

**CHAPTER 6
SAFETY**

6-1. PURPOSE. To establish policies and procedures that permit the unit commander maximum flexibility in the planning, and the conducting of training, firing, and field exercises, while ensuring maximum safety to personnel and equipment, with a minimum loss of combat realism. This balance can be maintained through adherence to this regulation and the active use of risk management principles.

6-2. GENERAL.

a. Commanders of units that are training at Camp Bullis are responsible for fulfilling the requirements outlined in this regulation. Officers and NCOs will be familiar with the contents of this regulation, and the references listed herein prior to arrival at Camp Bullis. This regulation will be strictly adhered to. Noted violations will result in a report being forwarded through appropriate command channels for necessary corrective action. Because of the limited medical resources and the isolation of Camp Bullis, it is imperative that each individual on the installation understands and complies with the basic safety rules established herein -- their lives or the lives of other individuals may depend on their knowledge and actions.

b. This chapter establishes safety policies and procedures governing the multiple uses of Camp Bullis. While some uses have specific regulations governing their procedures, other uses may be unique operations or operations that are new to the Army. These operations will be managed using available regulations and the Camp Bullis Risk Management Standard Operating Procedure (SOP). Risk management training and assistance is available from the Camp Bullis Safety Office.

c. This chapter establishes policies and procedures governing the firing of munitions on the Camp Bullis military reservation, as well as delineating of other safety requirements for all units and agencies utilizing Camp Bullis. (Ref: Army Regulation 385-62, Regulations for Firing Guided Missiles and Heavy Rockets for Training, Target Practice and Combat, and AR 385-63, Policies and Procedures for Firing Ammunition for Training, Practice, and Combat.)

d. Major active duty and reserve forces commanders are authorized to publish safety directives which conform to the provisions of this regulation and to other Army regulations, in order to meet the requirements of special training situations. In no case will subordinate command safety publications be less restrictive or eliminate any of the safety requirements set forth in this publication. Such publications should be coordinated with HQ, USAG, FSH, ATTN: MCCS-BCB, prior to publication and implementation.

6-3. INCOMING UNITS (MILITARY AND CIVILIAN). All incoming units (military and civilian) are required to report to Camp Bullis Operations, building 6110, and receive a safety and final coordination briefing (for further information see Appendix D, E, and F). Written risk management procedures will be furnished to Operations at this time. If signing for ranges or maneuver areas, Camp Bullis Operations will brief (see Appendix D, for outline of the Safety Briefing) specifically in these areas. Units signing for hutments during the winter season will be required to receive a separate safety briefing on the use of the hutment heating equipment. The Supply and/or Fire Department will provide this briefing.

6-4. RISK MANAGEMENT. Leaders will:

NOTE: Written Risk Management Worksheet will be provided to Camp Bullis Safety Office at least 10 days prior to operations.

a. Detect hazards and risks associated with operations. Identifying risks involves closely looking at each phase of training or operations.

b. Assess risks and determine risk implications. Leaders will consider the likelihood of a mishap, and the degree to which injury or equipment damage is possible. Understanding facts is the basis for deciding whether or not to take a risk. (See the Camp Bullis Risk Management SOP, for risk management processes.) A copy of the Camp Bullis Risk Management SOP can be obtained by calling the Camp Bullis Safety Office, 295-7915. The Risk Management Worksheet, CSFS Form 4297, is also available on the FSH local area network.

c. Develop risk control alternatives and make risk decisions. When risk elimination is not possible, risks will be controlled without sacrificing essential mission requirements. Risk control alternatives may include new or revised task standards, operational procedures and parameters, training. Making decisions may include selecting controls, trading off mission elements against risk controls, and making a final decision whether controls are adequate to make a risk acceptable, considering mission benefits.

d. Implement risk control measures. Leaders will integrate procedures for controlling risk into plans, orders, SOPs, preliminary training, and other channels that ensure procedures are used during operations. Implementation will involve the chain of command.

e. Evaluate. Evaluate operational results, including their effectiveness of risk management controls.

6-5. ACCIDENT AND INJURY REPORTING.

a. All accidents and injuries occurring anywhere on Camp Bullis will be reported immediately to "Bullis Control" (FM 34.20), by use of the most expedient means, and will provide the information required to take appropriate action, as the situation dictates. The initial report will include:

- (1) Unit, date/time, and location of accident.
- (2) Name and grade of OIC.
- (3) Personnel and equipment involved in accident/incident.
- (4) Description of damages.

b. Units are responsible for ensuring a follow-up written report (DA Form 285-AB-R, US Army Abbreviated Ground Accident Report (AGAR), or DA Form 285, US Army Accident Report) is submitted through appropriate command channels. The unit responsible for the accident will supply a copy of the report to the Camp Bullis Safety Office, building 6110. Forms are available at Bldg. 6110. Assistance in completing the forms is available in AR 385-40, Accident Reporting and Records, and DA PAM 385-40, Army Accident Investigation and Reporting, and the Camp Bullis Safety Office, 295-7915.

c. Accidents resulting in serious injury or death or in damage to equipment or facilities in the amount of \$2000 or greater will be investigated immediately by the affected unit and the Camp Bullis Command Group, as appropriate.

d. Camp Bullis Operations will furnish a copy of all accident reports or a ledger of reported accidents to the Camp Bullis Safety Office.

