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Safety

**FUNCTIONING OF SIMULATORS AND  
SMOKE PRODUCING MUNITIONS FOR  
LOCAL EXERCISES**

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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This instruction implements Air Force Policy Directive (AFPD) 91-2, *Safety Programs*. It establishes procedures for the safe handling, operation, and disposition of M18 smoke grenades, and M115A2 ground burst simulators during 419th Fighter Wing (FW) local exercises. It also references AFMAN 91-201, *Explosive Safety Standards*, T.O. 11A-1-42, *General Instructions for Disposal of Conventional Munitions*, T.O. 11A10-27-7, *Storage and Maintenance Procedures Simulators (Battlefield Effects)*, T.O. 11A-1-46, *Fire Fighting Guidance, Transportation, and Storage Management Data*, T.O. 11A8-5-7, *Storage and Maintenance Procedures Grenades Hand and Rifle*. It applies to all 419th Fighter Wing personnel involved in explosive operations of any kind.

**1. Responsibilities.** It is the responsibility of each exercise evaluator to ensure compliance with this instruction.

**2. Explosive Limits.** The hazard class/division of each item is as follows:

2.1. M115A2 Simulators (04) - 1.2 G-1370-00-752-8126.

2.2. M-18 Smoke Grenade - 1.4G:

2.2.1. 1330-00-289-6854, Red.

2.2.2. 1330-00-289-6851, Green.

2.2.3. 1330-00-289-6854, Yellow.

2.2.4. 1330-00-289-6853, Violet.

**NOTE:** The maximum quantity of explosives involved should not exceed a one-day supply.

**3. Personnel Limits:**

- 3.1. Maximum. One supervisor, one operator, one fireguard, and two casuals.
- 3.2. Minimum. One operator and one fireguard.
- 3.3. Location. Per 419 FW exercise map.

#### 4. Equipment Requirements:

- 4.1. Flameproof (leather) gloves.
- 4.2. Two metal covered containers (M548).
- 4.3. Six each, class 2A:10BC fire extinguishers (two for transportation, one at each function site).
- 4.4. Explosive placards, as required.
- 4.5. Radio.
- 4.6. Retaining pit (container).
- 4.7. Toxicological agent protective gloves.
- 4.8. Hearing protection.

#### 5. Pretask Briefing:

- 5.1. Exercise evaluator will ensure a copy of this instruction is available at each site where these devices are to be used.
- 5.2. The operation to be performed is to activate signaling smoke-producing munitions and ground burst simulators during wing exercises.
- 5.3. They will not be thrown or activated within 200 feet of any storage site, magazine, operating location, munitions holding area which contain explosives, bulk petroleum, oil, lubricants, and facilities with facing windows (include explosive loaded aircraft).
- 5.4. They will not be thrown or activated within 125 feet of persons, vehicles, or 100 feet of any buildings without facing windows.
- 5.5. They will not be pre-positioned and left unattended.
- 5.6. Only personnel trained by Explosive Ordinance Disposal (EOD) will be allowed to prepare and activate the items.
- 5.7. The area where items are used must be free of combustible material within a 10 foot radius, surrounding the item(s). The fire department will be consulted if used in brushy/dry grass areas during field exercises.

#### 6. Precautions:

- 6.1. All items containing pyrotechnic or explosive material will not be handled roughly, tumbled, or dropped.

**WARNING:** PRIOR TO USING M8 SMOKE GRENADES, CONTACT THE WEATHER STATION TO DETERMINE IF AN INVERSION EXISTS, IS EXPECTED, OR ANTICIPATED, AND IF THERE IS WIND BLOWING IN THE DIRECTION OF INHABITED AREAS; IF SO, DO NOT USE THESE GRENADES.

6.2. The M-18 smoke grenades present a fire hazard.

6.3. The M115A2 simulator presents both fire and explosive hazards.

6.4. Personnel will wear long sleeved shirts with sleeves rolled down and a glove on the throwing hand when activating munitions.

## 7. Emergency Procedures:

7.1. In the event of fire or accident, take the following actions:

7.1.1. Sound the alarm and notify wing maintenance operations center (MOC). MOC has the responsibility to:

7.1.1.1. Call hospital, if needed.

7.1.1.2. Call security police.

7.1.1.3. Call fire department.

7.1.1.4. Call wing safety.

7.1.1.5. Call explosive ordnance disposal (EOD), if needed.

7.1.2. Render first aid if necessary.

7.1.3. Ensure to provide the following information:

7.1.3.1. Location.

7.1.3.2. Nature of fire/accident.

7.1.3.3. Type of munitions involved (M-18/M115A2).

7.1.3.4. Extent of fire, are other munitions involved?

7.1.3.5. Number of injured personnel.

7.1.3.6. Evacuate nonessential personnel.

7.1.3.7. Direct responding emergency crews to accident site.

7.2. Fire fighting procedures:

7.2.1. If the fire has not involved the explosive items, remove the explosives from the area and if possible fight the fire.

7.2.2. If the fire involves the munitions, do not attempt to fight the fire.

## 8. Preparation. The following steps will be conducted prior to the start of operation:

8.1. Conduct pretask briefing as outlined in this instruction.

8.2. Gather necessary tools, equipment, and technical data. Ensure all tools and equipment are serviceable and technical data is current.

