

NOTE

DOE 5480.16A, FIREARMS SAFETY, reflects a revision to DOE 5480.16 that was coordinated prior to the recent moratorium on Directives and implementation of the new Directives System. All major issues have been resolved and the originating office has requested that the revised Order be issued without **recoordination** with the understanding that the Order will be reviewed under the Departmental initiative to reduce internal regulations.





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U.S. Department of Energy
Washington, D.C.

ORDER

DOE 5480. 16A

3-4-94

SUBJECT: FIREARMS SAFETY

1. PURPOSE. To provide standards and procedures for the safe use of firearms by Department of Energy (DOE) and contractor personnel involved in carrying out Departmental activities.
2. APPLICABILITY.
 - a. Departmental. The provisions of this Order apply to all Departmental Elements performing work that requires the use of firearms.
 - b. Contractors. The provisions of this Order apply to all contractors and **any** of the subcontractors, the performance of whose contracts require the use of firearms.
3. CANCELLATION. DOE 5480.16, FIREARMS SAFETY, of 1-12-88.
4. POLICY.
 - a. Firearms shall be used in a manner that ensures the safety and health of DOE and contractor personnel, as well as the public, and is consistent with operational objectives.
 - b. Only firearms provided by the Department of Energy and approved by the local Operations Office Manager shall be used by on-duty DOE employees **and** contractor personnel.
 - c. **Nonsecurity** use of firearms other than for testing operations outlined in DOE/EV/06194, DOE Explosives Safety Manual, shall conform as a minimum to the requirements of Chapter V of this Order.
5. GENERAL.
 - a. Mandatory standards, denoted by the words "shall" or "must," are requirements that must be followed unless DOE issues a written variance for a particular standard (see page 2, paragraph 8).
 - b. Specific site policies and procedures covering the safe transportation, handling, use, and storage of all firearms, live ammunition, blank ammunition, riot agents, liquid grenades (tear gas), smoke, and other explosive or incendiary devices used in firearms operations are based on the material contained in this Order and are subject to review and approval by the appropriate DOE official.

DISTRIBUTION:
All Departmental Elements

INITIATED BY:
Assistant Secretary for
Environment, Safety and Health

6. **REFERENCES.** See Attachment 1.
7. **DEFINITIONS.** See Attachment 2.
8. **VARIANCES.** A variance does **not exempt** contractors from a DOE-prescribed firearms safety requirement. However, a contractor may request a variance from a specific DOE-prescribed firearms safety requirement when they are unable to comply, due to their mission, to meet the required firearms safety specifications and the contractor provides equivalent protection of employees for the duration of the variance (if approved). Heads of Departmental Elements may deny variances; however, only the Assistant Secretary for Environment, Safety, and Health can approve variances. There are two types of variances:
 - a. **Temporary.** A temporary variance may be requested when DOE or contractors are unable to meet this Order's standards, for a short period of time, but anticipate subsequent full conformance with requirements. While a temporary variance is in effect, the contractor shall provide equivalent or acceptable firearms safety protection to employees. Requests for a temporary variance shall be submitted to Heads of Departmental Elements for action.
 - b. **Permanent.** If any firearms activity, operation, or process is determined not to comply with this Order's requirements, yet the manager of the facility, or Operations Office Safeguards and Security manager, or the protective force contractor determines that the activity, operation, or process is providing equivalent or acceptable protection to employees, he or she may submit a request for a permanent variance to the appropriate DOE official.
 - c. **Variance Submittal Process.**
 - (1) The Director of Occupational Safety shall be notified of, and be furnished with copies of, all variances relating to contractor personnel; the Assistant Secretary for Human Resources and Administration shall be notified of, and be furnished with copies of, all variances relating to DOE employees.
 - (2) The variance request shall be submitted from the Operations Office Manager to Headquarters. The Associate Deputy Secretary for Field Management or the Director of Safeguards and Security, as applicable, **shall** submit to the Director of Occupational Safety, all requests for variance. After review of the request for variance, the Director of Occupational Safety shall submit an approval or disapproval recommendation to the Assistant Secretary for Environment, Safety, and Health, who shall grant or disapprove the variance. The formal review and notification process through the Assistant Secretary for Environment, Safety and Health shall take no longer than 60 calendar days after receipt.

- d. Content of Variance. Any variance request shall include the following elements:
- (1) Description of condition;
 - (2) Safety standard requiring deviation;
 - (3) Reason why a variance is requested;
 - (4) Steps taken to provide equivalent or greater protection;
 - (5) Statement of whether equivalent safety is provided, description of safety enhancements, and an **analysis** of corresponding risk reduction;
 - (6) Any proposed corrective action and schedule; and
 - (7) Duration of requested variance (if temporary).

9. **RESPONSIBILITIES.**

- a. Assistant Secretary for Environment, Safety and Health shall:
- (1) Develop and coordinate firearms safety policies, standards, and guidance.
 - (2) Conduct independent performance-based assessments of firearms **safety** programs to ensure DOE line management organizations are effectively implementing their occupational safety and health responsibilities. Verify, on a sampling basis, actual DOE line performance practices; the viability of the implementation process; the effectiveness of management controls and oversight; and conformance with established DOE firearms safety requirements.
 - (3) Provide authoritative interpretations of firearms safety **requirements.**
 - (4) Provide technical guidance to line programs as necessary and support the line organization in implementing firearms safety programs.
 - (5) Determine the response to and disposition of requests for variances.
- b. Heads of Departmental Elements shall develop, administer and implement a comprehensive line firearms safety program; establish programmatic goals, objectives, and priorities; plan, program and budget for the resources necessary to implement the requirements of

this Order, with a goal of maintaining continuing program improvement to achieve excellence; ensure that line firearms safety self assessment programs are established and properly implemented in accordance with the requirements contained in Chapter III.

- c. Managers of Operations Offices and Director of Security Affairs (for Headquarters operations), shall be responsible for **ensur'ng that** :
 - (1) All firearms activities by DOE personnel under **the'r** control comply with this Order; and
 - (2) All contracts the performance of which require the use of firearms also require the contractor to comply with this Order. The application to contractors shall be accomplished by noting prominently in the procurement request package that the contract will require the contractor to use firearms with the identification of this Order or the particular portions, including, if appropriate, the paragraph dealing with variances, that should apply to the contractor. Provision should be made for flowdown to subcontracts of any tier that will require the use of firearms.
- d. The cognizant local DOE authority for safeguards and security at each Operations Office and at Headquarters shall be responsible for implementing this Order for protective force activities.
- e. The cognizant director of safety and health at each Operations Office and at Headquarters shall be responsible for ensuring the safety and health of employees and the public through application of the environmental protection, safety, and **health** protection assessment program.
- f. Instructors (rangemasters, range safety officers, or other persons assigned training duties) **shall** implement the requirements of this Order and the regulations of the specific sites during firearms **training**, including classroom and firing range training, tactical training, field exercise, and other situations designed to teach and retrain.
- g. The training manager **shall** ensure that someone is present or readily available who is trained and capable of:
 - (1) Providing safety direction and guidance in the transportation, storage, handling, and operation of firearms and munitions used on the range and shall control all personnel and activities on the range when firearms are present;
 - (2) Identifying, analyzing, and evaluating a variety of hazards involving the use of ammunition, explosives, or chemical devices used in live-fire training exercises;

(3) Verifying range safety data and/or protective containment construction requirements through onsite inspection, interpretation, and use of surface danger zones and maps; (i ●., AR 385-63 and Military Handbook 1027/3); and

(4) Assessing risk to personnel conducting range operations and recommend safety measures consistent with training requirements.

- h. Supervisors shall be cognizant of any deterioration in subordinates' physical or mental condition/fitness for duty, whether the deterioration is caused by long workdays or other factors; supervisors shall restrict participation in training or work activities involving the use of firearms where a noted deterioration may have dangerous consequences.
- i. Supervisors who have direct operational control of activities involving firearms shall ensure that personnel under their control adhere **to** this Order.
- j. Director of Naval Nuclear Propulsion Program shall, in accordance with the responsibilities and authorities assigned by Executive Order 12344 (statutorily prescribed by Public Law 98-525, 42 **U.S.C.** Section 7158, note) **and** to ensure consistency throughout the joint Navy/DOE organization of the Naval Nuclear Propulsion Program, implement and oversee all policy and practices pertaining to this Order for activities **under** the Director's cognizance.
- k. DOE **facilities**, projects, and programs that are subject to regulation by the Nuclear Regulatory Commission (NRC) or an NRC Agreement State shall use, where applicable, the requirements specified by the NRC or NRC Agreement State in lieu of this Order whose requirements overlap or duplicate NRC or NRC Agreement State regulations.

10. ASSISTANCE. Questions concerning this Order shall be directed to Edward Patigalia, EH-313, 301-903-3972.

BY ORDER OF THE SECRETARY OF ENERGY:



ARCHER L. DURHAM
Assistant Secretary for
Human Resources and Administration

REFERENCEs

1. DOE 3790.16, **FEDERAL EMPLOYEE OCCUPATIONAL** SAFETY AND HEALTH PROGRAM, of 1-7-93, which sets Federal regulations for Government personnel health and safety.
2. DOE 5000.36, OCCURRENCE REPORTING AND PROCESSING OF OPERATIONS INFORMATION, of 1-19-93, which sets Departmental requirements and procedures for reporting unusual occurrences.
3. DOE 5480.4, ENVIRONMENTAL PROTECTION, SAFETY, AND HEALTH PROTECTION STANDARDS, of 5-15-64, which sets standards for protecting the environment and the health and safety of people.
4. DOE 5481.16, SAFETY ANALYSIS AND REVIEW SYSTEM, of 9-23-86, which establishes uniform requirements for the preparation and review of safety analysis of Departmental operations.
5. DOE **5482.1B**, ENVIRONMENT, SAFETY, AND HEALTH APPRAISAL PROGRAM, of 9-23-86, which presents the Department's policy and requirements for appraisal of **envircnment**, safety, and health programs.
6. DOE 5483. **1A**, OCCUPATIONAL SAFETY AND HEALTH PROGRAM FOR DOE CONTRACTOR EMPLOYEES AT GOVERNMENT-OWNED CONTRACTOR-OPERATED FACILITIES, of 6-22-83, which describes the requirements for ensuring the safety of **Government-** owned contractor-operated facilities.
7. DOE 5484.1, ENVIRONMENTAL PROTECTION, SAFETY, AND HEALTH PROTECTION INFORMATION REPORTING REQUIREMENTS, of 2-24-81, which sets DOE information reporting and accident investigation requirements regarding the environment, safety, and health.
8. DOE 5500.16, EMERGENCY MANAGEMENT SYSTEM, of 4-30-91, which establishes the Department's overall policy and requirements for response to emergencies.
9. DOE 5632.7, PROTECTIVE FORCES, of 2-9-88, which prescribes Departmental policies, **and** requirements for the management, operation, training, and equipping of **protective** forces charged with the protection of security interests at DOE facilities.
10. DOE 5632.8, PROTECTION PROGRAM OPERATIONS: SYSTEM **PERFORMANCE TESTS**, of 2-4-88, which requires that protective forces shall perform force-on-force exercises.
11. DOE/ **EV/06194**, "Department of Energy Explosives Safety Manual," which prescribes the Department's procedures for operations involving explosives and is available From the Office of Occupational Safety.

