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INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON
FORT A.P. HILL, VIRGINIA 22427-3114

APH Regulation 350-2

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Directorate of Plans, Training, Mobilization and Security
RANGE REGULATION

FOR THE COMMANDER:

DISTRIBUTION:

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History. This publication is a complete revision of and replaces Fort A.P. Hill 350-2 dated 1 Feb 1996.

Summary. This regulation establishes policies and procedures for the use of ranges and live-fire facilities at Fort A.P. Hill.

Applicability. This regulation applies to all users of the Fort A.P. Hill range complex.

Suggested Improvements. The proponent of this regulation is the Directorate of Plans, Training, Mobilization and Security, Range Control Fort A.P. Hill. Users are invited to send comments and suggested improvements on DA Form 2028, (Recommended Changes to Publications and Blank Forms,) to the Fort A.P. Hill Range Officer, ATTN: IMNE-APH-PLR, Fort A.P. Hill, VA 22427-3106.

*This Regulation supersedes APH Regulation 350-2 dated 1 February 1996.

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CHAPTER 1 INTRODUCTION

1-1. PURPOSE

- a. To define responsibilities and prescribe the policies and procedures to be followed by all units, civic organizations and individuals training at Fort A.P. Hill in order to ensure realistic training that will enhance combat readiness while at the same time ensure safe operations.
- b. This regulation supplements and supports AR 350-19, AR 385-63, DA Pam 385-63 and all other applicable safety directives as well as pertinent field and technical manuals.
- c. This regulation applies to all personnel that use range facilities and specific training areas on this installation.
- d. Detailed information on range facilities and their capabilities is provided in appendix A to this document.
- e. Information on training facilities that are not part of the range complex is contained in Fort A.P. Hill Regulation 350-1.
- f. Unless otherwise approved by the Installation Commander or the Range Officer, all personnel utilizing Fort A.P. Hill range facilities will comply with the requirements and directives prescribed in this regulation.

1-2. REFERENCES. Required and related publications and prescribed and referenced forms are listed in appendix J.

1-3. DEFINITION OF TERMS

Approved overlay. An overlay prepared by the requesting unit IAW Chapter 19 that has a control number issued by Fort A.P. Hill Range Control.

Combined Arms Live Fire Exercise (CALFEX). A training exercise where a maneuver element, platoon size or larger, employs combat formations and the use of supporting mortar, artillery, attack helicopters demolitions and/or close air support (CAS) fires.

Cease Fire. A command to immediately discontinue firing. Any person observing an unsafe condition at the firing location may give the command. This term is also used as a control measure during training. Only Range Control can lift a cease-fire.

Cease Fire Freeze. On receipt of a "CEASE FIRE FREEZE", message sighting and aiming stakes will be left in place, sight settings will not be altered, and personnel will move away from their weapon. Artillery and mortar firing charts, computer records, and associated data from the last fired missions will be collected and prepared for delivery to Range Control if needed. The use of cease-fire or check fire will be accepted as a command to stop firing, and when used will be relayed by voice or any means required to all firing positions in the area affected. Whether the term used was the correct term

by definition will be resolved at a later time, if necessary.

Check Fire. A self imposed command to temporarily cease firing for administrative purposes (Re-supply, Change of ammunition types, conduct briefing or replace targetry for example.) imposed by an authority who does not have to be physically located at the firing site. The element that initiates a check fire, has the authority to lift it.

Command Certified. The certification by a unit Commander (O-5 or above) that a specific individual has received the necessary training and possesses the knowledge and experience to properly and safely supervise the live firing of a specific weapon system.

Controlled Area (CA) All Ranges and Training Areas south of route 301 along with training Areas 17 and 19 on the north side of 301 are considered Controlled Areas. Unauthorized access is prohibited.

Controlled Firing Area. (CFA). Established to contain activities, which, if not conducted in a controlled environment, would be hazardous to nonparticipating aircraft. The CFA shall be used for those activities, which are either of short duration or of such a nature that they could be immediately suspended on notice that such activity might endanger nonparticipating aircraft.

Controller. A qualified Commissioned Officer, Warrant Officer, or NCO (SSG or above) who is directly responsible to the Range Safety Officer for the coordination and control of maneuver elements, and organic supporting fires in strict compliance with all safety regulations.

Cook off. A round, which functions out of the intended sequence due to heat buildup in the barrel or tube.

Dry Facility. Range facility, which is in use or is occupied with no actual live fire involved.

UXO. Explosive ammunition that has not been armed as intended or failed to explode after being armed.

Duded Area. Any area known or likely to contain unexploded ammunition or ordnance of any kind.

Hang fire. An undesired delay in functioning of a firing system. A hang fire for a rocket occurs if the propellant is ignited by the firing impulse but fails to exit the launcher within the expected time (applies to HYDRA-70 2.75 rockets).

Hot status. Is defined as anytime weapons, ammunition, or ordnance are present on a range facility. A red range flag by day supplemented by a red light during the hours of darkness will be displayed at all times during hot status.

Impact Area. An area specifically designed to contain UXO producing munitions, rounds, residue, or laser beam impact. There are two categories of Impact Area:

Permanent Impact Areas: Designated within the complex and intended for indefinite use. These are irreversibly committed and require joint approval by HQDA ACSIM and HQUSACE. The Installation Range Officer must approve entry into permanent impact areas.

Temporary Impact Area: Designated within the complex and designed for one time use. These areas are in conjunction with fire and maneuver exercises, where Soldiers will maneuver into an area after it has received fire. The establishment of temporary impact areas requires the permission of the Installation Range Officer and DPW environmental section. Unless every round was observed as detonated, the area must be surface cleared by the unit under the supervision of EOD and Range personnel prior to units maneuvering. Only Artillery and Mortars can fire into a temporary impact area.

Incident. An unintentional or chance event considered likely to result in property damage or injury to personnel.

Laser Range Safety Officer. The Commissioned Officer, Warrant Officer, or Noncommissioned Officer (SSG or above) designated by the unit Commander who is responsible for all operational and safety aspects concerning LASER operations on a range or training facility.

Misfire. Failure of a primer, propelling charge of a round, or rocket or guided missile ignition and/or propulsion system to function wholly or in part.

Malfunction. Failure of an ammunition item to function as expected when fired or launched, or when explosive items function under conditions that should not cause functioning. Malfunctions include hang fires, misfires, duds, abnormal functioning, and premature functioning of explosive ammunition items under normal handling, maintenance, storage, transportation, and tactical deployment. Malfunctions do not include accidents or incidents that result solely from negligence, malpractice, or situations such as vehicle accidents or fires. Malfunctions are divided into three classes:

Class A. Malfunctions that result in death or lost-time injury, are similar to previous malfunctions that have resulted in death or lost-time injury, are judged as having had an appreciable probability of causing death or lost-time injury, or that have adverse political implications.

Class B. Malfunctions that result in damage to major equipment that cannot be repaired at unit level maintenance or result in an ammunition suspension that significantly impacts readiness or training.

Class C. Malfunctions that are neither class A or class B.

Range Officer-In-Charge (ROIC). The Commission Officer, Warrant Officer, or Noncommissioned Officer (SFC or above) designated by the unit Commander who is responsible for all operational and safety aspects of a range or training facility.

Range Safety Officer (RSO). A qualified commissioned Officer, warrant Officer, or NCO (SSG or above), who is directly responsible to the ROIC for safety on the range facility.

Simmunitions. A reduced-energy, non-lethal and non-toxic cartridge, which leaves a detergent-based, water-soluble, color-marking compound at impact. These visible impacts allow accurate assessment of simulated lethality. The cartridges are available in .38 and 9 mm calibers (for use in most weapons) and feature tactical accuracy up to 25 feet (7.6 meters). The 5.56 mm is tactically accurate and matched with ball cartridges to 100 feet (30 meters).

Switches/Hot. Armament sub-systems are considered hot with switches on and circuit breakers in.

Switches/Cold. Armament sub-systems are considered cold with the master arm switch on safe or off position.

Wet Facility. Range facility, which is in use and on which ammunition or demolition is being fired.

1-4. RESPONSIBILITIES. These are primary responsibilities reinforced here for the implementation of range safety. The full scope of responsibilities can be found in DA PAM 385-63.

a. Installation Range Officer. The Range Officer is responsible to the Commander, Fort A.P. Hill, Virginia for the control, supervision, safety, issuance, clearance, maintenance, and coordination of all range training activities and associated facilities on the installation. He will maintain this regulation and installation policy current to applicable range and safety directives.