6-6. VEHICLE SAFETY.

a. Licensing. Supervisors shall ensure that personnel are properly trained and licensed for the vehicle they will be operating, FM 21-305, Manual for the Wheeled Vehicle Driver. Units found to be operating with improperly licensed or unlicensed drivers will be reported to their chain of command, and may lose access to Camp Bullis training opportunities.

b. Vehicle inspections. Units will have procedures in place that provide for the systematic inspection of vehicles, with particular emphasis on safety items such as lights, brakes, troop straps, etc.

c. Speed limits. The speed limit on Camp Bullis is 30 miles per hour (mph) on improved roads in the cantonment area, unless otherwise posted, and 15 mph on unimproved roads. The speed limit will be strictly observed. The speed limit when passing troops in formation is 10 mph.

d. Vehicular accidents. All vehicular accidents will be investigated by the Military Police (MP). They may be reached through the Camp Bullis Operations or by calling, 295-7557. A copy of all vehicular accident reports will be furnished to the Camp Bullis Safety Office. Units are responsible for ensuring a follow-up written report is submitted through appropriate command channels. The unit responsible for the accident will supply a copy of the report to the Camp Bullis Safety Office.

6-7. BIVOUAC ACCIDENT AND INJURY PREVENTION.

a. Site requirements. Commanders will designate a safety officer (SO) and a fire marshal for each bivouac area. Responsibilities of SOs and fire marshals are as follows:

(1) Bivouac site. Bivouac areas will be free of hazards (i.e., debris, poisonous plants, dangerous animals, large and sharp rocks). Safety officers will check bivouac areas for high voltage lines before laying wire and erecting antennas and bridges.

(2) Parking area. A natural or artificial barrier will exist or will be constructed between the parking area and tent areas. Vehicles will be parked so they will not roll into sleeping or mess facilities. Vehicle parking areas will be located at least 15 meters from sleeping areas.

(3) Petroleum, oil, and lubricants (POL) storage area. The POL storage area will be located at an elevation equal to or lower than bivouac areas.

(4) Ammunition and explosives storage area. Storage areas for ammunition and explosives will be surrounded by natural barricades, and will be at least 80 meters from the POL storage area, when possible.

b. Sleeping areas. Commanders will:

(1) Designate and mark sleeping areas with white engineer tape. When sleeping areas are around the perimeter of the bivouac area, and it is not practical to mark sleeping areas with white engineer tape, commanders will place extra emphasis on keeping vehicles away from the perimeter.

(2) Ensure sleeping areas are barricaded and are away from roads and vehicle trails, when possible.

(3) Not permit soldiers to sleep:

(a) Immediately in front of, behind or under wheeled or tracked vehicles.

(b) In vehicles with the engine running.

(4) Encourage soldiers to sleep next to natural barriers (i.e., trees) within command-designated sleeping areas. Soldiers will sleep in safe places when in areas without natural barriers.

(5) Ensure guards challenge vehicles to halt at bivouac perimeters, and have a dismounted ground guide before entering assembly or bivouac areas.

(6) Ensure vehicles pass through assembly or bivouac areas only for operational necessity. To move through assembly or bivouac areas or areas where troops may be present, drivers will have ground guides. There will be 10 yards between vehicles and ground guides, TC 21-306, Manual for the Track Combat Vehicle Driver. Ground guides must be trained in using hand and arm signals, as outlined in FM 21-305, and their soldiers' manual.

NOTE: A complete blackout of vehicles in bivouac areas is prohibited during tactical exercises. Isolated blackout movements in bivouac areas may be authorized when a ground guide proceeds with a flashlight. Vehicle drivers will comply with flashlight, and arm and hand signals given by ground guides.

(7) Ensure walking guards are posted and carry working flashlights after dark. Commanders will brief walking guards on their duties.

6-8. FIRE PREVENTION AND PROTECTION.

a. Major active duty and reserve forces commanders are authorized to publish safety directives which conform to the provisions of AR 420-90, Fire and Emergency Services, and FSH Reg 420-5, Fire Prevention and Protection. In no case will subordinate command safety publications be less restrictive or eliminate any of the safety requirements set forth herein. Such publications should be coordinated with HQ, USAG, FSH, ATTN: MCCS-BCB, prior to publication, and implementation.

b. Fires in the cantonment area will be reported to the Camp Bullis Fire Department, by use of the most expedient means. The telephone number for the Fire Department is 911 from government phones and 295-7514, from post housing and commercial phones. The use of fire extinguishers is encouraged only if the fire is extremely small and a report to the Fire Department can be made simultaneously. The safety of personnel is of primary importance. The evacuation of buildings must take priority.

c. Stoves in the hutment area pose a significant hazard if improperly used. All units will maintain fireguards when the stoves are in use. The stoves will be turned off any time no one is in the hutment to monitor them.

d. Vehicles will not be parked in the hutment area or closer than 10 feet to any other structure, unless loading or unloading, or in an approved parking area. When it becomes necessary to block or obstruct a fire lane or access way while loading or unloading equipment or materials, the driver of the vehicle will remain with the vehicle to move it, in the event of an emergency. No parking is allowed along Wilkerson Road, between the posted number parking signs or between buildings 5114 to 5120, 888 to 889, and 5122 to 5124.