12. Atomic Energy Act of 1954 (42 United States Code (U.S.C.)2201k), as amended, section 161k, which authorizes the appropriate arming of Department or Departmental contractor personnel while engaged in the protection of property of the United States and provides the authority to make arrests without warrant.
13. DOD 6055.9-STD, "DOD Ammunition and Explosives Safety Standards," which provides standards for protection to personnel and property, both inside and outside an installation, from damaging effects of potential accidents involving munitions.
14. Title 48 Code of Federal Regulations (CFR) 970.5204-2, "Department of Energy Acquisition Regulation," which provides clauses to be used in contracts where the Department of Energy is either required to, or elects to, enforce environmental protection, safety, and health protection requirements.
15. Title 49 CFR Chapter 1, "Research and Special Programs Administration," Department of Transportation, of 10-1-86, which prescribes the procedures for the development and promulgation of Cargo Security Advisory Standards.
16. Title 29 CFR 1910, "Occupational Safety and Health Standards," which provides general industry safety and health standards pursuant to Public Law 91-596.
17. Army Regulation (AR) 385-63, "Policies and Procedures for Firing Ammunition for Training, Target Practice, and Combat," which specifies requirements including Surface Danger Zones for a variety of firing ranges for the U.S. Army and Marine Corps.
18. Military Handbook 1027/3, "Range Facilities and Miscellaneous Training Facilities Other Than Buildings," presents design criteria for training facilities for use by design engineers for design of new facilities and rehabilitation of existing facilities for firearms used by the Navy and Marine Corps.

DEFINITIONS

1. **AMMUNITION** is a type of munitions normally containing explosives, propellant, pyrotechnics, initiating composition, nuclear, or chemical material which is designed to inflict damage upon structures, personnel, or materiel. [t also includes assembled cartridges, projectiles, grenades, bombs, pyrotechnics and mines together with projectiles such as bullets, shot and their necessary primers, propellants, fuzes, and detonators.
2. **APPROVED** is being in compliance with the provisions of this Order and the instructions issued by the authority having jurisdiction.
3. **ARMORER** is an individual who by schooling, experience, and assignment is certified by the Central Training Academy (**CTA**) to operate, maintain, and repair firearms used by protective force personnel.
4. **AUTHORIZED FIREARMS** are firearms authorized by the Department and issued by the responsible contractor or Departmental Element to be used by protective force personnel in the performance of their duties.
5. **AUTOMATIC RIFLE** is a lightweight firearm normally shoulder fired, designed to fire rifle ammunition, and capable of firing more than one round of ammunition by a single manipulation of the trigger.
6. **BLANK AMMUNITION** is a cartridge loaded with powder but containing no projectile, or ammunition that is deemed by the manufacturer to be incapable of firing a projectile that **will** kill, wound, or otherwise harm any individual at a distance greater than 10 feet (3.05 meters).
7. **BLANK FIRE ADAPTER (BFA)** is a mechanical device attached to a firearm for the purpose off adapting it for use with blank ammunition.
8. **BULLET CONTAINMENT J) EVICE** (see Clearing Barrel).
9. **CENTRAL TRAINING ACADEMY (CTA)**, located in Albuquerque, New Mexico, is the organization designated by the Director of Safeguards and Security to carry out a safeguards and security education program that includes instructor training, development of course material, firearms R&D, and selected site assistance programs.
10. **CHEMICAL DEVICES** are devices that contain incendiary mixtures or liquid mixtures that will produce smoke or irritant, burning, poisonous or asphyxiating gases.
11. **CLEARING BARREL** is a device used to point a firearm at or into during the loading and unloading process that will contain any inadvertently discharged round.

12. **CONTRACTOR** is any DOE prime contractor or subcontractor subject to the contractual provisions of DOE or **specific** negotiated contract Provisions Indicating DOE's decision to **enforce environmental** protection, safety, and health protection requirements.
13. **CONTROLLER** is an individual trained in firearms activities who helps to ensure that training exercises are conducted safely and that all participants are following the rules.
14. **DEFECTIVE FIREARM** is a firearm that, because of improper assembly, excessive wear, or broken or **missing** parts, does not function according to redesign specifications.
15. **DRY FIRING** is a training procedure to improve proficiency that uses a firearm without blank or live ammunition.
16. **DUD** is a bomb, grenade, or shell that fails to explode.
17. **ENGAGEMENT SIMULATION SYSTEM (ESS)** is composed of three elements: (a) devices that provide firearm effects, (b) a control system, and (c) a training-support package.
18. **EXERCISE** is any scenario that simulates an actual incident to which a protective force **would** respond.
19. **EXERCISE AREA** is an area geographically defined to contain the exercise.
20. **EXERCISE PLAN** is a plan that is written and reviewed to outline a security exercise.
21. **EXPLOSIVE** is any chemical compound or mechanical mixture which, when subjected to heat, impact, friction, shock, or other suitable initiation stimulus, undergoes a very rapid chemical change with the evolution of large volumes of highly heated gases that exert pressures in the surrounding medium.
22. **FIELD ELEMENT** is a Departmental organizational component located outside the Washington, D.C., metropolitan area.
23. **FIREARMS** are rifles, handguns, shotguns, machine guns and similar devices designed to be carried and operated by a person. For the purposes of this Order, laser engagement systems, other firearms simulators, chemical devices, and pyrotechnic devices are considered to be firearms.
24. **FLASH-SOUND DIVERSIONARY DEVICES** are used to momentarily distract and/or confuse suspects in order to allow SPOS to gain control of a tactical situation. Diversionary devices include both pyrotechnical and **non-incendiary** methods.

25. FORCE-ON-FORCE EXERCISE simulates the actual engagement of hostile personnel by the protective force personnel. This may include limited scope performance tests and similar exercises.
26. GRENADE LAUNCHER is a lightweight firearm used to deploy multi purpose munitions such as HE, smoke, chemical agents, etc.
27. HANDGUNS are firearms designed to be held and fired with one hand.
28. HANGFIRES are missiles or rockets that have been fired but have not left the launching device.
29. INCENDIARY DEVICES (see Chemical Devices).
30. INHABITED BUILDING DISTANCE is the minimum distance permitted between locations containing munitions and inhabited buildings, administrative areas, site boundaries, main power stations, and other facilities of vital or strategic nature.
31. LIGHT ANTI-TANK WEAPON (LAW) is a portable, shoulder-fired, **recoilless** firearm capable of launching explosive projectiles.
32. LAW HAZARD ZONE is the zone at the rear of a LAW or LAW simulator where **flame, hot** gases, or fragments may be present during discharge of the **firearm**. The hazard zone is defined as a 30 degree cone truncated at 10 feet wide by 30 feet deep at the rear of the LAW tube.
33. LAW SIMULATOR is a **firearm** that simulates the firing of a LAW and emits a coded laser beam in the direction aimed. The simulator does not fire a projectile but **does** expel fragments and a hot flash from the rear of the launch tube.
34. LIVE-FIRE RANGE is an area designated for firearms training; it does not include training areas where blank ammunition or **ESS** firearms are used exclusively.
35. LIVE-ROUND EXCLUDER is a removable (spring pressure retained) flagging device inserted **between** the breech and the bolt face of a firearm which restricts a live round of ammunition from feeding from a magazine into the chamber without removal of the device.
36. LIVE-ROUND INHIBITOR is an obstructive device mounted in the cylinder or barrel permitting cambering and firing of blank ammunition but preventing cambering of a live round.
37. MACHINE GUN is a fully automatic firearm capable of firing multiple rounds of rifle ammunition with a single pull of the trigger; it is belt fed and is usually mounted on a biped, tripod, or other fixture.

38. MAGAZINE is a mechanical device used to hold a predetermined number of cartridges in position for feeding into a firearm.
39. MINIMUM FRAGMENT DISTANCE is the minimum distance required to protect personnel from hazardous fragments in open areas, inhabited buildings, and public traffic routes.
40. MISFIRE is an event involving any cartridge, missile, or rocket that does not properly fire when triggered.
41. MODIFICATION is any alteration of a firearm or firearm component part other than that alteration necessary to maintain factory required tolerances, or addition of any part not made to the firearm manufacturer's specification or military specification supplied by the particular manufacturer for the specific firearm.
42. MUNITIONS are small arms ammunitions, diversionary devices, and explosives.
43. NET EXPLOSIVE WEIGHT is the weight of the energy-producing material in munitions.
44. NON SECURITY USE OF FIREARMS is the utilization of firearms in any activity sponsored and/or funded by DOE and not authorized within the scope of Section 161k of the Atomic Energy Act as amended.
45. PROTECTIVE FORCE PERSONNEL are security officers, security police officers (I, II, III), couriers, authorized escorts, and personnel assigned to protective details, who are employed to protect the security interests of the Department.
46. PUBLIC TRAFFIC ROUTE DISTANCE is the minimum distance permitted between locations containing munitions and any public street, road, highway, or passenger railroad (including roads on DOE-controlled land open to public travel).
47. QUANTITY DISTANCE is the distance required for a specific level of protection for a particular hazard class/division of ammunition and explosives.
48. RANGE MASTER is the individual designated to provide overall management and administration of a live-fire range facility to ensure that all operations and training are conducted in accordance with applicable DOE Orders.
49. RANGE SAFETY OFFICER is the designated and specifically trained individual responsible for safety at a live-fire range.
50. RIFLE is a shoulder firearm with a rifled bore.