(1) Supervise Range Control personnel and operations. Range Control will serve as the central point of control and coordination for access to the Impact Area and the controlled air space (Restricted Airspace R6601). In addition, Range Control will operate as net control for the range and aviation tactical frequencies, the Range/Training Admin net, and as the Emergency Operations Center (EOC) for training emergencies.

(2) Oversee safety on the Range Complex, coordinate for range maintenance, and serve as the center of expertise for range safety. He will additionally maintain the office of record for all historical range data.

(3) Advise and coordinate with the ROIC to ensure the safe and efficient operation of range facilities. This will include inspections and/or supervision of firing to guarantee compliance with this regulation.

(4) Make on the spot corrections of violations of this regulation or other applicable directives to include relieving the ROIC/RSO when deemed appropriate. Major violations may be reported to the Commander, Fort A.P. Hill.

(5) Provide safety briefings, guidance, and range orientation for ROICs and RSOs.

(6) Investigate accidents/incidents.

(7) Resolve conflicts concerning Range Operations.

(8) Ensure that range equipment is accounted for and maintained in a serviceable condition and adequate for issue to using units.

(9) Coordinate for and oversee all planning, construction, and maintenance of range facilities.

(10) Plan and initiate actions necessary to keep the range complex abreast of changing weapons and doctrine.

(11) Notify the installation safety manager of any serious range accident or incident.

(12) Notify QASAS concerning any incident involving munitions.

(13) Acts as the Installation Laser Safety Officer.

b. Installation Safety Manager.

(1) Will provide assistance to the Installation Range Officer on hazard abatement and risk assessment.

(2) Will investigate serious range accidents and incidents IAW AR 385-40 and file appropriate reports.

(3) Will conduct an annual review of Fort A.P. Hill Reg 350-1 and Fort A.P. Hill Reg 350-2 to ensure compliance with safety regulations.

c. Commanders.

(1) Commanders are ultimately responsible for the safe operation of all range facilities occupied by their units and the compliance of their units with this regulation.

(2) Commanders at all echelons are responsible for implementing the requirements set forth by AR 40-5 on hearing conservation. Unit Commanders will ensure that personnel have and use appropriate hearing protective devices. ROIC's and RSO's will require all personnel in the vicinity of their range to use hearing protective devices during live firing. Hearing protective devices are a unit issue item.

(3) Ensure subordinate units comply with the requirements of this regulation, AR 385-63 and applicable FM's and TM's relating to weapons, ammunition and training facilities. Ensure subordinate commands conduct safe and proper training on ranges or training areas.

(4) The Commander of any element using Ranges or Training Facilities on Fort A.P. Hill has the ultimate responsibility for all actions that occur on that facility. The Battalion Commander (U.S. Army) Squadron Commander (U.S. Air force) or Installation Commander (U.S. Marine Force) will designate an ROIC to be responsible for the safe conduct of training and proper use of the facility. When live firing is to be conducted, the Commander will also appoint an RSO to assist the ROIC in his duties. If lasers are to be used a LRSO will also be appointed to assist the ROIC concerning laser safety. The ROIC, LRSO and RSO will be certified to perform their duties as described in Para 1-3 of this regulation. The designation and presence of an ROIC or RSO does not relieve the Commander of the responsibility for safe conduct of training or firing.

d. Range Officer In Charge (ROIC). The ROIC has responsibility for the overall safe conduct of training on his range facility. The ROIC will:

(1) Ensure that RSO's are validated by a command certification letter, briefed by Range Control, have valid Safety Cards in their possession, and the unit has in-processed the installation through DPTMS Fort A.P. Hill.

(2) Be present with the RSO and required medical coverage during all live fire activities on the

range facility.

(3) Ensure that he has no other additional duties while acting as ROIC.

(4) Sign for and be responsible for turn in all range facility equipment and keys from Range Control.

(5) Ensure that he receives a Range Acceptance/Clearance Checklist (DPTMS Fort A.P. Hill Form 6) from Range Control and has a copy of this Range Regulation and applicable weapons and ammunition publications on hand at the range facility prior to firing.

(6) Establish radio communications with Range Control prior to occupying the range facility and ensure that it is maintained and monitored on dedicated equipment until the unit is cleared.

(7) Ensure that a DA Form 1594 is maintained noting all significant activities. Significant activities include but are not limited to:

a. Ensure the range facility is cleared and all keys and equipment have been turned in.

b. Ensure that he and the RSO know safe routes in and out, limits for the weapons/ordnance being used, and that Range Control has been informed about weapons systems, ammunition, simulators, flares, explosives, or other ordnance to be fired.

c. Prior to commencing range operations, conduct a safety and information briefing for all personnel on UXO, the use of hearing protection, seasonal warnings, weapons and ammunition warnings, "cease -fire freeze", and the installation's program on ammunition amnesty (AAP) and ammunition found on post (AFOP).

d. Ensure that barriers are locked or guards are in place, adequate medical coverage is available, and the red flag/light is displayed from the range facility flagpole before requesting "hot status". Range Control will be notified of all cease-fires that will exceed 30 minutes. At the completion of firing the ROIC will request a "cold time" and give an approximate time for clearing the facility. All times and changes of status will be recorded on the Range Acceptance/Clearance Checklist.

e. Ensure that any nonstandard operation, or any operation covered in Chapter 19 of this regulation has been cleared in advance by Range Control and meets all requirements. If Range Control and the ROIC do not both have a copy of the approved overlay, the range will not be cleared to fire.

f. Immediately notify Range Control of all accidents and weapons/ammunition malfunctions and personally supervise the procedures for misfires, hang fires, and cook-offs.

g. Ensure that the range usage data block on the DPTMS (Fort A.P. Hill) Form 6 is completed and turned in to Range Control. All ammunition expended will be recorded by type and quantity. Personnel strength and times of occupation must be reported even on range facilities where there was no live fire. Range usage data applies to all range facilities including the laser range, ammunition field storage sites, observation positions (OP's), forward arming and refueling points (FARP) where personnel strengths are not included as part of another range facility.

h. Range Safety Officer (RSO). Personnel assigned duties as a RSO are responsible for the safe conduct of fire and will not be assigned additional duties while performing this function. The RSO will:

(1) Ensure that each firer has received at least 4 hours of PMI prior to using the range.

(2) Ensure that weapons are at the proper firing location; only authorized ammunition, explosives, training devices, or other ordnance is used; firing settings and limits are properly set and verified; and all weapons are inspected before firing to ensure safe operation.

(3) Check visible parts of the Impact Area, back blast area, and the "downrange area" for personnel or equipment before live firing. This will include placement of guards and/or barriers denying access to the impact and downrange areas.

Prevent improper handling of ammunition, weapons, simulators, and/or explosives.

(4) Ensure that all personnel on the range facility wear hearing protection during live firing.

(5) Ensure that the medical support requirements of this regulation and the unit Commander's directive are met before allowing live firing to commence or continue.

(6) Ensure that a safety and UXO briefing is conducted for all personnel. Safe operating procedures pertaining to the weapon system and ammunition being used will be explained and all firers will be instructed on immediate action and misfire procedures. A sample UXO briefing is included as Appendix B.

(7) Upon completion of firing verify weapons are clear to the ROIC. UXO locations will be identified to Range Control personnel with number and approximate location recorded on Range Acceptance/Clearance Checklist under "REMARKS".

1-5. RANGE SAFETY CERTIFICATION PROGRAM

a. All Range Officers-In-Charge (ROICs), Range Safety Officers (RSOs), and Laser Range Safety Officers (LRSOs) are required to have a current range safety certification card issued by Fort A.P. Hill. This also applies to other organizations to include Rod and Gun Clubs, local police offices, U.S. Government agencies and other non-military organizations approved to use of ranges and training. The Range Safety Certification program is a joint effort between the using unit Commander and Range Control to ensure that the Soldiers are well versed in both the weapons systems and the ranges on which they are employed.

b. Range Safety Certification process includes:

(1) Commander Certification. The using unit Commander, equivalent to battalion level or above, will certify in writing to Range Control that the ROIC, LRSO and RSO are qualified and competent on the weapon to be fired. Competency includes knowledge of misfire procedures, malfunctions, hang fire, downloading, uploading, ammunition handling/storage, weapon clearance

procedures, ballistic ranges, fire control procedures, and other hazardous characteristics of the weapon being employed. See the example memo in Appendix C.