8.3. Grenades and simulators will be picked up at the designated locations.

8.4. Receive grenades and simulators and secure properly.

8.4.1. Proper item only, accept no substitutes.

8.4.2. Proper quantity.

8.5. Place grenades and simulators in separate containers and secure properly.

8.5.1. Explosive devices will be carried in a suitable container. The lid will be closed at all times, except when taking out or replacing explosive devices.

8.5.2. Do not place containers with grenades or simulators in passenger compartment of vehicle.

8.5.3. Containers will be tied down or sand bagged in the cargo compartment to prevent movement.

8.6. Operator will evaluate the area and weather conditions prior to functioning of explosive devices.

8.6.1. Ensure that there is no combustible material within a 10-foot radius surrounding the item(s).

8.6.2. If retaining pit is covered with snow, remove snow if possible.

8.6.3. Make sure no weather inversion is present or anticipated.

8.6.4. Operator will ensure that retaining pit is free of objects which may become flying objects when simulators are functioning.

8.7. The wing project officer will notify the following base agencies prior to use of grenades and simulators:

8.7.1. Security Police.

8.7.2. Hospital.

8.7.3. Fire Department.

8.7.4. Public Affairs.

8.7.5. Base Operations.

8.7.6. Hill Consolidated Command Post.

8.7.7. ALC Weapons.

8.7.8. Wing Safety.

8.7.9. EOD.

**9. Use.** Prepare M18 smoke grenades as follows:

**WARNING:** DISASSEMBLY OF EXPLOSIVE COMPARTMENTS WITHOUT SPECIFIC AUTHORIZATION IS STRICTLY PROHIBITED. ENSURE THE SAFETY PIN IS IN PLACE BEFORE REMOVING THE GRENADE FROM CONTAINERS. DO NOT USE THE PULL RING FOR LIFTING OR HANDLING THE GRENADE. IF GRENADE IS PACKED UPSIDE DOWN OR SAFETY PIN IS NOT PROPERLY HELD IN PLACE, DO NOT ATTEMPT TO REMOVE THE GRENADE FROM ITS CONTAINER.

9.1. Remove grenades from containers. Ensure grenade safety pin is present. Remove carefully, holding down the safety lever as it emerges.

9.2. To arm and function the grenade, complete the following:

9.2.1. Hold grenade in throwing hand with safety lever pressed against palm.

9.2.1.1. The safety pin will be removed just before throwing and at no other time.

9.2.1.2. Pull pin without changing grip and hold down safety lever until grenade is thrown.

9.2.1.3. Once the safety pin has been removed, the grenade is armed and must be thrown.

**WARNING:** AVOID HITTING OBJECTS WHICH WOULD DEFLECT THE GRENADE. AVOID TOSSING GRENADE INTO COMBUSTIBLE MATERIALS. IN THE EVENT OF A MISFIRE (DUD) SEE PARAGRAPH 12 OF THIS REGULATION.

9.2.2. Remove safety pin with a twisting motion. THROW GRENADE into retaining pit. Clear area approximately 30 feet upwind.

9.2.3. The fuse begins to function upon release of safety lever.

9.2.4. After delay of 1.2 to 2 seconds, grenade filler ignites and begins to emit a colored smoke.

**10. USE.** Prepare M115A2 ground burst simulators as follows:

**WARNING:** SIMULATORS CONTAIN PHOTOFLASH POWDER, HIGH EXPLOSIVES AND WILL NOT BE HANDLED ROUGHLY, THROWN, OR DROPPED. UNPACKED SIMULATORS DROPPED IN EXCESS OF THREE FEET SHALL BE CONSIDERED UNSERVICEABLE AND NOT USED.

10.1. Inspect M115A2 simulator prior to use. Use T.O. 11A10-27-7, Table 5-1

10.2. Grasp simulator in throwing hand and remove the metal safety clip from the cap.

**NOTE:** Use care when removing cap. The cap is connected to the igniter by a pull cord.

10.3. Remove the cap from the M3A1 safety fuse igniter.

**NOTE:** There is a 6 to 10 second burning time on the fuse. After 6 to 10 second delay, the powder charge in the whistle assembly is ignited.

10.4. Grasp the cap and pull cord as a unit and firmly pull the cord through the M3A1 igniter.

10.5. Toss the M115A2 simulator into the retaining pit. Clear area approximately 30 feet upwind.

**11. DISPOSAL AND HANDLING.** Any dud M18 smoke grenade or M115A2 ground burst simulators will be handled only by trained EOD personnel.

**WARNING:** IN THE EVENT OF DUD M115A2 SIMULATOR, NOTIFY EOD, NOTE THE TIME, DO NOT ALLOW ANYONE TO APPROACH THE SIMULATOR FOR AT LEAST 30 MINUTES. EOD WILL REMOVE AND DISPOSE OF THE DUD. IN THE EVENT OF NO COLORED SMOKE AND NO WHISTLING OR REPORT, THE SMOKE GRENADE OR SIMULATOR MUST BE CONSIDERED A DUD. KEEP THE AREA CLEARED TO A 125 FOOT RADIUS OF ALL PERSONNEL.

11.1. In the event of a dud M-18 and M115A2, cordon area off a 125 feet and notify MOC.

11.1.1. MOC in turn will notify EOD of location and type munitions involved.

11.1.2. Note the time attempt to function munitions was made.

11.2. Return unused explosive devices to the supply point custodian.

11.3. Residue from grenades and simulators will be policed up after the proper waiting period and placed in a metal container. Containers of expended items or scrap will be turned over to the 419 LG/LGMWM.

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