51. **SAFETY ANALYSIS REPORT (SAR)** is prepared in accordance with DOE 5481 .16; the report summarizes the hazards associated with the operation of a particular facility and defines minimum safety requirements.
52. **SECURITY AREA** is a DOE physical space (fenced area) which has been designated **as** requiring access control.
53. **SECURITY POLICE OFFICER** is a Departmental contractor (see DOE 5632.7) employed **for** and charged with the protection of classified matter, special nuclear material, **or** other Government property; the security police officer is authorized under section **161k** of the Atomic Energy Act of 1954, as amended, or other statutory authority (i.e., section 661 of **U.S.C. 7270a**), to carry firearms and to make arrests without warrant.
54. **SEMI-AUTOMATIC FIREARM** is a type of firearm that employs either gas pressure or recoil force and mechanical spring action in eject^{ing} the **empty cartridge**, case after the first shot and **loading** the next cartridge from the **magazine**, but that requires release and **another** pressure of **the** trigger for firing each successive shot.
55. **SENIOR CONTROLLER** is responsible for assigning tasks and coordinating the efforts of **all** controllers during force-on-force exercises.
56. **SHADOW FORCE** is **an** armed security force that provides continuing site protection under the constant supervision of a controller while an exercise is **being** conducted.
57. **SMALL ARMS** are hand-carried firearms, including but not limited to handguns, rifles, shotguns, submachine guns, machine guns, LAWS, and grenade launchers.
58. **SMALL ARMS AMMUNITION** is ammunition of a caliber less than 20 mm.
59. **SHOTGUN** is a shoulder firearm with a smooth bore.
60. **SUBMACHINE GUN** is a fully automatic or selective-fire firearm designed to fire handgun ammunition.
61. **SUPERVISOR** is a specifically trained person who has been designated by a DOE Element or contractor to accomplish the requirements for a supervisor in this Order.
62. **TAGOUT** is a safety procedure for identifying and labeling a defective firearm's status.
63. **UNAUTHORIZED DISCHARGE** is **the** discharge of a firearm under circumstances other than either (a) during firearms training with the firearm properly pointed downrange (or toward a target) or (b) the intentional firing at hostile parties when deadly force is authorized.

TABLE OF CONTENTS

CHAPTER I - FIREARMS SAFETY TRAINING

Page

1.	Requirements	I-1
2.	Basic Training	I-3
3.	Advanced Training	I-4
4.	Range Operations and Procedures	I-5
5.	Force-on-Force Exercises	I-8
a.	Requirements	I-8
b.	Exercise Hazards and Safety Rules	I-10
c.	Blank Ammunition and Blank Fire Adapters	I-11
d.	Light Anti-Tank Firearm Simulator Operation	I-12
e.	Hand-Thrown Grenade Simulators, Pyrotechnics, and Liquid Grenades	I-12
6.	Exercises or Systems Performance Tests	I-13

CHAPTER 11 - OPERATIONS

1.	Basic Considerations	II-1
2.	Requirements	II-1
3.	Firearms Maintenance	II-3

CHAPTER 111 - OPERATIONAL ASSURANCE

1.	Appraisals/Assessments	III-1
2.	Firearms Safety Committee	III-2
a.	Composition	III-2
b.	Responsibilities	III-2
3.	Managers of Operations Offices and Contractors	III-3
4.	Employee Review	III-3
5.	Reporting/Investigation Requirements	III-3
6.	Emergency/Event Planning	III-3

CHAPTER IV - TRANSPORTATION, HANDLING, AND STORAGE OF MUNITIONS

1.	Approved Ammunition	IV-1
2.	Transportation of Munitions	IV-1
3.	Handling of Munitions	IV-1
4.	Storage of Munitions	IV-1
a.	Storage Structures	IV-1
b.	Hazard Class and Hazard Division	IV-2
c.	Quantity, Distance Requirements	IV-2
d.	Storage Compatibility Requirements	IV-4
5.	Protective Force Munitions	IV-4
a.	Storage of Small Arms Ammunition	IV-5
b.	Transportation of Munitions in Protective Force Vehicles	IV-5

- c. Munitions Carried by Protective Force PersonnelIV-6
- Attachment IV-1 - Military ItemsIV-7
- Attachment IV-2 - Commercial ItemsIV-11

CHAPTER V - NON SECURITY USE OF FIREARMS

- 1. **Work-Related** ActivitiesV-1
- 2. Public Hunting0.0.000. V-2
- 3. Firearms Related Activities Not Otherwise Specified.V-3

CHAPTER I**FIREARMS SAFETY TRAINING****1. REQUIREMENTS.**

- a. The Office of Safeguards and Security, with the assistance of impacted **Headquarters** and **Operations Offices**, shall publish standard DOE training programs for firearms being used at the various sites. Such training programs shall contain attachments of specific site developed firing range and on-duty (off-duty when applicable) safety information **and** shall incorporate those sections of the manufacturer's operating manuals that are necessary for the safe operation, inspection, and maintenance of specific firearms.
- b. During firearms training, all personnel shall have access to an instruction manual for each type of firearm with which they may be armed **while** on duty and shall demonstrate both technical and practical knowledge of the contents of the manual governing the safe use of that firearm.
- c. Training records for personnel authorized to carry firearms shall be available for review by appropriate safety and security personnel.
- d. All firearms training, qualification, requalification, practice and test firing shall be conducted by personnel who are certified by the Central Training Academy (CTA). This certification is specific and personnel **shall** not conduct activities for which they have not been certified.
- e. Lesson plans for all firearms training shall be available for review by appropriate safety and security personnel. Such lesson **plans** shall incorporate safety in addition to other training objectives and task performance standards. The Central Training Academy shall provide training on how to develop the categorical information to be contained in typical lesson plans.
- f. **Standard Operating Procedures.**
 - (1) All firearms training shall be conducted in accordance with the Office of Safeguards and Security guidance and local standard operating procedures developed in response to specific site needs and tactics as designated by the cognizant local DOE authority for safeguards and security. Standard operating procedures shall include detailed procedures emphasizing the safety of participants, observers, and bystanders and the use **of** personal protective equipment.

- (2) All standard operating procedures shall be reviewed and approved by appropriate contractor safety and protective force personnel at least annually or more frequently if significant revisions are made in the training program. Field Element safety and protective force personnel review and approve standard operating procedures initially and whenever significant changes are made.
- (3) All firearms training and qualification shall require instructor-to-shooter ratios with no more than the following:
 - (a) One-to-one for any automatic fire training (e.g., submachine gun, rifle, or machine gun). Other one-to-one ratios include the use of any firearm that has an explosive projectile (e.g., **M79, M203, M72, 3.5-inch** rocket launcher), or any advanced course of fire with any firearm involving movement of the shooter other than straight down range, or a fan of fire greater than 10 degrees. An exception shall be for special response team (**SRT**) courses developed by the **CTA** and approved by the Office of Safeguards and Security and conducted by the **CTA** or **by** sites certified to conduct **CTA SRT** courses. The **ratio** for these excepted courses shall be no greater than one-to-four.
 - (b) One-to-four for requalification with a submachine gun, rifle, or machine gun in automatic mode using controlled bursts of fire and for practice or training for personnel who have qualified on at least one automatic course of fire in the DOE Firearms Qualification Manual.
 - (c) One-to-eight when firing in the semiautomatic mode (e.g., automatic rifle in semiautomatic mode, shotgun, semiautomatic rifle, and pistols), except during night firing and initial training where the **instructor-to-shooter** ratio shall be no greater than one-to-four. When using an indoor range, whether daylight or simulated night "fire, the instructor-to-shooter ratio shall be **one-to-five**.
- (4) A range safety officer or an instructor with specific delineated responsibilities for range safety (e.g., monitor the safety performance of the shooters as well as overall safety of the firing range) **shall** be present during **all** firearms training activities, qualification, or requalification activities.
 - (a) When the shooter-to-instructor ratio requires only one instructor on the firing line, he or she **shall** be the lead instructor and may be assigned range safety responsibilities if approved by the range master.

- (b) When the shooter-to-instructor ratio requires two or more instructors on the firing line, there shall be a lead instructor presiding over the firing activities (i.e., "calling the line") who will not be **assigned** additional **instructional duties or** be included in the shooter-to-instructor ratio, but may be assigned range safety **responsibilities**. To accomplish these activities, the **lead** instructor may be positioned either behind the firing line, in a booth, or in a tower whichever location provides the greatest safety and control.
- g. All personnel involved in firearms training shall be required to comply with the personal protective equipment rules in effect at each training location. In particular, eye and hearing protective equipment **shall** be worn.
- h. Any **injury/illness** sustained during firearms training, regardless of degree, shall be reported immediately to an instructor. The instructor **shall** follow the established local operating procedures for accident reporting and injury treatment.
- i. Prior to the **implementation** of any new training or evaluation method involving firearms tactical operations, a risk analysis report shall be completed.
- j. No person **shall** be issued a firearm if there is any indication that he or she has a deteriorated mental or physical condition which could have a dangerous consequence while conducting training or work activities with firearms.

2. **BASIC TRAINING.**

- a. Basic firearms safety training and demonstrated technical knowledge and practical proficiency shall be required before firearms are permitted to be carried on duty. Safety training shall be repeated at least semi-annually, at which time safety proficiency must be demonstrated in order to retain firearm carrying status.
- b. Basic firearms training shall be conducted at a site approved by the Manager of the Operations Office. Sites not falling under any Operations Office shall be approved by the appropriate Departmental official.
- c. Basic firearms safety training shall include, at a minimum, the following:
 - (1) General firearms safety orientation;
 - (2) Instructions on the capabilities of firearms and ammunition and the implications thereof;

- (3) Firearms safety information for each type of firearm required by duty assignment;
 - (4) Practice with an unloaded firearm in the teaching environment;
 - (5) Range safety procedures and demonstration of safe firing techniques on the range;
 - (6) Dry firing techniques and hazards associated with dry firing;
 - (7) Handling of misfires;
 - (8) As applicable, instructions on the hazards associated with the impact of bullets and other projectiles on nuclear explosives, nuclear weapons, explosives, and other possible items that could result in a significant release of energy or toxic substances;
 - (9) Detailed procedures on clearing, handling of malfunctions, inspecting, cleaning, loading, unloading, and other specific tasks related to each firearm for which the student receives training. This may include instruction and practice in assembly/disassembly but shall not include repair, modification, or replacement of parts; and,
 - (10) Details of firearms accidents and how they could have been prevented.
- (11) Four General Firearms Safety Rules;**
- (a) All firearms are always loaded,
 - (b) Never point a firearm at anything you are not willing to destroy,
 - (c) Keep your finger off the trigger until your sights are on the target, and
 - (d) Be sure of your target.