(2) Range Certification. Appointed ROICs and RSOs must complete range certification testing at the designated Range Control Center. Testing will ensure ROICs and RSOs are familiar with range safety requirements in general and the specific safety requirements for individual ranges (where applicable). At the successful completion of testing, ROICs and RSOs will be issued a standard range safety card to be valid for one year (renewable annually through update briefings at the servicing Range Control Center). Also, the ROIC and RSO will have their personal information entered into the RFMSS database to ensure proper automated cross checking during range opening procedures.

1-6. MINIMUM GRADE REQUIREMENTS FOR ROIC OR RSO. The grade requirements for ROIC and RSO listed below are mandatory. In accordance with DA PAM 385-63 Chapter 1 Para 1-7g, the Installation Commander may reduce the ROIC/RSO grade requirement in table 1-1 by not more than one grade, with the following exceptions:

- a. OIC of a Battalion or larger combined arms live fire exercises (CALFEX) will be a field grade Officer.
- b. RSO for Marine Corps will be E6 or above for hand grenades.
- c. Marine Corps EOD units are exempt from ROIC/RSO requirements. EOD units conducting EOD operations and training will supervise demolition and disposal operations following the guidance contained in NAVSEA OP5, NAVSEA SWO60-AA-MMA-010, and EODB 60 series publications. Marine Corps EOD units conducting disassembly and inserting will assign a qualified EOD technician as an RSO. The RSO may be an E-5 or above if, they are currently qualified as an EOD Officer or technician MOS 2305/2336.

Range Safety Personnel Grade Requirements

FUNCTIONAL AREA:	ROIC ¹			RSO ¹		
	OFF	WO	NCO	OFF	WO	NCO
Practice hand grenade and rifle grenades; Sub-caliber training devices; LASER ranges, firing devices; simulators, trip flares; small arms and machineguns.	X	X	E6	X	X	E5
Chemical agents and smoke ^{2, 6}	X	X	E6	X	X	E5
Aerial gunnery, air defense weapons; flame-throwers; live grenades (hand and rifle); mines And demolitions; mortar; recoilless weapons; rockets; guided missiles; tank cannon.	X	X	E7	X	X	E6
Field Artillery ³	X	X	E7 ³	X	X	E6
Mortars ⁷	X	X	E6	X	X	E6 ⁷
ADA Rockets and Guided missiles		X			X	
Direct Fire Antitank rockets and missiles	X	X	E7	X	X	E6
Live fire exercises using organic weapons, squad thru company, battery, troop.	X	X	E7	X	X	E6
Combined Arms Live Fire Exercises (CALFEX) using outside fire support, troop, battery, squad, platoon, company or Battalion and larger ⁵	X	X	E7	X	X	E6
<p>Notes:</p> <ol style="list-style-type: none"> 1. Civilians in the grade of GS-07 or above may act as ROIC and GS-05 or above may act as RSO. Civilian contractors may act as ROIC and RSO when approved by the installation Commander and IAW contract SOW. 2. OIC and RSO must be nuclear, biological and chemical qualified when conducting NBC or Smoke training. 3. Use of E7s as ROICs is authorized only when approved by the Installation Commander. Either the battery executive Officer or platoon leader normally performs duties as RSO. 4. SRSO will be a field grade Officer, CW4 or CW5 (Army), or Civilian in the grade of GS-12 or above. 5. OIC will be a field grade Officer for battalion or larger CALFEX. 6. RSO for Marine Corps will be E6 or above for practice hand grenades, Chemical Agents and smokes. The installation Commander may allow E5 to act as RSO for practice hand grenades, Chemical Agents and smokes. 7. RSO for Marine Corps can be E5 for mortar training activities. 						

1-7. RANGE SAFETY OFFICER DUTIES FOR INDIRECT FIRE RANGES. This chapter is in addition to RSO duties as prescribed in this regulation and AR 385-63.

- a. Verify the safety diagram and safety cards are on hand and correct for the unit, time, and place. The RSO will compare safety data with the Fire Direction Officer (FDO) and maintain a copy of each section's safety data. He will verify the "Safety T" for each section is accurate and in the possession of the section chief.
- b. Verify the lay of the weapons with a properly declinated check instrument.
- c. Verify correct firing position location, referred deflection, positioning of collimator and/or aiming posts, ammunition to be fired, and all other necessary items and procedures are accomplished prior to live firing.
- d. Ensure that pre-fire safety checks are properly performed on each weapon and that ammunition lots are separated to avoid firing of mixed lots.
- e. Verify in the weapon logbook that a bore scope and pullover has been performed within the required time period for that weapon.
- f. Visually check for parallel lay and supervise and check the emplacement of safety aids such as stakes, tape, etc.
- g. Verify that range clearance has been obtained.
- h. The ROIC will ensure that all ammunition fired is cleared for overhead fire and not restricted or suspended. Range Control must be notified in advance of firing, anytime ammunition to be used is not cleared for overhead fire so arrangements can be made to control access to area D. The ROIC request for "hot status" is his verification to Range Control that all ammunition has been cleared for overhead fire.
- i. Ensure that all required and normal safety checks are performed and complied with so that all rounds impact in the designated area.
- j. Supervise the safe and proper burning of all unused propellant increments or charges after firing is completed at each position.

1-8. ROIC/RSO BRIEFINGS

- a. Briefings are conducted at Range Control on 0900 Monday, 1500 Friday and Saturday at 0700. Certification as ROIC/RSO remains valid for one year. Requests for special briefing times or locations can be submitted in writing or by calling Range Control at 804-633-8410 (DSN 578-8410) a minimum of five working days in advance.
- b. Personnel acting as ROIC/RSO must be familiar with this directive and ensure that the guidelines are followed by all personnel. ROIC/RSO are required to pass a test after receiving the briefing from Range Control in order to be Range safety certified. This test includes questions from this regulation concerning range/safety procedures.

1-9. CONTROLLED SUBSTANCES. No alcoholic beverages or controlled substances will be consumed or be present at any range any time.

CHAPTER 2 RANGES

2-1. RANGE CONTROL HOURS OF OPERATION

a. Normal duty and firing hours coincide with the installation's controlled airspace hours of 0700-2300 hours daily. Range Control opens at 0700 hours and closes when all range and live-fire operations have ceased for the day and all equipment is accounted for and secured. Special requests for extensions of these times with appropriate justification should be submitted to: Director, DPTMS, Fort A.P. Hill, Virginia at least 30 days in advance. The Federal Aviation Administration (FAA) has the approval/disapproval of any live-fire operation times between 2300 and 0700 hours.

b. Units must contact Range Control with confirmation of their intention to fire NLT 0900 hrs for day firing and 1630 hrs for night-fire each day a facility is scheduled. If confirmation is not received, Range Control will assume the scheduled use of the facility is cancelled.

2-2. RANGE SCHEDULING

a. Units scheduled to deploy will have priority for all ranges on Fort A.P. Hill. If there is an irreconcilable conflict of interest between two deploying units, then the Fort A.P. Hill DPTMS will determine the priority based on the request date and the date of deployment.

b. Enhanced Remote Electronic Target System (ERETS) ranges are high demand facilities that require operator support. In order to allow for maximum utilization and required operator support, units should schedule times as closely as possible to what is actually needed.

c. Co-use consists of a primary unit (the unit with priority) and secondary unit(s). The primary unit must approve co-use. The primary unit Commander assumes responsibility for the safety and coordination of all units involved. The primary unit is responsible for providing the DPTMS scheduling section with an amended range request addressing changes. In the event that the range is a maneuver live fire or two ranges that conflict, then the primary unit is responsible for ensuring that a scenario is submitted in accordance with Chapter 19 of this regulation. The primary unit can cancel a co-use agreement at any time.

d. Static fire ranges (qualification, familiarization, zero etc) will be scheduled a minimum of 30 business days prior to execution. Night-fire must be specified on the initial range request. Extensions to daytime firing schedules in order to night-fire will not routinely be granted and must be cleared through the Range Officer.