e. Fires on the ranges, in the impact area or in the maneuver training areas will be reported to Camp Bullis Operations, immediately. Camp Bullis Operations will request assistance from the Camp Bullis Fire Department. Primary fire fighting will be accomplished by the Fire Department. Personnel other than professional fire fighters will assist in fire fighting only if requested by the Camp Bullis commander. The suppression of a range fire will take priority over all training being conducted. Units may be called upon to cease training and move to another area to assist in the suppression of a fire.

f. During extremely dry and windy weather conditions, and at other times when additional precautions are required, the Camp Bullis commander may: restrict use of such flammable munitions as pyrotechnics, demolitions, tracers, white phosphorous and illuminating combustibles.

g. Lighted smoking materials and matches will not be thrown from vehicles. All cigarettes will be properly extinguished and field stripped. Smoking is prohibited while driving a military tactical vehicle.

h. There will be no campfires or burning of trash in the training areas. All trash will be transported for disposal in the trash dumpsters.

i. All units conducting training at Camp Bullis will maintain a continuing program of educating personnel in fire prevention, reporting of fires and fire fighting. The following points will be emphasized:

(1) Training units will appoint a unit fire marshal on orders, IAW FSH Reg 420-5, and AR 420-90.

(2) Units may draw additional fire extinguishers from the Camp Bullis Fire Station for use in the billet area.

(3) All flammable materials, such as grass and leaves, must be cleared at least 15 feet from demolition pits.

(4) There will be no smoking within 50 feet of ammunition or petroleum products.

(5) Paint and other flammable material will be stored only in an approved metal wall locker that is securable. All lockers will be marked as follows: Flammable--No Smoking within 50 Feet.

j. Pyrotechnics.

(1) Use of pyrotechnics will be coordinated through Camp Bullis Operations on the day of use. Weekend use may be coordinated on Friday. There will be NO blanket approvals for extended periods.

(2) During dry, windy weather, pyrotechnics become a fire hazard. When fire hazard conditions exist, units previously granted authority to use pyrotechnics may be notified of removal of that authority. Notification will be provided to training units via Camp Bullis Operations. Use of pyrotechnics need to be addressed on the Risk Management Worksheet.

(3) Booby trap simulators and trip flares present extreme fire hazards and are not permitted on Camp Bullis.

k. Paragraph 10-3, governs camping and picnic fires on Camp Bullis.

6-9. AMMUNITION AND EXPLOSIVES. The removal of any ammunition from Camp Bullis, whether training or live, is strictly prohibited and punishable under law. The Commander, USAG, FSH, will ensure compliance with the provisions outlined in paragraph 2-10, AR 385-63.

a. Unexploded ordnance (UXO). Because of Camp Bullis' history as an artillery range, there is a large quantity of UXO not only in the impact area, but also throughout Camp Bullis. Any type of UXO, flare, simulator or unidentified object, should be considered extremely dangerous. If any type of UXO is found, the location should be marked, and reported to Camp Bullis Operations, immediately. Camp Bullis Operations will request Explosive Ordnance Disposal (EOD) support for the removal/destruction of any UXO found on post. Mark the spot with any suitable material, no closer than 10 meters to the UXO, so that EOD will be able to find it. In no case will the suspected UXO be handled, moved or disturbed in any way.

b. Pyrotechnics.

(1) Pyrotechnics will be used only for the purpose for which they are designed.

(2) Signal flares will not be fired at people, tents, vehicles or aircraft.

(3) Hand-held pyrotechnics will not be armed before use.

(4) Booby trap simulators and trip flares are not allowed on Camp Bullis.

(5) Red smoke will be used only to signal an emergency. It will not be used to simulate a training emergency. Red smoke that has not been used for an emergency will be returned to the ammunition supply point (ASP).

c. Simulators. Personnel will:

(1) Follow detailed instructions for the use and the safety precautions provided with each simulator.

(2) Observe the minimum safety distances printed on the package or simulator. Hand-held (hand grenade and artillery) simulators, however, will

not be detonated within 25 meters of unprotected personnel, vehicles or buildings (excluding military operations on urbanized terrain (MOUT) facilities).

(3) Not throw simulators directly at people, tents or vehicles. The fragment hazard distance for M115A2 simulators is 25 meters. Only designated and authorized personnel may use M115A2 simulators. The experience level of the personnel in charge of the device will be considered in the risk management process.

(4) Not place hand-held simulators on vehicles. A high surface temperature could ignite simulators.

(5) Never open a simulator or attempt to burn the contents.

6-10. AMMUNITION STORAGE AREA.

a. If training requires the use of high explosive (HE) type material, the using unit will, after coordination with Camp Bullis Operations, bring in the quantity required, and store it under proper security on the range where it is to be used, until the material is expended during the course of training. Camp Bullis Operations will be notified prior to ammunition storage.

b. Security of the ammunition storage area is the training unit's responsibility. All storage operations will be IAW AR 190-11, Physical Security of Arms, Ammunition, and Explosives.

c. Field storage of ammunition is also authorized, but must be accomplished IAW appropriate regulatory procedures.