3. ADVANCED TRAINING

- a. The firearms safety portions of the advanced firearms training and of the SRT training shall follow the same rules as those listed on page I-3, paragraph 2. Also:
 - (1) Lesson plans shall include a safety briefing for all participants and authorized observers. The briefing must be conducted by personnel experienced in performing exercises and

knowledgeable about the firearms to be used. Lesson plans shall be made available to all students (e.g., through a library).

(2) Lesson plans must be written and include safety requirements for any course of fire.

b. During advanced firearms training, eye and hearing protection equipment shall be worn.

4. RANGE OPERATIONS AND Procedures.

a. Specific site range safety rules and regulations shall be developed and implemented by the organization designated to be responsible for operating a live-fire range. Such rules and regulations shall be formal, provide a disciplined approach to range-operations, and include rules and regulations on pre- and post-firing range activities. The Central Training Academy shall provide training on developing basic policy and guidelines for range operations.

b. A risk analysis or a Safety Analysis Report (DOE 5481.1B) shall be prepared on the facilities and the operations of each live-fire range. This report shall be reviewed by the contractor safety staff, the Operations Office safety staff and approved by the Operations Office Manager, or as appropriate, the Office of Safeguards and Security, Headquarters.

c. Specific site range safety rules and regulations shall be conspicuously posted at all DOE-controlled live-fire ranges and as a minimum shall contain the following elements:

(1) While on the range, it is mandatory to use approved eye and sound barrier-type ear protection and other personal protective equipment as required by the range safety officer.

(2) Unsafe conditions shall be immediately reported to the range safety officer or the range master.

(3) Other than duty equipment, only firearms and ammunition scheduled for use on the firing line shall be brought to the line. An exception is when an on-duty shooter is qualifying with a firearm other than a handgun.

(4) A firearm shall only be exchanged with another shooter at the direction of the instructor who, prior to the exchange, shall verify that the cylinder or action of the firearm is open and that the chamber is empty. If a firearm is exchanged, both parties shall check it for safety (i.e., verify that the chamber is empty, and depending on the type of firearm, that either (a) safety is on or (b) the selector lever is on safe).

- (5) All firearms shall be carried in the manner specified in the approved instruction manual (see page I-1, paragraph 1a).
- (6) Firearms shall not be left unattended or unsecured.
- (7) Fingers shall not be placed on a firearm's trigger or in the trigger guard until the firearm is pointed at the target.
- (8) Firearm loading and firing shall commence only on command.
- (9) Shooters shall not be permitted to talk while on the firing line during a firing exercise, except in reply to an instructor as a part of the exercise or to shout "cease fire" in an unsafe situation.
- (10) Until the firing line has been declared safe by the firearms instructor, shooters shall not bend over or move over the line.
- (11) All shooters shall be trained and instructed on what constitutes an unsafe condition and to shout "cease fire" when such a condition is observed.
- (12) Smoking, eating, or drinking shall be prohibited while on the firing line.
- (13) Alcohol beverages and drugs are prohibited on DOE firing ranges. If the firearms staff detects the presence of alcohol or drugs on a shooter or if a ~~shooter~~ is believed to be under the influence of either, the firearms staff shall remove the shooter from the range and report the incident to the appropriate DOE official; appropriate **followup** action shall be taken in accordance with **pre-established** directives. Shooters taking medication shall report this fact to the staff before reporting to the firing **line**. The staff shall be responsible for determining whether a shooter is safe to use the range. A medical doctor shall be consulted by the staff if necessary.
- (14) When automatic or semiautomatic firearms are being fired, shooters shall take precautions to prevent hot spent cartridge and gunshot residues from getting inside their clothing. Spent cartridge deflectors, when available and practical, shall be required for all shooters (none required if determined by risk analysis that shooters are protected by partitions or by distance).
- (15) **When a training** session is completed, each firearm shall be physically examined by the shooter and by a designated range safety officer or qualified firearms instructor to ensure that



it is unloaded and in safe (clear) condition before leaving the range. If the shooter is using a duty firearm on the range, he or she may reload that firearm at the range if returning directly to duty.

- (16) Shooters shall **collect** unexpended ammunition and return it to a range officer/instructor to ensure its proper accounting and disposition.
- (17) Shooters shall collect spent cartridge **for** proper disposal, checking for live rounds.
- (18) Shooters shall ensure that their firearms are properly cleaned, stored, and secured after firing. Cleaning materials shall be properly stored or disposed.
- (19) **While** a firearm is being cleaned, live ammunition shall not be allowed in the cleaning area.
- d. Before firing **commences**, a safety briefing for all participants shall be conducted that will include the basic range safety rules, the capabilities of the firearms to be used, and the safe operating procedures for the course of fire to be undertaken.
- e. Dry firing shall only be conducted on a live-fire range or in an approved area, and then under the direct supervision of a firearms instructor.
- f. A scarlet streamer shall be prominently displayed at outdoor **live-fire** ranges at all times during daylight firing. The streamer shall be replaced with blinking or pulsating red lights for nighttime firing that shall be activated before firing exercises actually begin. These day and night range warning indicators must be visible to aircraft.
- g. For outdoor ranges where it is credible that live-fire operations may affect aircraft operations, the contractor aircraft operations center, the Federal Aviation Administration, or another authorized aviation control center shall be notified of live-fire range schedules and activities. Schedules shall be coordinated with communications, medical, and fire department elements.
- h. **If** emergency medical technician personnel or professional medical personnel are not available at a live-fire range, all firearms instructors shall be cardiopulmonary resuscitation (**CPR**)/**first** aid trained **and** qualified and retrained annually. **CPR/first** aid training shall be from instructors certified by the American Red Cross or the American Heart Association. Specific training on the handling of gunshot wounds shall be provided.

- i. An approved plan shall be required for quickly handling, treating, and evacuating injured personnel through the use of air ambulance, on-scene wheeled ambulance, and the like. Emergency response drills shall be carried out at **least** annually to test personnel preparedness in implementing the plan. Medical equipment shall be available at a live-fire range as determined by the cognizant site physician or other authorized personnel.
- j. Airborne lead concentrations at all firing ranges shall be measured semiannually and the measurement technique shall comply with Occupational Safety and Health Administration (OSHA) lead standard, 29 CFR 1910.1025 as required by DOE 5480.4. The medical surveillance provisions of the lead standard shall be established and implemented, when indications are that employees are or may be exposed to airborne lead concentrations that exceed the action level for 30 days per year.
- k. Any employee involved in regular firearms training (e.g., instructors, security police officers) shall be entered into a Hearing Conservation Program.
- l. A communications system with backup (i.e., telephone and/or two way radio) shall be available at each live-fire range.
- m. Shooter-to-target distances for steel targets shall be **greater** than 21 feet (6.41 meters), except for shooters firing shotgun slugs where the shooter-to-target distances shall be greater than 150 feet (45.75 meters). Firearms shall not be fired at steel targets unless the steel is thick enough to prevent dimpling.
- n. The design and method of deployment of steel targets shall be approved by the cognizant DOE official in consultation with the Central Training Academy.
- o. Steel targets shall be examined prior to every use. Targets that bow in excess of 10 degrees and/or contain dimples in excess of **one-**sixteenth inch in depth shall be removed from use.
- p* Live-fire ranges shall be equipped with sufficient lighting to assure safe nighttime firing exercises.
- q. Written and approved procedures for handling duds and misfires shall be provided at all live-fire ranges.

5. **FORCE-ON-FORCE EXERCISES**

a. **Requirements.**

- (1) All exercises shall be governed by a plan that specifically addresses safety issues while remaining consistent with realistic training.

- (2) All exercises and related activities shall be regulated by controllers under the supervision of a senior controller who **shall** have final authority. The senior controller shall signal the beginning and end of the exercises and shall guide and supervise the other controllers.
- (3) **The** senior controller or his or her representative shall conduct **pre-exercise** briefings to discuss the exercise and to ensure a clear understanding of safety procedures and requirements. Post-exercise briefings of both participants and bystanders shall include a safety recap.
- (4) An exercise plan shall be approved by a safety representative designated by the manager of the organization responsible for the exercise. For each force-on-force training exercise, all participants, safety representatives, or controllers shall have the authority to stop an activity if in their opinion unsafe conditions develop.
- (5) Individuals with live firearms (shadow force) in an operational area where **an** exercise is to be conducted must be under the continuous and direct supervision of a controller who preferably is a protective force supervisor. This controller must be knowledgeable of security requirements to ensure that the members of the shadow force understand their **roles and do** not become involved in the exercise. Management of facilities/buildings involved in exercises must be informed of exercises in advance. The cognizant DOE official, Federal Bureau of Investigation, and local law enforcement officials **shall** be notified of pending exercises as appropriate.
- (6) During exercises, in the event of an unscheduled security alarm, the exercise controller shall suspend the exercise and release the shadow force to respond to the alarm. The exercise **will** not resume until the members of the shadow force are out of the exercise area.
- (7) All firearms used in an exercise shall be inspected at the beginning of the exercise, clearly marked as exercise firearms, closely controlled, and kept separate from any firearms not associated with the exercise. The senior controller shall not permit issuance of blank ammunition and exercise firearms until **all** live firearms and live ammunition have been collected from participants and accounted for.
- (8) All firearms used in laser engagement simulation system (**ESS**) exercises shall:
 - (a) Be designated for **ESS** use;

- (b) Be individually inspected just prior to the beginning of an exercise unless equipped with an approved live-round inhibitor, and kept segregated from firearms that fire live rounds;
 - (c) **Not** be loaded until authorized by the senior controller;
and
 - (d) Never be pointed or fired at an individual who is closer than 10 feet (3.05 meters).
- (9) Maintenance or adjustments to **ESS** laser transmitters shall only be performed by the supplier or by qualified site personnel and approved by the supplier.
- (10) The transmitters of all laser engagement systems used in Departmental exercises shall have warning signs or stickers displayed in accordance with American National Standards Institute (ANSI) Standard **Z136.1-1986**. In addition, safe distances from these systems shall be calculated using the methodologies in **ANSI Z136.1-1986**.
- (11) All equipment containing semiconductor laser diodes shall be FDA certified and shall be subject to the **ANSI Z136.1-1986** (see DOE 5480.4, Attachment 2, page 3, paragraph **2d(3)** (c)).
- (12) At the end of an exercise, explosive simulators and exercise firearms **shall** be collected and accounted for under the direction of the senior controller. Excess blank ammunition and explosive simulators shall be returned to the point of issue. Live firearms and ammunition shall not be reissued until all blank ammunition, simulators, exercise firearms, **ESS** equipment, and personnel are accounted for.
- (13) The exercise plan will include specific direction involving engagement of adversaries, handling of firearms, loading and unloading procedures and locations, and any other scenario specific firearm deployment information. The site range master or designated firearms instructor shall be consulted prior and should be present during the exercise to ensure that **ESS** firearm use procedures are compatible with approved live fire training.

b. **Exercise Hazards and Safety Rules**

- (1) Exercise plans or standard operating procedures shall discuss **exercise** hazards and enumerate all **applicable safety** rules such as those dealing with vehicles, fence climbing, and hand-to-hand combat.