e. Maneuver and non-standard ranges (CALFEX, MOUT, Maneuver, Convoy Live fire, R&D, AVN gunnery etc) must be scheduled a minimum of 30 business days prior to execution. NLT 20 days prior to execution, the requesting unit must submit a Range packet to the Range Officer Fort A.P. Hill for review. Chapter 19 covers the requirements for a Range packet.

f. The Range Officer Fort A.P. Hill may approve same day scheduling of static fire ranges on a case-by-case basis.

g. The Primary means of scheduling will be through RFMSS. Units that are not RFMSS capable will send request letters with justification to the Directorate of Plans, Training, Mobilization, and Security (DPTMS). They will be processed by date on a first come, first serve basis. Incomplete requests will not be processed.

h. Due to manning requirements, units must schedule hours of operation accurately. Ranges that exceed scheduled usage will be approved on a case-by-case basis by the Range Officer Fort A.P. Hill and may require reimbursement for Operator and/or Firing Desk Overtime. Block scheduling of ranges will not be approved without justification.

i. Cancellations must be received a minimum of 2 weeks prior to the execution date. If a unit is forced to cancel inside the two-week deadline or is a no show, a justification letter must be submitted to the scheduling section of Fort A.P. Hill DPTMS. All late cancellations, no shows and justifications will be reported to the Fort A.P. Hill Installation Commander and the first 0-5 in the unit's chain of command. The installation may also charge for the scheduled day and time. Units may also be charged for unused scheduled time in excess of 2 hours.

j. Trained operators are provided for Enhanced Remote Electronic Target System (ERETS) ranges. This does not relieve the unit of ROIC/LRSO/RSO responsibilities however, it does greatly add to the operating expense of the range. When a unit's range usage requires overtime for the operators, either because of the hours requested or because more time is required than scheduled, the unit may be charged for the overtime operation. Range operation starts and ends at Range Control and includes range PMCS and shutdown checks. Range Operators are scheduled for the times the unit has requested/been approved on a given range.

k. Questions regarding range facility capabilities should be communicated directly to Range Control telephonically at (804)-633-8224 or DSN 578-8224. Every effort will be made to accommodate your training needs.

l. Scheduling conflicts for field artillery are based on ammunition cleared for overhead fire. Conflicts corresponding to ammunition not cleared for overhead fire will be determined on a case-by-case basis.

m. Scheduling of ranges inside the 30 day window requires a memorandum from the first 0-5 in the chain of command stating the reason for the late request and what will happen if the request is not approved. An example memorandum can be found in appendix I.

2-3. RANGE/CA SECURITY

a. The Controlled Area/Impact Area is marked by warning signs and/or locked barriers. Entry into the impact area is strictly prohibited without Range Control permission and possession of a key does not in any way imply free access. Unauthorized entry is a Federal offense and those apprehended will be prosecuted. All personnel requiring access must report to Range Control and coordinate the reason, destination, and routes to be used prior to their being allowed entry.

b. The Installation Range Officer must clear entry into the Impact Area by anyone other than members of Range Control or EOD. Access will only be considered for approval after the proper information has been submitted. Information that must be provided will include the purpose of entry,

how transportation will be handled, locations visited, timeline of the event, risk assessment and a signed waiver of liability from the individual to the Federal government and the installation. A blanket acceptance of liability statement signed by the sponsoring unit Commander may be required.

c. Entry into the Impact Area when firing is in progress requires that personnel have in their possession a map and radio. Communications will be continuously maintained with Range Control while in the Impact Area.

d. All range/Impact Area gates will either be locked or guarded by the unit using the area. Guards that are not within visual and verbal distance of the range facility must have two-way wire or radio communication with the range.

e. Keys will not be issued in bulk. The ROIC and RSO are the only individuals authorized possession of the keys for their ranges. If the ROIC or RSO are replaced or rotated, then keys CAN be transferred to the oncoming authority after verbal notification to Range Control.

2-4. RANGE DETAILS. Although our primary focus is to make the range support mission invisible to the users, during heavy usage or unusual circumstances, units may be requested to supply details to assist Range Control in any of the following situations:

- a. Range operations, maintenance, and communications.
- b. Help fight range fires.
- c. Provide range police and cleanup.
- d. Range security.

2-5. SAFETY AND RISK ASSESSMENT. The unit Commander is the principal training Officer and has overall safety responsibility for his unit. The following policies and procedures are established to permit the unit Commander maximum flexibility in planning, training, and realism while providing for a safe environment for personnel and equipment.

- a. Safety.

(1) Ensure that each firer has received at least 4 hours of PMI prior to using the range.

(2) The ROIC is responsible to the unit Commander and has overall responsibility for the safe and efficient operation of the range facility.

(3) The RSO will be a dedicated safety person and will be present during all live-fire operations.

(4) A Laser Range Safety Officer (LRSO) must be assigned and on station during all LASER operations. His duties will include.

- a. Ensuring the unit conforms to the SDZ presented to Range Control.
- b. Ensure there are no specular hazards down range.

(5) Additional Assistant Range Safety Officers (ARSO) may be appointed by the ROIC to assist the RSO in managing safety on the firing line. The ARSO does not have to be a certified safety person. This will in no way relieve the ROIC or RSO from their responsibilities.

(6) When multiple firing locations are used and positive control by the ROIC and RSO cannot be maintained, additional RSO's will be appointed by the ROIC. At least one dedicated RSO will be present at each firing location. When more than one safety Officer is used the ROIC will have communications with each location and establish a safety chain of command with one RSO being the Senior Safety Officer. Range Control must be briefed and concur on how communications and safety will be handled.

(7) Specific guidance for indirect fire safety requirements and personnel are contained in Chapter 10 for Mortars and 11 for Artillery.

(8) Any conflict between the unit OIC and the designated ROIC which cannot be resolved will be immediately referred to Range Control who is the final authority. No firing will be allowed until all problems are resolved.

(9) Range Control personnel are authorized onto any range facility at any time. Guards will be so instructed and advised that admittance will be granted without passwords, special clearance, or delay. Range Control personnel are the only individuals who are not the responsibility of the ROIC/RSO.

(10) Any Range Control representative may close a range facility for what he deems the lack of safe and correct operation of the facility.

a. Risk Assessment: Unit Commanders will ensure that a risk assessment is performed IAW FM 100-14 on all operations their unit takes part in on Fort A.P. Hill. A copy will be provided to Range Control prior to the unit being allowed on the range complex

b. Whenever firing points are occupied, regardless of firing status, they will fly the red flag and maintain communications with Range Control. Direct communication is required during "HOT" status. If the unit is not in a firing status and their next higher headquarters has established communications with Range Control direct communications thru that headquarters satisfies the requirement. Units bivouacking on site will re-initiate radio contact with Range Control at 0700 every day they remain on the range complex. Units will maintain communications with Range Control at all times while on the range complex to include convoy movements.

2-6. UNEXPLODED ORDINANCE (UXO) All personnel must be warned not to pick up ammunition, projectiles, flares, simulators, or any unidentified objects that may be found. All unexploded ammunition and unidentified objects should be considered UXO and extremely dangerous. If UXO is found and goes unreported, it may harm a Soldier or civilian. Although all UXO is hazardous, Bombs, Artillery and Mortar shells have the added danger of possibly employing either proximity or timed fuses which when damaged, may TEMPORARILY cease to function. Vibrations of the ground or shifting of the round itself, may cause the fuse to begin functioning again, effectively creating a motion sensor or "time bomb" effect.

- a. If UXO is found, a 10m perimeter should be marked off with engineer tape and the location should be reported at once to Range Control. (Do not under any circumstances drive anything into the ground.)
- b. A unit representative who knows the exact location of the UXO should remain at the site until a Range Control representative arrives. The unit representative will be released as soon as Range Control has positively identified the location.
- c. The removal of any ammunition whether training or live, is strictly prohibited and punishable under law. The ROIC/RSO must include information on UXO during their safety briefing to all personnel prior to utilizing any range facility on Fort A. P. Hill. Appendix B of this regulation contains the standard UXO briefing.

2-7. WEATHER ALERTS/WARNING AND EMERGENCY MESSAGES

- a. Wet Bulb readings of 78 degrees or higher will be transmitted over all Range Control frequencies as soon as they are received and every time they are updated.
- b. Severe Storm warnings will be transmitted as soon as they are received over all Range Control frequencies and repeated every 30 minutes while the warning is in effect.
- c. Emergency messages will be relayed to units as expeditiously as possible.
- d. During tornado watches or other extreme weather warnings, the ranges will be shut down so that support equipment can be secured and operators will have time to seek cover. At this time, the unit may be tasked to provide a detail to assist Range personnel. The Unit Commander is advised NOT to provide the detail if the unit or any of its members may be placed in danger or the detail will delay the unit from reaching cover.