6-11. CARE IN HANDLING AND PRESERVATION OF EXPLOSIVES.

a. Explosives and ammunition will be carefully handled and transported. Containers will not be tumbled, dragged, thrown or dropped on each other, rolled or walked over the floor or dropped from tailgates of trucks. Ammunition will be loaded and blocked to prevent damage to ammunition and vehicles.

b. Personnel handling ammunition must not tamper with the components, unless specifically authorized to do so.

c. Only non-ferrous or other non-sparking (i.e. bronze) tools or equipment will be used in conjunction with explosives. Safety tools are required when opening boxes for repairs.

d. Ammunition will be protected from direct sunlight and the elements, and dunnage will be used when stacked on the ground to prevent dampness. Use of tarps is recommended for protection of all munitions.

e. The safety precautions contained in AR 385-64, U.S. Army Explosives Safety Program, will apply at ammunition points.

f. Ammunition to be fired will be removed from sealed containers and protected from adverse weather elements, to include the direct rays of the sun, as much as possible. Ammunition will not be removed from sealed containers any earlier than is necessary to prepare it for firing.

This includes inspection and maintenance. Pre-cutting of powder charges is NOT authorized.

6-12. TRANSPORTING EXPLOSIVES.

a. Explosives will be transported and handled only under the direct supervision of competent and qualified personnel who are thoroughly familiar with the safety provisions listed in AR 385-63, AR 190-11, FM 5-250, Explosives and Demolitions, this regulation, and FMs for specific weapons.

b. All appropriate Department of Transportation (DOT) regulations will be adhered to.

c. Vehicles transporting explosives off post will carry "EXPLOSIVE" signs on the front, rear and each side of the vehicle.

d. Signs will be covered or removed when vehicles are not carrying explosives. Trucks loaded with explosives will not be brought into the cantonment area.

e. Vehicles transporting ammunition must meet the requirements outlined in AR 385-64, and FMs for specific weapons.

f. Tarpaulins, though not required, are highly recommended to cover ammunition being transported in combat vehicles on the reservation.

g. Government vehicles involved in on-post shipments of ammunition/explosives shall be equipped, as a minimum, with two Class 10-BC rated portable fire extinguishers; one mounted outside the driver's side of the vehicle, and the other inside the driver's compartment.

h. Unless an organization has a specific training requirement necessitating field ammunition storage, such storage areas will not be established.

i. Ammunition will be controlled IAW AR 190-11.

6-13. SAFETY GUIDELINES, RANGE OPERATIONS.

a. The commander, who is the principal training officer of his/her unit, will have overall responsibility for safety at the firing point or range. The OIC will have written Risk Management/Assessment available for inspection, and will ensure that all safety officers are familiar with the risk level of training being conducted, safety requirements regarding the care and handling of any ammunition being used, and of any other pertinent safety precautions.

b. No one will be allowed forward of the firing line without first obtaining clearance from the Range Control. Personnel will not be allowed down-range on ranges where dud-producing munitions have been fired.

c. Weapons will be inspected immediately prior to firing to ensure all chambers and bores are free of obstruction.

d. Range safety personnel will inspect weapons after each cease-fire, to determine all weapons are cleared.

e. No weapon will be removed from the firing line or position until it has been cleared and placed in a safe firing position with the bolt or breech open.

f. When weapons on the firing line are not being fired, they will be cleared and placed on safety. Bolts will be locked open and weapons will be pointing down-range.

g. Prior to departure from the range, a cleaning rod will be passed through the bore of each weapon; and the weapon will leave the range with the bolt open.

h. Weapons will not be taken forward of the established firing line, except when specifically authorized by the OIC. This includes ranges where personnel are required to move forward and fire at targets, score targets and as required by the training program.

i. No one will be permitted forward of the firing line until all weapons have been cleared, placed in the safe position, checked by competent personnel, and then only after orders have been issued by the OIC.

j. Demolition pits will be inspected prior to commencement of firing to ensure no foreign debris is present.

k. The unauthorized removal of live ammunition from the firing line or unauthorized removal of material, component parts of projectiles or other objects from the ranges will be considered a serious offense, and appropriate disciplinary action will be taken against violators. Privately owned vehicles (POVs) will not be used to transport military ammunition or weapons.

6-14. SAFETY OFFICER REQUIREMENTS AND RESPONSIBILITIES, RANGE OPERATIONS.

a. The OIC/RSO will ensure all safety measures are taken, including, but not limited to the following:

(1) Assistant RSOs are appointed as required by Camp Bullis Operations.

(2) A qualified radio telephone operator is present on the range at all times.

(3) Communications are maintained with "Bullis Control" on ranges, and maneuver/training areas. Failure to maintain communications will constitute justification to close the range/training/maneuver area.

(4) Range regulations for the particular range are understood and followed.

(5) Ammunition is stored and handled properly.

(6) All troops have the proper equipment and are instructed on safety procedures.

(7) Range property and equipment are not damaged or removed and no unnecessary damages are caused by firing.

(8) Necessary warning devices are used.

(9) A red streamer is on the pole during all firing. Red lights will be used during the hours of darkness.

(10) No marker, tower, triangulation stations, gun positions, observation posts, Corps of Engineers markers, United States Coast and Geodetic Survey (USC&GS) markers or buildings are fired on, or otherwise destroyed or damaged.

(11) No one is allowed down-range unless approved by the Camp Bullis Operations.

(12) No one is permitted forward of the firing line until all weapons have been cleared, placed in the safe position, and checked by the RSO or assistant RSO, and then only after orders have been issued by the OIC. The OIC must ensure that personnel moving down-range to check targets will not enter the danger surface zone of any other firing range. The OIC will ensure no one touches a weapon while personnel are forward of the firing line.