- (2) Participants in **ESS** exercises shall wear eye protection and shall **wear** hearing protective equipment unless exercise safety considerations indicate otherwise as determined by the senior controller and approved in the exercise plan.
- (3) Directives for force-on-force exercises shall include or cover the following:
 - (a) The location of the exercise site and the identification of responsible personnel and organizations;
 - (b) A description of the equipment, firearms, ammunition, explosive devices, and materials involved;
 - (c) A description of the operation with appropriate diagrams;
 - (d) **Details** of the hazardous conditions;
 - (e) Procedures for the actions of personnel and/or the use and accountability of equipment;
 - (f) Procedures for tracking and controlling personnel with **live** ammunition;
 - (g) Procedures covering an accident, emergency, or unexpected occurrence;
 - (h) The assignment of responsibility for **ensur ng** compliance with safety procedures; and
 - (i) Notification of appropriate management and of all personnel affected by the exercise.

c. **Blank Ammunition and Blank Fire Adapters**

- (1) All blank ammunition magazines, and belts (first link) shall be distinctively color-coded and, where practicable, adapted to accept **only** blank ammunition.
- (2) All semi-automatic and automatic firearms, using gas expansion as the means to cause the intended cycling of the firing mechanism, shall be equipped with approved blank fire adapter (**BFA**), **if** an approved BFA is available for the firearm. All firearms equipped with BFAs shall not be fired at any individual who is closer than 10 feet (3.05 meters).
- (3) Blank ammunition shall not be used in force-on-force exercises except with **ESS** equipment.
- (4) Blank ammunition shall be stored separately from live ammunition, either in a different location or in a locked

cabinet, and shall be inspected prior to issuance, preferably by a safety representative having **munitions** experience.

- (5) Prior to each **ESS** exercise, participants shall inspect their firearms to ensure that only blank **ammunition** and properly equipped **ESS** firearms are in use.
- (6) Prior to each **ESS** exercise, each firearm and all ammunition shall be inspected by the responsible safety or protective force supervisor to ensure that only blank ammunition and properly equipped **ESS** firearms are being used.
- (7) Only those blank rounds approved by, or meeting specifications approved by, the manufacturer of **ESS** equipment shall be used in firearms associated with that equipment.

d. **Light Anti-Tank Weapon (LAW) Simulator Operation.**

- (1) Exercise participants shall be **given** comprehensive instruction before using the LAW simulator and shall make sure that personnel, obstructions, and combustible materials are outside the hazard zone prior to firing a LAW simulator.
- (2) Exercise participants shall not cock the LAW simulator until a target is sighted. If the LAW simulator is not fired at a given target but is anticipated to be fired at another target during the exercise, it will be returned to the uncocked position until the next target is sighted. If the **LAW** simulator is not fired, it will be returned to an unloaded/tube-empty position prior to turn-in.
- (3) LAW simulators shall only be used in designated areas identified **in** the exercise plan.
- (4) In training with the LAW simulator, exclusion distances and conditions shall be established as though an actual firearm were being fired.

e. **Hand-Thrown Pyrotechnics, Flash-Sound Diversionary Devices and Chemical Agents.**

- (1) Controllers shall ensure that all participants deploying **hand-thrown** pyrotechnics, flash-sound diversionary devices and chemical agents are fully trained and qualified. Flash-sound diversionary devices shall not be thrown within 50 feet (15.25 meters) of personnel in open areas or into an occupied room.
 - (2) Participants shall never pick up a thrown pyrotechnics, **flash-sound** diversionary devices, or chemical agents, even one that appears to be a dud. Duds must be reported as soon as possible after discovery to the senior controller.
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- (3) Written and approved procedures for handling duds shall be included in force-on-force directives.
- (4) Only flash-sound diversionary devices meeting specifications approved by Office of Safeguards and Security shall be used for training, qualification or operations.
- (5) Written and approved procedures for such activities as the wiring of pyrotechnics into vehicle electrical systems and the use of **booby** traps and trip wires shall be included in **force-on-force** directives.
- (6) Smoke generators shall **not be** used indoors. If exposure to smoke **is** anticipated, participants shall be provided with appropriate protective equipment. Personnel responsible for deploying smoke in exercises shall ensure that the smoke agents in use contain **no carcinogens** or other harmful byproducts.
- (7) All pyrotechnic devices generate sufficient heat to start fires and shall only be used in areas identified as safe in the exercise plan. When pyrotechnic devices are to be used in an exercise, appropriate fire fighting equipment shall be readily available.
- (8) Exercise plans shall address the hazards and personnel protective equipment when using pyrotechnics and **liquid** grenades (tear gas) in the vicinity of personnel, aircraft, critical facilities, roads traveled by non participants, and building; occupied by nonparticipants.
- (9) Pyrotechnics and liquid grenades (tear gas) shall not be taken on board aircraft unless participants and flight crew have appropriate (**NIOSH** approved) respiratory protection readily **available**.

6. **EXERCISES OR SYSTEMS PERFORMANCE TESTS.**

- a. Any exercise (**see** DOE 5632.7) or systems performance tests (see DOE 5632.8) that require the drawing of a firearm or deployment of **ESS** equipment shall conform to the force-on-force requirements that are appropriate to the scenario as outlined in Chapter I, paragraph 5.
- b. Each **Operations** Office site shall have approved site-specific policies and procedures governing limited scope performance tests, alarm response and assessment performance tests, and emergency management performance tests (see DOE 5632.8).

CHAPTER II

OPERATIONS

1. BASIC CONSIDERATIONS.

- a. The Department is required to **develop** and implement its responsibilities by the following:
 - (1) The Atomic Energy Act of 1954, as amended;
 - (2) Federal statutes;
 - (3) Executive orders; and
 - (4) Other orders, such as DOE Orders.
- b. These responsibilities include the protection of:
 - (1) Restricted Data and other classified information or matter;
 - (2) Nuclear weapons and nuclear weapon components; and
 - (3) Departmental and contractor facilities, property, and equipment.
- c. In order to provide the required level of protection, some Departmental **and** contractor employees are armed. These employees include protective force personnel, Transportation Safeguards Division (AL) couriers, and Departmental safeguards and security staff personnel.
- d. Employees shall not be authorized to carry a firearm until they have:
 - (1) Received appropriate safety training in its use; and
 - (2) **Demonstrated** their technical and practical knowledge governing the **safe** use of those firearms.
- e. Authorization to remain in armed status shall continue only if the employee demonstrates his or her technical and practical knowledge of firearms safety semi annually.

2. REQUIREMENTS.

- a. Semiautomatic and automatic firearms shall be carried in the manner specified **below** except when responding to an incident where there is reasonable **cause** to believe that deadly force is authorized.

- (1) Semi automatic handguns shall not be carried with a live round in the firing chamber unless the following conditions are met:
 - (a) The site has, in place, a documented training program for such handguns, which has been approved by the Operations Office Manager,
 - (b) The training program in use is approved by the **CTA**, and
 - (c) After receiving **CTA** approval, and after all involved **protective force personnel** have successfully completed the **training program**, the Operations Office **Manager** shall formally notify the Office of Occupational Safety and Office of Safeguards and Security as to when they intend to allow the carrying of a round in the chamber at the site.
 - (2) Semi automatic **long** guns, e.g., rifles, shotguns, submachine guns, shall not be carried during normal operations or placed in post or vehicle racks or carriers with a round in the firing chamber.
- b. All duty firearms shall be carried in the manner approved by the cognizant local DOE authority for Safeguards and Security. Unless otherwise stated, from check-in to check-out a handgun shall always be in a holster; and a rifle, shotgun, or submachine gun shall always be carried on an appropriate sling with the muzzle pointed up or down, except where the firearm is designed to be carried in a different manner or operational conditions dictate otherwise. At **no** time shall a firearm be carried with fingers on the trigger or **inside** the trigger guard.
 - c. When firearms are carried in vehicles, watercraft, or aircraft, they shall be mounted in an appropriate rack or container when not held by an individual.
 - d. All personnel covered by this Order shall be required to comply with the personal protective and safety rules in effect at each workplace.
 - e. The **loading or clearing** of firearms shall take place only in an approved **area** or when **the** barrel of the firearm is in or pointing toward a bullet containment device. Each site shall have an approved procedure for loading and clearing firearms under field conditions when no bullet containment device is available.
 - f. The routine loading and clearing of all firearms shall be witnessed by a supervisor.
 - g. **If** the presence of alcohol or drugs is detected on a person, it shall be grounds for denial of the issuance of a firearm or removal from a duty station.

- h. Departmental **elements** and contractors performing security operations shall develop specific site policies and procedures covering the safe transportation, handling, use and storage of live ammunition, blank ammunition, chemical munitions and pyrotechnic devices used in firearms operations.
- i. Each Operations Office shall require that analyses be performed to determine what ammunition and firearms can be used safely in each site for which it has responsibility.

3. **FIREARMS MAINTENANCE.**

- a. All sites, including the Central Training Academy, shall have (**onsite**, under contract offsite, or in association with another DOE site) an armorer with the knowledge, capability, and responsibility for inspecting, maintaining, and repairing all firearms available for use. The armorer and all other personnel shall be prohibited from modifying the basic design of a firearm or any of the firearm's operating or safety components without written approval from the Operations Office Manager or, as applicable, Office of Safeguards and Security.
- b. Armorers shall successfully complete a factory authorized or U.S. military approved training course for each firearm available for on duty use at a site. **In addition**, armorers shall demonstrate proficiency in the following:
 - (1) Conducting firearms safety inspections;
 - (2) Performing minor repair of basic firearms;
 - (3) **Assembling/disassembling** the firearms used at the various sites;
 - (4) Rendering firearms safe, including confiscated firearms;
 - (5) **Knowing** the minimum and maximum tolerances associated with safe **operation** of all firearms in inventory and available for use at each site; and
 - (6) Identifying unapproved modifications to firearms.
- c. Certification procedures for armorers shall be established by the Central Training Academy, which shall certify all DOE armorers. Recertification shall be required at least every 2 years or whenever there is a major change in firearms policy.
- d. The armorer shall inspect and certify for use all firearms available for duty issue. This inspection shall be in accordance with the recommendations of the manufacturer or the Central Training Academy, but not less often than semiannually.