2-8. RANGE WAIVERS

- a. Requirement for waiver. Safety standards established in DA PAM 385-63 and AR 385-63 will be strictly enforced. However, when safety standards outlined cannot be met, an approved waiver is required prior to firing. The requirement to establish a waiver rests with the Commander of the unit that will conduct the training that must be waived. AR 385-63 requires that a Commander using a range facility that does not meet the standard safety requirements that it defines must seek a waiver to those requirements. The Commander describes how the non-standard range can meet safety requirements due to extenuating circumstances (terrain physically constrains the effects of munitions; direct physical restraints employed by unit personnel will constrain weapons effects; etc). The Commander's risk assessment addresses those areas of training, which must be waived and how each risk will be addressed to ensure safety. Commanders must keep in mind that they are inherently authorized to evaluate risks to their Soldiers but do not have a legal basis for doing so for civilian populous outside the complex. As such, extreme care will be taken during the waiver process to ensure no endangerment to civilian personnel or their material possessions. DA PAM 385-63 Chapter 1 Para 1-5c describes the documentation requirements necessary.
- b. Safety Waiver Authority. The MDW Commander is the waiver authority for Fort A.P. Hill.

c. Initiating and processing range waivers.

d. All waiver requests must be through the requesting unit's chain of command, the Fort A.P. Hill Installation Range Officer, Safety Officer and Installation Commander.

e. Once the Installation Commander has recommended approval, the packet will be forwarded to the MDW Safety office and TJAG for the MDW Commander's approval.

f. Range safety waiver packets must be processed not later than five weeks prior to the training event to ensure complete and proper safety reviews and command staffing. Requests submitted within five weeks may be denied due to insufficient time for processing.

g. Any unit may use an existing waiver regardless of the unit who processed it as long as that waiver is still valid and the unit follows the conditions and prescriptions established.

h. Fort A.P. Hill Range Control is able to assist units in the preparation of a waiver through all phases of staffing. Digital waiver packets can be emailed to the unit to expedite construction.

i. Once a waiver has been approved, it is valid for one year. One year extensions to the original waiver may be granted by the waiver authority if specific conditions contained in the original waiver have not changed (range terrain, boundaries, munitions, etc.). A waiver may be extended no more than five times. At the end of the fifth extension, a new waiver packet must be generated and the facility re-surveyed for safety conditions. If any condition of the original waiver has changed, a new waiver or a modification addendum to the original waiver must be processed.

(1) Any unit can request an extension of an established waiver. All personnel involved in live fire training on any range will be made aware of the waiver limitations prior to firing.

(2) Any live fire accident or incident on a waived range will cause the existing waiver to be immediately void. Upon completion of a proper investigation (paragraph 3.9 below), the waiver authority, or his/her duly designed representative, may reinstate portions of or the entire original waiver, require its modification or require a new waiver be completed. Units may not recommence live fire training until a final determination has been made.

2-9. RANGE CLEARANCE AND POLICE. The using unit is responsible for the condition of the facility once it is signed for. The unit will be held responsible for recovering any debris on the facility regardless of type, age or ownership. Units can avoid this inconvenience by notifying range control of any discrepancies before signing for the range.

Once training is completed, we request that you take the time to fill out a Range After Action Review Form (Appendix G), rating Range Control's performance. This report is an opportunity for you to suggest improvements, request modifications and rate the performance of support personnel. We also ask that you leave your phone number, so that we can contact you and report our progress concerning your issue(s). The Installation Range Officer or Range Operations Officer reviews the AAR Forms and we will respond if you leave your number. An After Action Review Form can be picked up at the Firing Desk, in the Range Tower, or in Appendix G of this regulation.

a. Upon completion of training the ROIC/RSO will have unit personnel conduct a thorough

police and cleaning of the range facility according to the instructions in the range book. A Range Control representative will then meet with the ROIC to clear the facility. Units will not be allowed to clear post until all areas used have been policed properly, inspected, cleared, and all equipment and keys accounted for by Range Control. If it is impossible for the inspection to be conducted prior to unit departure or there are still outstanding discrepancies, only a "conditional clearance" from the installation will be granted. The unit will have to make firm arrangements to promptly correct their deficiencies. Units with "conditional clearances" not correcting their deficiencies within thirty days will be reported through their chain of command.

b. In the event a unit entering a training facility finds the area in a poor state of police, they will immediately contact Range Control. Any unit not reporting a poorly policed area accepts responsibility for policing the area before they will be allowed to clear.

c. All trash and garbage will be transported by units to the trash disposal site vic TT 994235. Trash sumps will not be dug on the reservation. Pit latrines will not be used for the disposal of kitchen or similar type trash. Kitchen sumps may be dug for liquid waste only.

d. Units conducting night fire will be cleared the next morning; however, all range keys and equipment will be turned in as soon as firing ends. Coordination will be made with Range Control as to a meeting time the next day for clearance.

e. All entrance, exit, and course routes must be policed and any damage repaired or reported to Range Control.

f. All buildings must be swept and cleaned and all power will be turned off.

g. All foxholes must be cleared and will be left uncovered for inspection. When inspection is complete the unit will replace the covers.

h. Two tied serviceable sandbags will be maintained in front of each position. Sandbags must be neatly and uniformly stacked with end ties facing the same direction. The unit will replace unserviceable sandbags.

i. Firing lines will be policed and raked prior to clearing and all brass and firing residue turned into the ASP.

j. The terrain must be restored to its original condition except when Range Control gives permission to leave emplacements. All temporary berms, fighting positions, bunkers, and target positions must be backfilled and the terrain contour restored.

k. Broken or unserviceable range fixtures or equipment must be repaired if possible or if not, reported to Range Control.

l. The range is considered cleared when all of the following requirements are met:

(1) RSO verification of weapons cleared and safe.

(2) Cold time requested and received from Range Control.

(3) Range inspection completed by Range NCO.

(4) Red range flag is down.

(5) Range OIC completed utilization data on Range Acceptance/Clearance Checklist and a Range inspector has signed it.

(6) The Range Acceptance/Clearance Checklist and all range equipment returned to Range Control.

m. Clearance of units, battalion size or larger may at the request of the unit and with Range Control concurrence, be completed at the end of their training period rather than on a daily basis. This will be accomplished as follows:

(1) The unit Commander will appoint a Range Clearance Officer (RCO) in the grade of E-8 or above.

(2) At least 24 hours prior to clearance the ROIC will meet with the Range Control Operations Officer and they will compile a list of facilities to be cleared.

(3) On the day of clearance the RCO will station himself at Range Control to coordinate and follow the clearance activities until they are completed.

2-10. ROIC/RSO DECERTIFICATION/SUSPENSION

Decertification is the loss of privilege to act as ROIC, LRSO or RSO on Fort A.P. Hill due to a major violation of safety procedures. Suspension of privileges may be derived from reoccurring minor infractions or major infractions with mitigation.

a. Examples of major violations are:

(1) Any violation to the safety criteria established in this regulation.

(2) Repeated loss of communications or failure to make/respond to radio checks with the Range Control Center.

(3) Firing on an unopened range.

(4) Firing during a cease-fire.

(5) Failure to report a serious incident.

(6) Firing without proper medical support available.

(7) Extensive damage to a range facility.

(8) Firing without a control number on exercises that require overlays.