(13) Weapons are not taken forward of the established firing line, except when specifically authorized by Camp Bullis Operations.

(14) A "cease-fire" is directed when unsafe acts are observed or when ordered to do so by the SO or by Camp Bullis Operations.

(15) Before departing for the range, the OIC/RSO will report to Camp Bullis Operations and receive a safety briefing. In addition to the safety briefing, SOs will read, understand, and comply with this regulation, AR 385-62, AR 385-63, appropriate FMs and TMs that pertain to weapons and ammunition.

(16) This regulation, and the following equipment are available for use on the firing position for safety purposes:

- (a) Range flag.
- (b) Appropriate weapon TM/FMs.
- (c) Range Book.
- (d) Fire-fighting equipment, if required by Camp Bullis Operations.

b. Upon completion of range firing the OIC/RSO will ensure:

(1) A 100 percent accountability inspection of all ammunition is done when firing is completed.

(2) The range area is policed just prior to departure, to include removal of field wire, trash, target material, expended brass and all packaging materials. (See Chapter 5, Police, Sanitation, and Environmental Protection Requirements.)

(3) All foxhole covers are in place, with a minimum of two sandbags stacked neatly on top.

(4) Sandbags are filled when necessary.

(5) All range property is returned to Camp Bullis Operations immediately after closing the range.

(6) All damaged or inoperative range equipment is reported.

c. For mortar SOs, compliance with the Camp Bullis Mortar Firing Point SOP will ensure all necessary safety precautions are accomplished.

6-15. MALFUNCTION, MISFIRE AND HANG-FIRE, RANGE OPERATIONS.

a. Safety procedures. When a weapon fails to fire, all personnel concerned must follow specific procedures depending on the type of weapon being fired, and/or the condition of the tube (hot or cold), if applicable. The range OIC must know the misfire procedures, and must apply appropriate procedures in case of a misfire in order to afford maximum safety. Malfunctions in the firing of ammunition, such as misfires or hang-fires, are defined and discussed below.

b. Definitions and immediate actions.

(1) Hang-fire: Undesired delay in the functioning of a firing system. The unit will wait the prescribed time as noted in the applicable TM, then will take action IAW the TM.

(2) Misfire: Failure of a round to fire or explode properly. Failure of a primer or the propelling charge of a round or projectile to function wholly or in part.

(3) Dud: Explosive munitions, which has not been armed as intended or has failed to explode after being armed. Also, a round that has gone down-range or a round of unknown origin and has failed to explode.

WARNING: If a unit is throwing grenades, smoke grenades or simulators, and one is a dud, that lane, and the lanes next to it need to be shut down and EOD needs to be called. There will be a one-hour wait before EOD personnel can go down-range to handle the dud.

c. Malfunction. In the event of a malfunction, other than routine, the SO/NCO will:

(1) Take the prescribed actions set forth in applicable TM/FM for the weapon being fired, and notify "Bullis Control" of the malfunction, and the actions taken.

(2) Immediately suspend firing.

(3) Ensure the weapon and ammunition involved are retained intact.

(4) Notify "Bullis Control" of actions taken. Camp Bullis Operations will request EOD assistance, as needed.

(5) Discontinue exercise/problem until clearance has been granted by the range operations officer or a designated representative.

(6) If appropriate, immediately report malfunction IAW AR 75-1, Malfunctions Involving Ammunition and Explosives, to the Ammunition Officer, Supply Division, Readiness & Logistics Business Center (RLBC), FSH, 221-5847.

d. Cease firing. Cease firing is a command normally given by the range OIC; however, in an emergency it may be given by anyone present. At this command, regardless of the source, firing will cease immediately.

WARNING: In the event a weapon fails to fire, keep the weapon aimed on the target. Personnel will stand clear of the muzzle.

6-16. EXPLOSIVE ORDNANCE DISPOSAL (EOD) SERVICE.

a. Disposal of dud ordnance. Duds that are discovered on ranges or in the training areas will be clearly marked, and the coordinates reported to the Operations Branch. Under no circumstances will duds be moved, picked up or disturbed in any way.

b. Misfires. Management of misfires is the responsibility of the using unit and will be accomplished IAW the appropriate weapons TM. Misfires will be separated from unused ammunition, and brass, and turned in through appropriate supply channels.

6-17. SAFETY LIMITS, RANGE OPERATIONS. Safety limits on any direct fire range are the greatest degrees to the right or left that a weapon is allowed to fire. The safety limits for each direct fire range are marked with panels or markers.

a. The right safety panel or marker limits the right angle of fire of the weapon on the right-most firing point, in relation to the right-most target. The left safety panel or marker limits the left angle of fire in exactly the same way as the right. On ranges with established firing lanes, personnel must fire in the lane assigned to their firing point.

b. When firing mortars, the impact of the first round must be observed safe; if not, the unit will notify "Bullis Control" and go to a cease-fire status until the OIC determines proximate cause and requests permission to fire a second round.

c. Left and right range limit lights for night firing. No night firing from direct firing positions will be conducted on Camp Bullis, until the left and right range limit lights (red light) have been emplaced, lighted and are visible to all firers. A range light (red light) will be placed on the range flagpole, and will be lit while the range is in a "HOT" status.

d. Erratic firing. Immediate action will be taken to report any projectile that bursts or lands outside the prescribed safe limits of any Camp Bullis range facility. Those range limits are identified as part of every unit's in-briefing upon arrival at Camp Bullis.