- e. **The** armorer shall maintain accurate individual records on all firearms, including the name of manufacturer, model, serial number of firearm, inspection dates, and nature and date of any repair, in accordance with prescribed authorized schedules.
- f. The armorer shall inspect and conduct test firings of a firearm following any unusual operation of, occurrence **with**, or functional repairs made to that firearm. Functional repairs are those that may have an effect on the safe operation or reliability of the firearm. Any firearm that has experienced an unusual operation shall be tagged "out-of-service" and segregated from operational firearms until certified by the armorer as safe to operate. Records of **any unusual** occurrence and subsequent inspection/test firing shall be maintained in accordance with prescribed authorized schedules.

CHAPTER III

OPERATIONAL ASSURANCE

1. APPRAISALS/SELF ASSESSMENTS.

- a. Formal appraisals or self assessments of the safety and health aspects of the safeguards and security program following the procedures detailed in DOE 3790.1B and DOE 5482.1B shall include firearms safety and shall be performed by line management at least annually.
- b. Contractors shall conduct formal appraisals, and self assessments (i. e., annual program **review** and **worksite** appraisals and periodic surveillances).
- c. Cognizant DOE field and line management shall conduct formal self assessments to include **annual** program reviews (assessments) of each contractor and appraisals of selected worksites.
- d. All shall maintain audits of their internal operations.
- e. Such evaluations and audits should be conducted by safety personnel or by a **joint** safety and protective force evaluation team.
- f. Such evaluations and audits shall cover procedures, responsibilities, and duty assignments within the firearms safety program to ensure that overall objectives and performance are being met.
- g. Such evaluations or audits shall include reviews of the following:
 - (1) Records of unauthorized firearms discharges, investigations of such discharges, and the application of lessons learned;
 - (2) Armorer's records of firearms inspections, malfunctions, and repairs;
 - (3) Firearms documentation maintained by DOE or contractor Environmental, Safety and Health manager to ensure that management decisions and actions to correct deficiencies have been completed and documented on time;
 - (4) Protective force safety performance data, as compared with similar operations and programs, to determine whether there are lessons to be learned or deficiencies that require corrective action;
 - (5) Hazardous incidents involving firearms and associated equipment;
 - (6) Safety **tagout** program for defective firearms;

- (7) Disciplinary actions for violation of firearms safety procedures or regulations;
- (8) Results of the airborne lead monitoring programs at firing ranges and of the testing programs for blood lead level changes and hearing loss;
- (9) Storage and handling of firearms, ammunition, and cleaning materials in armories;
- (10) High risk activities, such as loading, unloading, and exchanging firearms, to ensure the existence of proper accident prevention controls; and
- (11) Firearms training programs.

2. **FIREARMS SAFETY COMMITTEE.**

- a. **Composition.** The DOE Firearms Safety Committee shall be comprised of one **permanent** DOE safety representative voting member or alternate from each of the following:
 - (1) Office of Occupational Safety;
 - (2) Office of Safeguards and Security;
 - (3) Central Training Academy;
 - (4) Transportation Safeguards Division (AL);
 - (5) Each of the DOE Operations Offices; and
 - (6) A representative from the Office of Human Resources and Administration shall serve as an ex-officio member of the committee.
- b. **Responsibilities.**
 - (1) **Assistant Secretary for Environment, Safety and Health, through the Director of Occupational Safety,** shall administer and manage the Firearms Safety Committee.
 - (2) **The Committee** shall review, evaluate, and make recommendations for **action** on proposed changes to this Order, the DOE Firearms Safety Manual, and the DOE Range Design Criteria Manual. The Committee shall meet annually or more often to review and evaluate the Order.

3. MANAGERS OF OPERATIONS OFFICES AND CONTRACTORS. Those providing protective force functions on, at, or for a DOE site shall have a firearms safety committee formally organized and chartered to assist management in providing safe firearm activities.
4. EMPLOYEE REVIEW. All DOE, contractor, and subcontractor employees have the right and responsibility to lodge a formal complaint about deficient safety practices or procedures. DOE employees are to be guided by DOE 3790. 1A, contractor employees by DOE 5483.1B.
5. REPORTING/INVESTIGATION REQUIREMENTS.
 - a. The reporting and investigation of firearms-related incidents shall be in accordance with applicable requirements of DOE 5000.3B, DOE 5484.1, and DOE 5632.7.
 - b. In addition to the above reporting, the appropriate Operations Office safety and protective force managers, Office of Occupational Safety, and Office of Safeguards and Security shall be notified.
6. EMERGENCY/EVENT PLANNING. Emergency plans and procedures required by DOE 5500.1B shall specifically address, as applicable, incidents involving firearms.

CHAPTER IVTRANSPORTATION, HANDLING, AND STORAGE OF MUNITIONS1. APPROVED AMMUNITION.

- a. Office of Safeguards and Security shall be responsible for developing, updating, and maintaining a list of approved ammunition for the daily use of Departmental personnel. This list shall specify the caliber, bullet type and weight, and manufacturer of the **ammunition.**
- b. Ammunition used for live fire training and qualification, **ESS** training, and other nonlethal training shall be of the highest quality. Reloaded, reprocessed, or military surplus ammunition should not **be** used for training purposes. Ammunition shall not be unboxed and placed in bulk containers.

2. TRANSPORTATION OF MUNITIONS.

- a. Transportation of munitions on public highways shall be governed by Department of Transportation (DOT) regulations (49 CFR part 173). For transportation purposes **only**, munitions shall be given DOT classifications.
- b. Transportation of munitions onsite shall comply with requirements contained in Chapter I, Section 16, of the "Department of Energy Explosives **Safety** Manual" (DOE/EV/06194). Munitions not in original DOT containers shall be transported in containers specified in paragraph 17.5, Chapter II of the Manual.

3. HANDLING OF MUNITIONS.

- a. Munitions **shall** be protected from abnormal stimuli or environments such **as** impact, shock, high temperatures, and open flames.
- b. Smoking shall be prohibited when handling, transporting, or storing munitions. No matches, lighters, other fire-, flame-, or **spark-**producing devices shall be taken into a munitions storage area; appropriate signs or markings shall be posted at such areas.

4. STORAGE OF MUNITIONS. (This is a summary of applicable requirements for the munitions listed in this Order. Additional criteria can be found in DOE/EV/06194, and in "DOD Ammunition and Explosives Safety Standards" (DOD 6055.9 -STD).)

- a. Storage Structures. Refer to DOE/EV/06194 for guidance on design of structures **for** storing munitions.

b. Hazard Class and Hazard Division.

- (1) For the purpose of placarding, the United Nations Organization (UNO) or the National Fire Protection Association (NFPA) hazard classification systems may be used. To ease identification of hazard characteristics and thus promote safe storage of munitions, the hazard classification system recommended by the UNO is used for DOE explosives classification. The system consists of nine classes for dangerous goods, with munitions included in Class 1. Class 1 is further subdivided into divisions that are based on the character and predominance of the associated hazards and on the potential for causing personnel casualties or property damage. The four divisions of Class 1 are as follows:
 - (a) Hazard Class/Division 1.1. Mass detonating with possible fragments.
 - (b) Hazard Class/Division 1.2. Non mass-detonating, fragment producing (fragments falling within indicated minimum distances).
 - (c) Hazard Class/Division 1.3. Mass fire (fragments and fire brands could fall within indicated minimum distances).
 - (d) Hazard Class/Division 1.4. Moderate fire, no blast.
- (2) When required to properly describe the hazard, a numerical figure in parentheses shall be placed to the left of the hazard class/division 1.1 through 1.3 (e.g., (18) 1.1, (08) 1.2, and (06) 1.3); this number in parentheses is used to indicate the minimum separation distance (in hundreds of feet) for specified levels of protection from munitions for inhabited buildings, public traffic routes, and personnel in the open.
- (3) The hazard class/division designation for the munitions presently in use by DOE security forces is contained in Attachments IV-1 and IV-2. Attachment IV-1 lists the military-type ammunition and explosives; Attachment IV-2 contains commercial items.

c. Quantity Distance Requirements.

- (1) Hazard Class/Division 1.1 Munitions. Inhabited building and public traffic route separation distances shall be in accordance with those specified in Table 9-1, DOD 6055.9-STD. If the storage structure is an above-ground magazine (not earth-covered), Column 5 for inhabited buildings and Column 9 for public traffic routes shall be used. The minimum fragment distance has been incorporated into the table except when the minimum fragment distance is indicated by a numerical figure in

parentheses. For example, "Hazard **Class/Division** (04) 1.1" means that for 100 pounds or less of net explosives weight, the minimum fragment distance will be 400 feet.

(2) Hazard **Class/Division** 1.2 Munitions.

- (a) (04) 1.2 Munitions. Inhabited building and public traffic route separation distances shall be as specified in Table 9-6, DOD 6055.9 -STD. If the minimum distances specified are available, there is no limit as to the quantity of the material which can be stored in an approved structure. If the minimum distances are not available, (04) 1.2 material shall not be stored in the structure. Limited quantities of (04) 1.2 items, for reasons of operational necessity, may be stored in security facilities; however, fragmentation shielding is required.
- (b) (08) 1.2 Munitions/. Inhabited buildings and public traffic route separation distances shall be as specified in Table 9-7, DOD 6055.9-STD. If the minimum distance specified is available, there is no limit as to the quantity of material that may be stored in an approved structure. If the minimum distance is not available, the structure shall not be used for this material.
- (c) (12) 1.2 Munitions. Inhabited buildings and public traffic route separation distances shall be as specified in Table 9-8, DOD 6055.9-STD. If the minimum distance is not available, the structure shall not be used for this material.

(3) Hazard **Class/Division** 1.3 Munitions.