(9) Intentional disregard for guidance from a Range Control representative.

b. Examples of minor violations are:

- (1) Missing 3 consecutive radio checks.
- (2) Denying Range personnel access to inspect training.
- (3) Failure to report a change of ROIC/LRSO/RSO during a live fire.
- (4) Failure to secure a range entrance.
- (5) Failure to maintain a DA Form 1594.
- (6) Failure to comply with the Range acceptance checklist.
- (7) Failure to properly clear a range.
- (8) Performing range modifications without prior coordination with Range Control.
- (9) Individuals lacking proper hearing protection.

c. Decertification requires the Soldier to wait a minimum of 60 days prior to re-certification. To re-certify, the Soldier must re-take the ROIC/RSO test and receive additional training on the subject area upon which they were decertified. Incidents revolving around weapons systems will require recertification on that system at the unit level.

d. The decision to suspend or decertify an individual rests at the level of the Installation Range Officer.

e. Decertification is accomplished by memorandum to the unit-certifying Officer with a copy furnished to the Fort A.P. Hill Installation Commander. The memorandum will contain information concerning the incident to include the date, time and description of the event that warranted decertification and a statement detailing how and when the individual may be re-certified.

f. Suspension relieves the Soldier from safety duties. The length of the suspension will be directly affected by the circumstances. The Soldier's chain of command is not notified in writing unless the suspension is for a period longer than 2 months. A memorandum for record is maintained at Range Control to document the circumstances and the Soldier's card is taken until the suspension period has elapsed.

2-11. AVIATION OPERATIONS

a. Aircraft flying in support of activities on Fort A.P. Hill or transitioning thru the installation's airspace will comply with Fort A.P. Hill Reg 95-2 (Aviation Facilities). Communications must be maintained with Range Control (Hill Advisory), a ground center having access to a telephone and capable of initiating the installation's Pre-Crash Plan, or with a "high bird" covering the operation. The "high bird" must be in contact with a ground control with access to a telephone.

b. Range Control will perform the duties of an Air Traffic Advisory during all hours of operation and when Hill Advisory is closed for aircraft operating on the installation. Aircraft operating on the

installation will file a DD Form 175 local with Range Control, Hill Advisory, or be on their unit's operations flight manifest if the unit is located on Fort A.P. Hill.

c. Prior permission requests (PPR's to arrange for fuel or VIP arrivals (O-6/GS-15 and above) can be obtained by contacting Range Control, DSN 578-8303 or (804)-633-8303, 24 hours in advance.

d. Aviation support of all operations on Fort A.P. Hill requires prior coordination of activities with Range Control to include scenarios, time schedules, flight paths, and proposed LZs. The OIC or the ROIC of the supported unit is responsible for ensuring that the supporting aviation unit meets coordination and requirements.

e. All un-certified or tactical LZs on the installation must be safety certified by the using unit according to guidance in AR 385-95, Fort A.P. Hill Reg 95-2, and FM 3-04.300 prior to use. This approval must be completed and the action logged in the Range Control Daily Journal prior to use of the LZ.

f. Each aviation unit utilizing Fort A. P. Hill training facilities will have an appointed Aviation Safety Officer who will coordinate safety regulations and procedures with the FAPH Aviation Officer or DPTMS and insure compliance with published safety regulations and directives.

g. Aviation units or activities responsible for aviation operations on this installation must familiarize themselves with A. P. Hill Pre-Accident Plan in accordance with AR 385-95. A copy of this plan may be obtained from DPTMS.

h. Forward Arming and Refueling Point (FARP) operations will be in accordance with FM 10-67-1 and unit SOPs. FARPs located separate from other unit operations must maintain radio or land line communication with Range Control either directly or through their parent unit. FARP operations separate from Range 25 will be scheduled the same as other facilities and Range Control will be notified as soon as it is operational. FARPs will be inspected and cleared by Range Control just as all other range facilities.

i. Guidance for aviation gunnery involving combat and attack aircraft, both fixed and rotary-wing, is covered in Chapter 13, and FM 3-04.140.

2-12. PRIVATELY OWNED VEHICLES (POVS). Using unit POV's are not allowed into the Controlled Areas where access is through locked barriers. They are only allowed in designated parking areas on fixed ranges 1 thru 18 and ranges 35, 37, and 38. Exceptions require a written request to the Range Officer, submittal of a liability form and approval will be on a case-by-case basis.

2-13. PROHIBITED ACTIVITIES

a. Possession and consumption of alcoholic beverages on the range complex.

b. Firing of improved conventional munitions (ICM).

c. Firing of ammunition, pyrotechnics, missiles, and/or rockets over ammunition supply points (ASPs), ammunition transfer points, field ASPs, or any ammunition storage area.

- d. Training with live M-14 mines.
- e. Firing of depleted uranium (DU) ammunition.

2-14. BLACKOUT DRIVE AREAS AND REQUIREMENTS

- a. Blackout Drive will be used when inside the Impact Area, on South Range Road beginning at Range Corner where North and South Range Road separate, and from Range 6 to Range 10 on north range road when night fire is being conducted.
- b. Blackout Drive road marches on North Range Road will be coordinated with Range Control. The unit is responsible for providing necessary road guards and manpower.
- c. In any emergency situation, service drive may be used.
- d. Units may request from Range Control, permission to use service drive in a blackout area for normal operations. Approval will be contingent upon other unit training in progress at the time. Requests should be made the day of use and not in advance.

2-15. BIVOUAC ON RANGE FACILITIES

- a. Units desiring to bivouac on range facilities must include that information in their request.
- b. When signing for a range facility the ROIC needs to confirm the units intention to bivouac and after arriving on site, call back a six digit grid location to Range Control.
- c. Units bivouacking anywhere on the range complex are required to maintain two way communications with Range Control on frequency FM 32.00 until released by Range Control at the end of the firing day. The unit will come back up on the air at 0700 hours the next morning when Range Control opens. With Range Control concurrence, landline or commo through their parent unit will satisfy the monitoring requirement. (NOTE: FM 32.00 is monitored by DPS after Range Control is closed down and should be called for EMERGENCY PURPOSES ONLY.)

2-16. ROAD NETWORK, TANK TRAILS, AND VEHICLE OPERATIONS

- a. The tank trail network must be used as much as possible for tactical convoys and is recommended as a primary route for travel wherever it exists.

The boundary tank trail system is being expanded, as resources are available. Presently on the Range Complex side of the installation, the boundary runs from Range Corner north to Range 14, south to Range 33, and a section has been constructed from Range 19 to Goldman's Corner. Track vehicles may use the hard surfaced roadways and bridges on North Range Road past Range 14 and again past Goldman's Corner. All internal impact area roads and trails are considered part of the tank trail system.

The main deficiencies to the tank trail system are the lack of a permanent crossing for White's Lake which cuts South Range Road before reaching Range 26P; R14 to R19, and the lack of a complete external road network on the northeast side of the reservation from Goldman's Corner that would

connect with Ranges 24, 25, and 26.

b. Bridge weight classifications will be observed.

c. In order to promote safety and training, South Range Road is closed to civilian traffic after 1800 hours daily.

d. Speed Limits:

- | | |
|--|-------------|
| (1) Tank trails | - 25 MPH |
| (2) Convoys | - 25 MPH |
| (3) Hardtop roads | - as posted |
| (4) Passing troops or joggers in formation | - 10MPH |
| (5) Blackout Drive at night (unassisted) | - 5MPH |
| (6) NVG Assisted | - 10 MPH |

g. Vehicle movement in the Impact Area:

(1) The front and rear vehicles of a road march will have communications with each other and the unit will have communications with Range Control either directly or through their controlling organization.

(2) All vehicles in or around bivouac sites or behind the firing line of ranges will be ground guided and the guide will use a flashlight during the hours of darkness.

2-17. BICYCLING, AND DISMOUNTED OPERATIONS

a. Bicycle traffic is governed by the same requirements as vehicular traffic and is restricted to hard surfaced roads. Headphones or anything that impairs normal hearing will not be worn while riding bicycles.

b. Tactical patrols are expected to vacate the road area when passed by vehicular traffic.

c. Foot marches will have priority and right of way over vehicular traffic. They will be coordinated with Range Control and conducted in accordance with FM 21-18. All vehicle traffic approaching troops in formation will slow to 10 mph. Maximum use should be made of tank trails and routes other than hard surfaced roads. Road guards equipped with safety vests will be stationed front, rear, and road side flank of the column. Flashlights will be used from dusk till dawn.

d. Jogging in formations of more than five will be conducted in accordance with paragraph c above. Individual joggers and groups of five or less will use the left side of the road facing traffic and will form a single file when passed by vehicle traffic from either direction. All vehicle traffic approaching individual or formation runners will slow to 10 mph. Headphones or anything that impairs normal hearing will not be worn while running.