(1) Anyone detecting rounds impacting outside of safe limits or outside of the established impact area, will cause the responsible unit to suspend firing and immediately report the incident to "Bullis Control." The report will include:

- (a) Date and time the erratic round was observed.
- (b) Extent of injury or damage, if any.
- (c) Number of rounds observed.

- (d) Location of impact.
- (e) Location, name and unit of observer.

(2) The range OIC will:

- (a) Order an immediate cease-fire of all units. If appropriate, the Commander, Camp Bullis, and the RLBC, will be notified of the cease-fire.
- (b) Analyze available facts and data to determine the suspect unit.
- (c) Require a technical service investigation if ammunition or weapon malfunction is suspected.
- (d) Prepare a preliminary report of investigation.
- (e) If appropriate, report the incident to the major command headquarters of the suspect unit and require an investigation be conducted. A written report of the investigation will be submitted to this headquarters, ATTN: MCCS-BCB, within 24 hours of completion of the investigation.
- (f) If appropriate, interim reports will be provided to the RLBC, as required throughout the investigative process.

(3) Safety Officers will:

- (a) Suspend firing immediately. Check firer's orientation for small arms ranges.
- (b) For crew served weapon systems, immediately have personnel fall in at the rear of their weapons, and ensure all weapons and associated equipment/material remain untouched. No ammunition will be disturbed until clearance has been given by the Operations Officer, Camp Bullis. Also, if appropriate, collect all firing data from the weapons and fire direction control (FDC), and provide this information to Camp Bullis Operations.

(4) If appropriate, as determined by the Commander, Camp Bullis, an investigating officer will be appointed by the major unit commander. The investigating report will include, but will not be limited to the following:

- (a) Description of circumstances.
- (b) Unit involved.
- (c) Date and time of the incident.
- (d) Type and caliber of weapon involved.
- (e) Lot number, nomenclature, and number of both projectile and fuse, if applicable.
- (f) Description of the incident.
- (g) Description of procedures followed by OIC, SO, and other personnel involved.
- (h) Name and rank of OIC and SO/NCOs.

- (i) Command safety summary.
- (j) Qualification prerequisites for appointment as OIC.
- (k) Duties of SO/NCOs (SOP).

(l) Conclusion. The conclusion will list all corrective actions taken by the unit to preclude future occurrences. It may also include any recommended actions by the unit. All corrective actions and recommendation statements must be signed by the major unit commander.

(5) All preliminary reports of erratic firing will be submitted, in triplicate, to Commander, Camp Bullis, ATTN: MCCS-BCB, within 24 hours of notification. The Operations Manager, Camp Bullis, has the right to reject any incomplete or unsatisfactory investigative reports. Units will not be allowed to resume a "HOT" firing status on the range involved until a satisfactory report has been received by the Commander, Camp Bullis.

(6) Investigating officers may obtain assistance by contacting Camp Bullis Operations.

(7) Continuation of an exercise can only be authorized by the Commander, Camp Bullis.

6-18. HEARING HAZARDS. Commanders at all echelons are responsible for implementing the requirements set forth by AR 40-5, Preventive Medicine, on hearing conservation. Unit commanders will ensure all personnel have in their possession appropriate protective devices. The OIC and SO, will ensure the provisions of AR 385-63, are met, by requiring all personnel in the vicinity of their range or firing point to use hearing protective devices during all firing.

6-19. AGGRESSOR ACTIONS. Any unit or testing team using aggressor personnel for field exercises will comply with the following:

a. Agents Chlorobenzaylmalononitrile (CS) or Chloroacetophenone (CN) or nuclear simulators will not be used without the prior approval of the Commander, Camp Bullis.

b. A definite schedule will be planned for aggressor attacks. There will be no bodily contact or personal assaults, such as throwing rocks, use of rifle butts, fights, etc., between the aggressors and the unit. There will be no mistreatment of "captured" personnel by either side, at any time.

c. The OIC of the aggressor actions will ensure there are no individual/undirected actions by aggressor personnel.

d. The OIC of the aggressors must have a radio tuned to the frequency of the exercise director.

e. All personnel will be accounted for by name at the conclusion of the exercise.

f. No aggressor activity will be permitted within the impact area.

g. Smoke grenades and other spark producing devices will not be used, unless previously authorized by Camp Bullis Operations.

h. Blank cartridges will not be fired at any individual at a distance of less than 10 meters.

i. The OIC of aggressors will not carry a weapon and will not actively engage in aggressor actions. The principal function of the OIC is to ensure that all safety requirements listed herein and in applicable regulations are followed.

j. Aggressors will not barricade or otherwise impede traffic on Camp Bullis roads or tank trails, unless previously authorized by Camp Bullis Operations.

k. All trash and expended materials used in aggressor actions will be policed and removed upon completion of the exercise.

6-20. USE OF BLANK AMMUNITION.

a. Troops using blank ammunition will be instructed that such ammunition is dangerous at close range. Ten meters is the minimum distance at which 7.62mm and 5.56mm blank ammunition may be fired at personnel.

b. Use of blank ammunition in hand-to-hand training is prohibited.

c. Pyrotechnics are prohibited in the cantonment area at all times.