- (a) Inhabited buildings and public traffic route separation distances shall be as specified in Table 9-10. DOE 6055.9 -STD, for Hazard **Class/Division** 1.3 munitions.
- (b) If the Hazard **Class/Division** 1.3 material is further described by a numerical figure in parenthesis, that number in hundreds of feet shall be minimum separation distance required, regardless of the distances given in Table 9-10 for the specific quantity.

(4) Hazard **Class/Division** 1.4 Munitions.

- (a) Limited quantities of Hazard **Class/Division** 1.4 material for operational use may be stored in security facilities such as guard headquarters, security operations buildings, and guard stations without regard to quantity distance separation requirements.

- (b) Storage of larger quantities, such as training stocks, shall be in accordance with Table 9-11, DOD 6055.9-STD. Additionally, this material in its original DOT Class C packaging may be stored in warehouses if the material is placed in segregated and specifically designed areas.

(5) Combined Storage of Hazard Class/Division.

- (a) If Hazard Class/Division 1.1, 1.2, and 1.3 materials are stored together, the largest separation distance for each individual Hazard Class/Division shall be required for protection of inhabited buildings and public traffic routes (See Chapter 9, Paragraphs B.1c through g, DOD 6055.9-STD).
- (b) Combining Hazard Class/Division 1.4 with any other Hazard Class/Division shall not affect the required separation distances.

(6) Intraline and Inter magazine Distances. If munitions for a protective force are stored near or within an explosives storage area or near explosives operation buildings, the required intraline and inter magazine separation distances shall be specified by the cognizant safety office using DOD 6055.9-STD.

d. Storage Compatibility Requirements.

- (1) Compatibility groupings define which munitions may be safely stored together without increasing the risk of initiation. Attachments IV-1 and IV-2 list the storage compatibility group for munitions presently in use by Department protective forces.

(2) Storage compatibility mixing.

- (a) The permitted mixing of storage compatibility groups shall be as specified in "Department of Energy Explosives Safety Manual," Chapter II, Table II-5. Additionally, items from storage compatibility groups C, D, E, F, G, and S may be combined in storage if the net explosives weight in the items (or in bulk) does not exceed 1,000 pounds and if the items are in their original or approved packages.
- (b) Electric blasting caps (storage compatibility group B) shall not be stored in a magazine with other munitions unless the blasting caps are separated from the other items by an enclosure built of sandbags.

5. PROTECTIVE FORCE MUNITIONS.

- a. Storage of Small Arms Ammunition. Articles in Hazard **Class/Division** 1.4 and Storage Compatibility Group S are considered as inert for storage purposes and only require appropriate fire-protection distance separation requirements as long as they are stored only with inert items or other 1.4 S items. This applies only if the Hazard **Class/Division** 1.4 and Storage Compatibility Group S articles remain in their original packaging containers. When stored with items in a Storage Compatibility Group other than S, normal quantity-distance requirements must be observed (see Chapter 9, Paragraph **C.4.b.** [page 9-19] of DOD 6055.9 STD).
- b. Transportation of Munitions in Protective Force Vehicles.
- (1) Protective force patrol and response vehicles are authorized to transport the minimum quantity of munitions needed to support approved contingency plans and to execute protective force duties.
 - (2) Whenever possible, support munitions required for defense against hostile forces should be **pre-positioned** in readily accessible magazines.
 - (3) Protective force vehicles loaded with a combination of up to 25 pounds net explosive weight of Hazard **Class/Division** 1.1 and 1.2 munitions shall be exempt from explosives quantity-distance requirements when executing approved contingency plans or protective force duties.
 - (a) **Vehicles** so loaded shall not be used for administrative purposes.
 - (b) Vehicles so loaded shall be separated from inhabited facilities and property lines by a minimum of 125 feet **when** temporarily out of protective force service.
 - (c) Vehicles so loaded shall be downloaded into properly sited **magazines** or approved facilities when parked for periods in-excess of **4** hours.
 - (4) Operation of explosives-loaded vehicles will be restricted to **onsite** locations.
 - (5) The explosives must be secured within the **vehicle**.
 - (6) Smoking in explosives loaded vehicles is **prohibited**.
 - (7) These vehicles shall be downloaded into properly sited magazines or approved facilities prior to repair or maintenance, except under emergency response conditions (see Chapter **II**, Paragraph 16. 1.2. e (1) of **DOE/EV/06194**).

- (8) Munition shall not be exposed to temperature conditions within the vehicle that exceed the criteria stated on the **MSDS** or manufacturer's recommendation. Appropriate safety precautions will be taken to ensure munitions are not exposed to extreme temperatures.
- c. **Munitions Carried by Protective Force Personnel.** Protective Force Personnel shall be allowed to carry on their person Hazard **Class/Division** 1.1 and 1.2 munitions issued to them for use in the execution of approved contingency plans without regard to explosives quantity-distance requirements. Appropriate safety precautions for the handling of munitions shall be observed and the munitions shall be placed in an approved location if temporarily removed from the uniform/load bearing equipment used to carry such items.

MILITARY ITEMS

Description	Hazard Class/Division	Storage Capability Group (SCG)	Remarks
Cartridge, 12 Gauge Shotgun	1.4	S	All types of shot
Cartridge, 20 Gauge Shotgun	1.4	S	All types of shot
Cartridge, 5.56mm	1.4	S	All types of projectile & blanks
Cartridge, Cal .22	1.4	S	All types of projectile & blanks
Cartridge, 7.62mm	1.4	S	All types of projectile & blanks
Cartridge, Cal .30 AP	1.4	S	Armor-piercing incendiary & tracers
Cartridge, Cal .30	1.4	S	Other types of projectiles & blanks
Cartridge, 9mm	1.4	S	All types of projectile & blanks
Cartridge, Cal .38	1.4	S	All types of projectile & blanks
Cartridge, Cal .45	1.4	S	All types of projectile & blanks
Cartridge, Cal .50	1.4	see remarks	Ball, tracer, or armor-piercing is SCG C; armor-piercing incendiary or incendiary is SCG G

Description	Hazard Class/Division	Storage Capability Group (SCG)	Remarks
Cartridge, 20mm TP or AP	1.4	C	Target practice or armor-piercing with or without tracer.
Cartridge, 20mm API	1.4	G	Armor-piercing incendiary with or without tracer.
Cartridge, 20mm Incendiary	(0.4) 1.2	G	Also armor-piercing with tracer and incendiary.
Cartridge, 20mm HEI	0.4) 1.2	E	Also with tracer.
Cartridge, 40mm M576	1.4	S	Multiple projectile round.
Cartridge, 40mm (Smoke & Fare)	1.4	G	Includes different types of smoke and pyrotechnic.
Cartridge, 40mm CS (Tear Gas)	1.4	G	Includes both the M674 & M651E1.
Cartridge, 40mm Pract XM781	1.4	C	
Cartridge, 40mm $\times \approx P$ M385	0.4) 1.2	C	
Cartridge, 40mm HEDP M430	0.4) 1.1	E	
Cartridge, 40mm HEDP M433	0.4) 1.1	E	
Fuse, Hand Grenade M228	1.4	B	
Grenade, Hand Smoke HC M8	1.4	G	

MILITARY ITEMS (continued)

Description	Hazard Class/Division	Storage Capability Group (SCG)	Remarks
Grenade, Hand Smoke M18	1.4	G	Includes all colors
Riot Control Agent, MACE	1.4	G	
Rocket, 66mm (LAW)	1.1	E	M72 series
Rocket, Pract M73 LAW	1.4 1.2	E	
Simulator, Detonation M80	1.1	G	
Simulator, Projectile M74A1	1.3	G	
Simulator, Hand Grenade M116A1	1.3	G	
Charge, Demolition C-4	1.1	D	
Charge, Demolition TNT	1.1	D	
Charge, Shaped Flex Linear	1.1	D	
Charge, Shaped Flex Linear	1.4	S	Containing not more than 15 grains of high explosives composition per linear foot and in lengths not over 26 feet; must be marked as DOT Class C

MILITARY ITEMS (continued)

Description	Hazard Class/Division	Storage Capability Group (SCG)	Remarks
Cap, Blasting Electric	1.1	B	
Cord. Detonating P&TN	1.4	D	
Fus. Blasting Time M700	1.4	S	
Signal, Illum Ground Para M127	1.3	G	All colors
Riot Control Agent, CS	1.4	G	

MILITARY ITEMS (continued)

COMMERCIAL ITEMS

Description	Hazard Class/Division	Storage Capability Group (SCG)	Remarks
Cartridge, Cal .223	1.4	S	All types of projectile & Blanks
Cartridge, Cal .257	1.4	S	All types of projectile & Blanks
Cartridge, Cal .303	1.4	S	All types of projectile & Blanks
Cartridge, Cal .308	1.4	S	All types of projectile & Blanks
Cartridge, Cal .30-06	1.4	S	All types of projectile & Blanks
Cartridge, Cal .35	1.4	S	All types of projectile & Blanks
Cartridge, Cal .357	1.4	S	All types of projectile & Blanks
Cartridge, Cal .45	1.4	S	All types of projectile & Blanks
Cartridge, Cal .460	1.4	S	All types of projectile & Blanks
Tear Gas	1.4	G	Includes grenades, projectiles, shells, "Mighty Midget," and similar items
Distress	1.4	G	Distress similar items
Simulators	1.3	G	Includes Mines Flash Bangs, Mite Midgets, and similar items with DOT Class C markings

COMMERCIAL ITEMS (continued)

Description	Hazard Class/Division	Storage Capability Group (SCG)	Remarks
Simulators	1.1	G	Items with DOT Class A markings
Safety Fuse	1	S	Similar to military fuse blasting time; should have DOT Class C markings
Nonal Primadet (Primer Cord)	1.4	S	Containing not more than 15 grains of high explosives composition per linear foot and marked as DOT Class C
Flexible linear shaped charges	1.4	S	Containing not more than 15 grains of high explosives composition per linear foot and in lengths not over 2 feet; must be marked as DOT Class C
Ammonium Nitrate/Fuel Oil Mixture (ANFO)	see remarks	H	When blasting agent; when stored with Hazard Class/Division 1.1 or 1.2, treat as Hazard Class/Division 1.1; when stored with Hazard Class/Division 1.3 or 1.4, treat as Hazard Class/Division 1.3 (must have DOT Class C markings). If ANFO has DOT Class A markings, treat as Hazard Class/Division 1.1

<u>Description</u>	<u>Hazard Class/Division</u>	<u>Storage Capability Group (SCG)</u>	<u>Remarks</u>
Dynamite	1.1	D	
Peress	1.3	C	
Potassium Chlorate	1.3	L	Explosive
Sodium Chlorate	1.3	L	Explosive
Black Powder	1.1	A	
Water Gel	See remarks	C	A blasting agent; when stored with Hazard Class/Division 1.1 or 1.2, treat as Hazard Class/Division 1.1; when stored with Hazard Class/Division 1.3 or 1.4, treat as Hazard Class/Division 1.3 (must have DOT Class C markings). If Water Gel has DOT Class A markings, treat as Hazard Class/Division 1.1.