2-18. CHECK FIRE/CEASE FIRE

a. Any person observing a condition that makes firing unsafe will command CEASE FIRE (hand and arm signal is waving arms extended above head). An alternate method such as Red smoke, whistles or star clusters will be used for night fire and all personnel will be briefed on day and night cease-fire procedures.

b. When a unit will be in a non-firing status for 30 minutes or more, Range Control will be notified and the range facility will be placed on administrative check fire.

c. CEASE FIRE-FREEZE Procedures: Whenever there is a serious situation on the range complex the command to CEASE FIRE-FREEZE will be given over all range control frequencies, placing all ranges in cease fire. ROIC will insure that all personnel have been briefed on these procedures. OIC is responsible to execute the following CEASE FIRE-FREEZE actions upon receipt of this net call:

- (1) Immediately place the range in a cease-fire.
- (2) All weapons on "safe", data and orientation undisturbed, and personnel moved to the rear.
- (3) Secure the site, maintain last fired weapons settings, and continue to monitor the net.

2-19. RANGE MODIFICATIONS

a. Fort A.P. Hill Range facilities will be used only for their intended purpose(s) as defined in AR 350-19 and AR 415-28. Once a facility has been registered in the real estate records as having a specific AR 415-28 function, it may only be changed after a proper analysis has been conducted and an approval granted by the Installation Range Officer. Before these changes can become permanent, they shall be reported to DPTMS for submission to DA databases (DCSOPS and ACSIM).

b. Training on each facility will be in accordance with DA PAM 350-38, Standards in Weapons Training and the applicable field manual for the authorized weapons, ammunition or explosive.

c. The Installation Range Officer may authorize temporary modifications to a facility or its function. Units desiring to physically modify a facility (e.g. dig holes, build additional target pits, move target stands, etc) on a temporary basis must submit a memorandum outlining the proposed changes to Range Control NLT than 30 calendar days before the requested modification date and remove these modifications NLT 5 working days after the termination of the training event for which the modifications were requested.

2-20. RANGE FIRES

a. Anyone observing a fire on the Range Complex will immediately notify Range Control by the most expeditious means available. If Range Control is not in operation call 911 from a military phone or (804) 633-8267/8888 from a civilian or cellular phone, or DES via FM 32.00.

b. Because all range roads and trails are also part of the firebreak system, they will not be blocked without Range Control permission. Approved barricades will be removed before the unit

leaves the area. Range Control will notify the DPS and Fire Department of roads closed due to training, the planned duration of the closure, and when the roads are again serviceable.

c. Under no circumstances will units attempt to fight fires in the vicinity of a dedicated impact area.

d. Range Control will work closely with the Forestry Section to monitor and control areas where ordnance is used that could potentially start range fires. They will continue to improve firebreaks around all areas necessary to support training in order to protect forestry and wildlife.

e. All controlled burning of wooded areas will be accomplished under the guidance of the Forester in coordination with Range Control. If the fire was reported by any means other than through Range Control, the Fire Department will ensure range personnel are notified. If Range Control is not open the DES will be called and he will implement the emergency notification roster.

f. In the event a unit starts a fire, the ROIC will immediately notify Range Control. Once notified, Range Control will:

(1) Notify the Fire Department and immediately respond to the fire location to determine hazards involved.

(2) Coordinate and control safe entry and operation of the Fire Department and Forestry Section any time entry to the Impact Area is required for fire fighting.

g. The Fire Department and Forestry Section will respond to range fires, as circumstances require:

(1) Forestry Section will assist the Fire Department by providing personnel with fire plows, road graders, and other equipment needed to contain the fire within the roadway/firebreak system.

(2) Range Control personnel will assist the Fire Chief in planning routes and areas that may be used to control and fight the fire.

(3) If the fire is not in a hazardous area the Fire Department and Forestry Section may fight the fire by whatever means they deem appropriate. Range Control personnel will monitor the situation in order to alert fire fighting personnel should the fire enter a hazardous area.

(4) The Fire Chief or his representative will determine when and by what means the fire will be fought and when the operation will be terminated.

2-21. ENVIRONMENTAL CONSIDERATIONS See Fort A.P. Hill Regulation 200-1 for a complete listing of the environmental regulations.

a. Solid waste will be disposed of at designated sites, which will be coordinated with DPW Roads and Grounds, ext 8415. Units are responsible for the transport and proper disposal of garbage and trash. Tires will be disposed of through DS Maintenance, ext 8440. Used POL, lead-acid batteries and antifreeze will be disposed of through DS Maintenance or central POL facility on Fortune Road.

b. Rechargeable batteries will be disposed through the Environmental Division, ext 8255.

c. All units should use weapons cleaning solvents that **do not** contain 1,1,1 Trichloroethane and dispose of waste materials (patches, q-tips, etc) as regular trash. If the solvent contains this chemical (1,1,1 Trichloroethane) the contaminated cleaning materials **shall be** disposed of as a Hazardous Waste through the Environmental Division (Contact Environmental office at x8255)..

d. Vehicle and equipment washing is only allowed at the central wash point.

e. POL spills, regardless of quantity, will be immediately reported to Range Control who will in turn activate the installation's "Spill Response Plan". The reporting procedures are listed in Appendix D.

f. Relic hunting and the use of metal detectors is prohibited by law on the installation. Accidental discoveries of suspected historic artifacts will be immediately reported to Range Control who will pass the information to the installation Environmental Office.

g. Several training noise-monitoring stations have been installed throughout the Installation. The equipment is installed on Observation Towers and/or telephone poles. Do not disturb or remove this equipment.

h. All ammunition residue and casing shall be turned into the ASP.

i. No treatment or disposal of munitions is allowed.

j. All targets will be processed by DOL prior to placement on the range.

k. Report any spill to DES/PMO at 633-8888.

2-22. COMMUNICATIONS

a. The primary means of communications on the Fort A.P. Hill range complex is tactical FM. It is a unit responsibility to provide radio equipment capable of operating on the Range Control tactical communications net (FM 32.00 for ground units, FM 38.50 for aviation units). Radio assets must be planned for in advance. Some field locations may require vehicle mounted equipment or the addition of OE254/292 antennas.

b. On range facilities with telephones, Range Control can be reached either by dialing 8374 if a dial tone exists, or giving the operator the number 8374 on those phones that are mag drops. Telephones will be checked for operation upon range occupation but are an emergency back up only. They need not be monitored.

c. Standard radio procedures will be used on all Range Control Nets.

d. Range Control frequencies will not be used for internal communications.

e. Units will respond to hourly Range Control radio checks initiated approximately 10 minutes prior to the hour. Any unit failing to hear a radio check prior to the hour will initiate a radio check with Range Control. If radio contact cannot be accomplished the RTO will notify his ROIC/RSO and the unit will place themselves on check fire until reliable communications can be reestablished.

f. It is the responsibility of the ROIC to establish and maintain tactical FM communications with Range Control on equipment dedicated solely for that purpose. He must additionally ensure that the radio is continuously monitored at all times the range is occupied and that radio checks initiated by Range Control are answered. Installation policy is that if after three unsuccessful attempts are made to contact any range, a Range Control representative will be dispatched to the range and it will immediately be placed on check fire. The Range Control representative will then make a determination as to whether the problem was equipment malfunction or a violation of the prescribed monitoring requirement. If it is an equipment malfunction the check fire will be lifted as soon as reliable and satisfactory communications are reestablished.

g. If a mobile antenna system is required, the unit must have an approved antenna erection permit.

h. Whenever range facilities are occupied, regardless of the reason or firing status, units will maintain FM communications with Range Control. When bivouacked on site, communications will be maintained from 0700 until Range Control closes for the night and will be reestablished at 0700 hours the next and all following days while on the range facility. (Emergencies can be called in after hours to DES via FM 32.00)

i. If the unit's next higher headquarters has communications with Range Control during the bivouac phase, direct communications with that headquarters satisfies this requirement. If a landline is readily available to the unit at the bivouac site, coordination may be made with Range Control to monitor the phone in place of radio as long as live fire is completed for the day. Failure to meet monitoring requirement is reason for loss of facility use by the unit.

CHAPTER 3 AMMUNITION

3-1. GUIDANCE. Ammunition and explosive requirements are based on AR 75-1, AR 385-63, AR 385-64, TB 9-1300-385, FM 5-250, and field manuals for specific weapons, ammunition and explosives.