WARNING: Blank ammunition will not be issued at the same time as ball or tracer ammunition.

6-21. WEATHER HAZARDS AND HEAT INJURIES.

a. During adverse weather, numerous hazards can develop. Camp Bullis Operations will make every effort to monitor the weather situation and provide weather advisories to units in training.

(1) Lightning. When an electrical storm is observed within a five-mile radius all training or outside work will cease. Personnel will get away from metal tools and seek shelter. If operating a radio, advise Camp Bullis Operations you are shutting down, turn off radio, disconnect any external antennas and move away from the radio. All groups of soldiers should spread out. If in an open area, move away from metal equipment, crouch with hands on thighs or over ears. Do not place hands on the ground. If in a wooded area, soldiers should also move away from metal equipment and position themselves under the lowest trees in the area -- never under tall trees.

(2) Tornadoes. When a funnel cloud is spotted or a tornado warning is issued, the following should occur: If outside, try to find the lowest point (i.e., ditch, creek-bed or hole), time permitting, and take cover. If in a vehicle, do not try to out-run the storm; take cover as above. If in a building, move away from windows and seek cover under a desk, mattress or in an interior doorway.

(3) Floods. Seasonal heavy rains create an extreme flash flood hazard on Camp Bullis and in the surrounding region. Each year in this area lives are lost to drowning. Most of these occur at low-water crossings where water is channeled, moving rapidly and with great force. Vehicles and individuals are often swept away as they attempt to cross. As potential flooding develops, units should move from low-lying areas and avoid crossing low-water

sites. Main roads are subject to flooding; however, the flood areas last for short duration. It is recommended to wait 1 or 2 hour(s) until flooding subsides.

b. Heat injuries. The three types of heat injuries are: Heat cramps, heat exhaustion, and heat stroke. All personnel must be trained to recognize the symptoms of all three injuries. While the first two are not fatal, the last can be. When it is determined to be a heat stroke, it must be treated as a medical emergency and evacuation must take place as soon as possible (see Appendix G, Prevention of Heat Injuries). See FSH Reg 40-6, Prevention of Heat Injury, for more detailed information on heat injuries.

(1) A wet bulb reading can be obtained from Camp Bullis Operations, on FM 34.20 (call sign - "Bullis Control").

(2) "Bullis Control" will issue warnings to all units when a new wet bulb reading is received.

(3) Obtain the Wet Bulb Globe Temperature (WBGT) by calling, 295-7608.

6-22. WILDLIFE HAZARDS.

a. There are numerous forms of wildlife on Camp Bullis, which can pose a safety threat to humans. Included are rattlesnakes, copperhead snakes, cottonmouth snakes, coral snakes, scorpions, black widow spiders, brown recluse spiders and an assortment of animals, which may be infected with rabies.

b. Include wildlife hazards in your unit's safety briefing. Be sure to identify personnel with animal or plant allergies prior to going to the field.

c. Avoid inadvertent contact with the wildlife. Check and shake out clothing and boots before putting it on. Watch where you step, place your hands before you sit down. Do not attempt to feed, pet, play with or molest the wildlife.

d. If bitten or scratched, report the incident and seek medical assistance promptly.

6-23. CAVE HAZARDS.

a. There are numerous caves found on Camp Bullis, which pose threats to humans. Several caves are deep enough (more than 50 feet), that anyone falling stands a good chance of being seriously or even fatally injured. In addition, some caves contain "bad" air that has carbon dioxide in high enough concentrations to cause loss of consciousness and death.

b. A cave safety briefing will be provided to all personnel training on Camp Bullis. This briefing should stress that at no time is anyone to enter any cave for any reason.

c. Persons entering caves should be reported immediately to Range Control. Do not enter a cave to look for someone believed to have entered a cave.

d. At no time should any material, refuse, vegetation, soil, rocks or pyrotechnics be thrown into a cave. Failure to follow this directive will result in immediate expulsion from the installation.

6-24. LOST/MISSING PERSONS PROCEDURES AND REPORT.

a. The most effective measure that can be taken for lost or missing personnel is the establishment of sound "lost soldier" procedures, and a thorough briefing of all personnel prior to the beginning of training.

b. The following should be used as the rule of thumb for establishing "lost soldier" procedures:

(1) Establish well-defined and easily recognized boundaries. Point these boundaries out on a map or other training aid such as a sand table, etc.

(2) Establish an emergency azimuth in a cardinal direction (0, 90, 180, or 270 degrees) that will move personnel away from the impact area and toward a major road/fire break.

(3) Lost personnel should normally not cross fences. They may end up in the impact area.

(4) Lost personnel should continue to move along their emergency azimuth until they reach a major road/fire break. DO NOT CROSS A ROAD. When reaching a road, they should remain there until a vehicle comes by to pick them up.

(5) Upon hearing a vehicle, lost personnel should shout at it, fire two to three rounds of blanks and generally make noise to attract attention. Consider issuing signal mirrors or whistles to soldiers prior to allowing them to depart on the exercise.

(6) Lost personnel should wave arms, white cloth or reflective material at over-flying helicopters. A signal mirror or orange emergency panel may also be used. At night use a strobe, signal fire, flashlight or glow stick, to attract aircraft or vehicles. (Ensure all fire starting safety precautions have been followed.)