COMMERCIAL ITEMS (continued)

MILITARY ITEMS

Description	Hazard Class/Division	Storage Capability Group (SCG)	Remarks
Cartridge, 12 Gauge Shotgun	1.4	S	All types of shot
Cartridge, 20 Gauge Shotgun	1.4	S	All types of shot
Cartridge, 5.56mm	1.4	S	All types of projectile & blanks
Cartridge, Cal .22	1.4	S	All types of projectile & blanks
Cartridge, 7.62mm	1.4	S	All types of projectile & blanks
Cartridge, Cal .30 AP	1.4	S	Armor-piercing incendiary & tracers
Cartridge, Cal .30	1.4	S	Other types of projectiles & blanks
Cartridge, 9mm	1.4	S	All types of projectile & blanks
Cartridge, Cal .38	1.4	S	All types of projectile & blanks
Cartridge, Cal .45	1.4	S	All types of projectile & blanks
Cartridge, Cal .50	1.4	see remarks	Ball, tracer, or armor-piercing is SCG C; armor-piercing incendiary or incendiary is SCG G

Description	Hazard Class/Division	Storage Capability Group (SCG)	Remarks
Cartridge, 20mm TP or AP	1.4	C	Target practice or armor-piercing with or without tracer.
Cartridge, 20mm API	1.4	G	Armor-piercing incendiary with or without tracer.
Cartridge, 20mm Incendiary	(0.4) 1.2	G	Also armor-piercing with tracer and incendiary.
Cartridge, 20mm HEI	0.4) 1.2	E	Also with tracer.
Cartridge, 40mm M576	1.4	S	Multiple projectile round.
Cartridge, 40mm (Smoke & Fare)	1.4	G	Includes different types of smoke and pyrotechnic.
Cartridge, 40mm CS (Tear Gas)	1.4	G	Includes both the M674 & M651E1.
Cartridge, 40mm Pract XM781	1.4	C	
Cartridge, 40mm $\times \approx P$ M385	0.4) 1.2	C	
Cartridge, 40mm HEDP M430	0.4) 1.1	E	
Cartridge, 40mm HEDP M433	0.4) 1.1	E	
Fuse, Hand Grenade M228	1.4	B	
Grenade, Hand Smoke HC M8	1.4	G	

MILITARY ITEMS (continued)

Description	Hazard Class/Division	Storage Capability Group (SCG)	Remarks
Grenade, Hand Smoke M18	1.4	G	Includes all colors
Riot Control Agent, MACE	1.4	G	
Rocket, 66mm (LAW)	1.1	E	M72 series
Rocket, Pract M73 LAW	1.4 1.2	E	
Simulator, Detonation M80	1.1	G	
Simulator, Projectile M74A1	1.3	G	
Simulator, Hand Grenade M116A1	1.3	G	
Charge, Demolition C-4	1.1	D	
Charge, Demolition TNT	1.1	D	
Charge, Shaped Flex Linear	1.1	D	
Charge, Shaped Flex Linear	1.4	S	Containing not more than 15 grains of high explosives composition per linear foot and in lengths not over 26 feet; must be marked as DOT Class C

MILITARY ITEMS (continued)

Description	Hazard Class/Division	Storage Capability Group (SCG)	Remarks
Cap, Blasting Electric	1.1	B	
Cord. Detonating P&TN	1.4	D	
Fus. Blasting Time M700	1.4	S	
Signal, Illum Ground Para M127	1.3	G	All colors
Riot Control Agent, CS	1.4	G	

MILITARY ITEMS (continued)

COMMERCIAL ITEMS

Description	Hazard Class/Division	Storage Capability Group (SCG)	Remarks
Cartridge, Cal .223	1.4	S	All types of projectile & Blanks
Cartridge, Cal .257	1.4	S	All types of projectile & Blanks
Cartridge, Cal .303	1.4	S	All types of projectile & Blanks
Cartridge, Cal .308	1.4	S	All types of projectile & Blanks
Cartridge, Cal .30-06	1.4	S	All types of projectile & Blanks
Cartridge, Cal .35	1.4	S	All types of projectile & Blanks
Cartridge, Cal .357	1.4	S	All types of projectile & Blanks
Cartridge, Cal .45	1.4	S	All types of projectile & Blanks
Cartridge, Cal .460	1.4	S	All types of projectile & Blanks
Tear Gas	1.4	G	Includes grenades, projectiles, shells, "Mighty Midget," and similar items
Distress	1.4	G	Distress similar items
Simulators	1.3	G	Includes Mines Flash Bangs, Mite Midgets, and similar items with DOT Class C markings

COMMERCIAL ITEMS (continued)

Description	Hazard Class/Division	Storage Capability Group (SCG)	Remarks
Simulators	1.1	G	Items with DOT Class A markings
Safety Fuse	1	S	Similar to military fuse blasting time; should have DOT Class C markings
Nonal Primadet (Primer Cord)	1.4	S	Containing not more than 15 grains of high explosives composition per linear foot and marked as DOT Class C
Flexible linear shaped charges	1.4	S	Containing not more than 15 grains of high explosives composition per linear foot and in lengths not over 2 feet; must be marked as DOT Class C
Ammonium Nitrate/Fuel Oil Mixture (ANFO)	see remarks	H	When blasting agent; when stored with Hazard Class/Division 1.1 or 1.2, treat as Hazard Class/Division 1.1; when stored with Hazard Class/Division 1.3 or 1.4, treat as Hazard Class/Division 1.3 (must have DOT Class C markings). If ANFO has DOT Class A markings, treat as Hazard Class/Division 1.1

<u>Description</u>	<u>Hazard Class/Division</u>	<u>Storage Capability Group (SCG)</u>	<u>Remarks</u>
Dynamite	1.1	D	
Peress	1.3	C	
Potassium Chlorate	1.3	L	Explosive
Sodium Chlorate	1.3	L	Explosive
Black Powder	1.1	A	
Water Gel	See remarks	C	A blasting agent; when stored with Hazard Class/Division 1.1 or 1.2, treat as Hazard Class/Division 1.1; when stored with Hazard Class/Division 1.3 or 1.4, treat as Hazard Class/Division 1.3 (must have DOT Class C markings). If Water Gel has DOT Class A markings, treat as Hazard Class/Division 1.1.

COMMERCIAL ITEMS (continued)

CHAPTER V

NON SECURITY USE OF FIREARMS

1. WORK-RELATED ACTIVITIES

- a. All DOE and DOE contractor organizations with employees using firearms in **nonsecurity** work-related activities shall develop a program of firearms safety specific to those activities. This program shall be approved by the appropriate Operations Office official **and** address, as a minimum, the following:
 - (1) A statement of management policy relating to the safe use of firearms;
 - (2) **Activity-specific** procedures for the operations being conducted;
 - (3) **Maintenance** and inspection of firearms being used under DOE control;
 - (a) Firearms shall be inspected by the user through functional manipulation prior to use.
 - (b) DOE provided small arms shall be maintained and inspected annually in accordance with manufacturers' guidelines by appropriately trained persons.
 - (c) The integrity of nonstandard modified firearms shall be verified by remote firing before being hand fired.
 - (4) Training of personnel;
 - (a) All persons shall be trained to a level necessary for safe and efficient operations. Personnel training requirements shall be documented and shall address initial as well as **any** recurrent training necessary;
 - (b) **Individual** personnel training records shall be maintained **and** available for review;
 - (c) All non security personnel who use firearms, in remote areas, shall successfully complete first aid training, **including** cardiopulmonary resuscitation (**CPR**) instruction, annually. Training shall be from instructors certified by the American Red Cross or the American Heart Association. Specific training on the handling of gunshot wounds shall **be** included in the training;

- (d) Training shall include the safety and health hazards associated with firearms and measures to reduce exposure to these hazards;
 - (5) Provisions for the storage, inventory, and control of firearms and ammunition; and
 - (6) Emergency response and communications needs.
 - (7) Provisions for ensuring that personnel issued firearms are not under the influence of alcohol or drugs and are otherwise **fit-for-duty**.
- b. Independent assessments of internal operations shall be conducted at least annually.
 - c. Developmental and quality assurance activities involving small arms shall be controlled in accordance with **DOE/EV/06194**, DOE Explosives Safety Manual, Chapter II, Section 13.

2. PUBLIC HUNTING.

- a. Prior to any activity that includes access by members of the general public to DOE-controlled security areas for the purpose of hunting and killing of game with firearms, the appropriate DOE official of the Operations Office involved shall provide for the establishment of written procedures for conducting and controlling such activities. Those procedures may be assigned through agreements between DOE and other agencies. The procedures for DOE controlled security areas shall describe, as a minimum, the following subjects:
 - (1) The means used for identifying each person engaged in a hunting activity;
 - (2) The provisions and recording of basic safety information and facility orientation specific to the hunting activity to all participants. This may be accomplished by providing each hunter a copy of the site-hunting map and the safety rules and procedures applicable to the hunt. Each hunter must **sign** that he or she understands the requirements;
 - (3) Whether emergency medical response and care will be available in the area of the hunt;
 - (4) The types of firearms and ammunition acceptable for use in the hunting activity; and
 - (5) The requirement for each hunter to thoroughly inspect his/her firearms for proper and safe function in accordance with the manufacturer's guidelines prior to bringing the firearm onto DOE property.

- b. The use, possession, or being under the influence of alcoholic beverages, **illegal** drugs, or controlled substances during or immediately prior to coming onto a DOE facility to hunt is strictly prohibited and shall be cause for denying access.
 - c. Procedures for-hunting on DOE-controlled properties shall conform to all applicable State and Federal regulations for such activity.
3. **FIREARMS RELATED ACTIVITIES NOT OTHERWISE SPECIFIED.** Specific written procedures shall be developed and approved for any activity not addressed elsewhere in the Order that involves DOE or DOE contractor personnel in the planned discharge of firearms, e.g., competitive shooting matches or pest control.