(7) All personnel should begin training with at least one full canteen of water, a first-aid kit and a working flashlight/glow stick. Other equipment that may be considered are a whistle and a signal mirror. If the training event is land navigation, a finish-time should be established.

(8) If an individual(s) is not finished with the course at the established finish-time, he/she should immediately take up the established "lost soldier" procedure, follow the emergency azimuth, move to a road and wait for pickup.

(9) All individuals participating in land navigation training should be issued a map with the impact area clearly marked. The procurement of these maps is a unit responsibility.

c. Upon discovery of a lost/missing person, the training unit should take the following action:

(1) Camp Bullis Operations (call sign on the radio is "Bullis Control") will be notified when an individual is missing in the range/maneuver areas in the vicinity of the impact area. Command and control for conducting the search will be assumed by the Commander, Camp Bullis, within 2 hours of being notified of the lost/missing soldier. Initially, all ranges will cease-fire and the unit will begin a search. **Camp Bullis range personnel will conduct the search for missing persons in the impact area.**

(2) Reports of missing/lost personnel should go directly to "Bullis Control." Camp Bullis Operations will notify the appropriate personnel.

(3) When it is evident the individual became lost in an area not included in the range impact area, a search party of such size as to thoroughly search the suspect terrain will be quickly organized and put into operation. **Do not send inexperienced personnel out to search** -- they may become lost themselves.

(4) When it is evident or suspected the individual is lost in or adjacent to the range impact area, clearance will be obtained from Camp Bullis Operations, prior to initiating a search of the suspect terrain.

(5) The senior commander involved will arrange position control and communications between the search group and the Operations Section.

(6) When the lost individual has been found, the Operations Officer, or a designated representative, will be notified immediately. Notification will include information on any searchers remaining in the impact area. Once the individual is found, action will be taken to expedite evacuation of the impact area, and a report will be submitted to the Operations Officer/or representative.

6-25. AVIATION SAFETY. For information on aviation safety at Camp Bullis, refer to FSH Reg 95-1, Aviation General Provisions, Local Flight Rules and Flight Standardization, and the Camp Bullis Air Operations SOP.

6-26. RAPPELLING SAFETY PROCEDURES.

a. Rappelling will be conducted only in areas that have been certified and inspected to be safe by Army engineers. As of January 1998, these areas are TA-11, Rappel Cliffs, and TA-17, Rappel Tower. Coordination will be made through Camp Bullis Operations.

b. Units will coordinate medical support requirements prior to conducting training.

c. Accidents/incidents will be reported to "Bullis Control" FM 34.20, by the fastest means available. Reports will include:

- (1) Unit, date/time and location of accident.
- (2) Name and grade of qualified trainer.
- (3) Personnel and equipment involved in accident/incident.
- (4) Mode of evacuation/transportation to hospital.

d. All injuries resulting from a fall from rappelling will be evaluated by a medical doctor.

e. Medical personnel with vehicle and equipment will be at the training site until the training has been completed. These medical personnel will not actively participate in rappelling training.

6-27. DROP ZONE SAFETY OFFICER (DZSO).

a. A DZSO will be used by all units whenever a DZ is active for parachute drops. For modular platform, container delivery system (CDS) and personnel drops, a DZSO will perform all safety functions. The DZSO must be jumpmaster qualified and ranked SFC or above. The DZSO must conduct all operations IAW the Camp Bullis Air Operations, SOP.

b. One hour prior to the scheduled aircraft time on target of any DZ, the DZSO will open the DZ with Camp Bullis Operations.

c. The DZSO will inform Camp Bullis Operations when the aircraft is 10 minutes out from the DZ. At this time Camp Bullis Operations will ensure the aircraft's line of flight is still clear.

d. The DZSO will maintain radio communications with Camp Bullis Operations during all operations.

e. At no time will the DZSO change the flight pattern or route (other than for minor corrections) of the aircraft after it has been established with Camp Bullis Operations. All flight patterns will be IAW the Camp Bullis Air Operations SOP.

f. Vehicles, other than those required for control purposes, will not be permitted on an active DZ during a parachute drop. The DZSO will ensure the DZ is clear of all other vehicles well in advance of a scheduled drop, and that they remain clear until all parachutes have landed. All POVs are strictly forbidden on the DZ or any other range facility or location, unless specifically authorized by Camp Bullis Operations.

g. At the completion of the activity, the DZSO will close the DZ with Camp Bullis Operations and give all requested information prior to discontinuing communications.

h. The DZSO is responsible for the policing of the DZ and surrounding area, prior to clearance.

i. All DZSOs will report to Camp Bullis Operations prior to any operation for a safety briefing, and to obtain barriers and signs for the DZ.

6-28. PREVENTIVE MEDICINE SERVICE.

a. Prior to training at Camp Bullis, units must contact the Preventive Medicine Service at Fort Sam Houston, at 295-2941 or 295-2500. It is imperative units training at Camp Bullis are supplied with the proper training and equipment to prevent climatic injuries, water, and food-borne illnesses.

b. The Preventive Medicine Service provides inspections, consultation, and training in the following areas: Water testing and analysis, food sanitation, climatic injury prevention and WBGT conditions, heat index readings and recommendations. (Reference: Appendix K-1).