3-2. POLICY

a. All ammunition and explosives will be used for the purpose for which it was manufactured. Any attempt of unorthodox use or to purposely make it malfunction is prohibited.

b. The firing of improved conventional munitions (ICM) is prohibited.

c. The firing of depleted Uranium (DU) ammunition is prohibited.

d. Live M14 mines will not be used in training.

e. Ammunition will not be indiscriminately fired or dumped to preclude return to the ASP. Appendix E defines the "Ammunition Found On Post/Ammunition Amnesty Program" (AFOP/AAP). The exception to this policy is Smokey Sam rockets, which are issued by the case of twelve. All unpacked rockets must be expended and only full, unbroken cases returned to the ASP.

f. Munitions containing phosphorous will not be purposely fired or dropped into any water body on the installation.

g. Using units must keep ammunition and explosives properly packed to the maximum extent possible. This practice is critical to safety and quality.

(1) Ammunition and explosives must remain packed until immediately prior to use. Unpack only the quantity expected to be immediately fired. Save all packing material until exercise is complete for possible use in repack.

(2) Properly repack ammunition before transporting on motor vehicles, aircraft, or watercraft.

(3) It is especially important to replace safety devices before repacking; for example, shorting clips on 2.75-inch rockets, electrical shunts on Hoffman devices, and pads protecting primers on gun and mortar ammunition.

(4) Ammunition which has misfired or has been classified as unserviceable must be indelibly marked and segregated from serviceable ammunition.

h. Blank and live ammunition will be stored and issued from separate locations. Soldiers will be cleared of all blank ammunition and blank adapters prior to being issued live ammunition.

i. Damaged, defective, or misfired ammunition will be kept at least 50 meters from all other ammunition, equipment, and personnel. It will be repackaged and turned back in to the ASP with appropriate turn-in documents and reports.

j. Defective ammunition will not be fired. The ROIC/RSO will report defective ammunition to Range Control who will in turn notify the QASAS. Defective ammunition typically includes, but is not limited to:

(1) A significant percentage of fixed projectiles loose in their cartridge cases.

(2) Fuzes that are loose or missing safety devices.

(3) Safety and/or arming devices found in an armed position.

(4) Ammunition showing serious deterioration, corrosion or defects in material or workmanship.

k. Ammunition with UXO and misfire rates equal to or greater than the standard given in AR 75-1 will be reported as a malfunction. The standard is, as a general rule:

Type of system	Missfires/Number of Rounds
Small arms through 50 caliber	4 rds/4000 rds
Warheads, explosive projectiles, Rockets, and grenades	2 rds or 5%
Guided missiles	1 rd

3-3. CONTROL Ammunition and explosives shall be under positive unit control at all times. Ordnance will be guarded at all times on the installation except when stored within the confines of the installation Ammunition Supply Point (ASP). This includes misfire or damaged ordnance.

3-4. TRANSPORTING

a. Explosives will be transported and handled under the direct supervision of competent and qualified personnel who are familiar with the applicable safety regulations. The load will never be left unattended and the vehicle will be operated with extreme care at least 5 MPH under the normal posted speed limit.

b. Vehicles involved in on-post shipments of ammunition/explosives will have a driver and assistant driver, be properly marked, equipped with at least two Class 10-BC rated portable fire extinguishers, and will not carry any other personnel. The vehicle will not be refueled while loaded except in an emergency situation.

c. Vehicles will be inspected to ensure they are able to pass DD Form 626 inspection.

d. Proper cushioning or dunnage will be installed between the ammunition/explosives and the metal bed of the vehicle and explosives will be secured to prevent shifting.

e. Live and inert or training ammunition/explosives should not be mixed on the same vehicle. Blasting caps will be transported separately from other explosives. They may be secured in a closed metal container and carried in the cab of the vehicle.

f. Powder increments or charges for different types of separate loading cannons will not be carried on the same vehicle. Example: Powder charges for 8-inch and 155MM howitzers will not be carried together on a vehicle.

g. White phosphorous ammunition will not be carried on the same vehicle as other ammunition. An attached trailer can be used.

h. If a fire occurs on a vehicle transporting ammunition/explosives:

i. Try to stop away from any populated area and stop traffic in both directions. Warn vehicle drivers and all personnel to keep at least 500m from 1.4 and 1600 for all other munitions.

(1) Inform emergency response personnel the cargo is explosive.

(2) If the fire involves only the engine, cab, chassis, or tires attempt to extinguish it with the fire extinguishers, water, or anything available. Do not attempt to extinguish burning explosives or ammunition. Once the fire spreads to the bed of the truck or the cargo, stop fighting the fire and immediately evacuate to a distance of at least 500m from 1.4 and 1600 for all other munitions.

3-5. FIELD STORAGE

a. Field storage areas will be coordinated through Range Control. The site will be scheduled with DPTMS and will be expected to maintain two-way communications with Range Control as long as it is in operation.

b. Major stacks of stored ammunition on the Range Complex will be a minimum of 380 meters from all other quantities of ammunition, explosives, and flammables or vehicle, helicopter, and personnel locations.

c. White Phosphorous ammunition in field storage sites will not be stored with or closer than 100 meters to any other ammunition, explosives, or flammables.

d. Armed combat equipment such as attack helicopters and self propelled (SP) artillery weapons will not be parked at the end of a days operation with explosives and/or ammunition on board. It will be off loaded unless special permission is requested from Range Control and all additional requirements for distance separation and security can be met to Range Control's satisfaction according to Table DA PAM 385-64.

e. Ammunition will be protected from adverse weather to include the direct rays of the sun.

f. Ammunition will always be under the positive control of unit personnel.

g. 2.75 FFARs will not be stacked more than five rows high.

h. No more than sixty-five (65) 2.75 FFARs and two (2) aircraft loads of other type ammunition will be stored at each re-arm point.

i. Damaged, defective, or misfire ammunition will be stored in a separate bunker or designated storage location at least 50 meters from equipment, landing positions, other ammunition, fuel, and personnel. Damaged, defective, and misfire ammunition will be repackaged and returned to the ASP.

3-6. SAFETY

a. Ammunition stacks will be protected from the elements, including direct rays of the sun, with air circulation provided.

b. Unpackaged ammunition at the firing line will be limited to the minimum number of rounds needed for efficient firing of the exercise.

c. Personnel participating in exercises, which involve the firing of aerial pyrotechnics such as Smokey Sam rockets, will wear individual protective equipment to include helmet and flak vest.

d. Smoking is prohibited within 50 meters of firing pads, ammunition or ready storage sites, and weapons assembly sites. Furthermore, the possession of matches or any flame producing device while working with or transporting propellants or explosives is prohibited.

e. Ammunition storage or handling sites will not be within 70 meters of troop concentrations.

3-7. OVERHEAD FIRE Only ammunition lots listed in TB 9-1300-385 and NAVSEA TWO24-AA-ORD-010 as cleared for overhead fire will be used for flanking and overhead fire. Verification of ammunition is a Unit Commander, ROIC, and RSO responsibility. Units must receive confirmation from Fort A.P. Hill QASAS that ammunition meets the safety requirements. The ROIC request for "HOT STATUS" is his verification to Range Control that the appropriate checks have been made. Range Control must be notified in advance if the ammunition to be used is not cleared.

3-8. MALFUNCTIONS

a. In the event of a misfire, hang fire, or other Class C malfunction the ROIC/RSO will supervise the unit Officers/NCOs who perform the actions prescribed in applicable FMs/TMs. Range Control will be immediately notified of the situation and again when it is resolved.

b. For Class A or B malfunctions the ROIC/RSO will:

(1) Immediately suspend firing and notify Range Control.

(2) Ensure that the weapon, ammunition, explosives, and all components involved including fragments are carefully preserved in the position and at the location occupied at the time of the incident. Nothing will be touched or disturbed until released by the Range Officer or QASAS after a complete investigation is performed.

(3) The ROIC will ensure that all available information is collected and promptly passed on to Range Control for early determination of the cause and timely action to prevent similar malfunctions.

(4) Continue the mission only after the Range Officer or his designated representative has granted clearance.

c. The Range Officer or his designated representative will:

(1) Immediately contact the Installation Safety Officer, extension 8268 and the Quality Assurance Specialist (Ammunition Surveillance) (QASAS), extension 8805 and relay all known information.

(2) With the assistance of the DPS, take control of the site and all material and residue associated with the incident as soon as possible after notification.

(3) Assist the QASAS and post safety Officer in completing initial and follow on reports as required by AR 75-1 and AR 385-40.

3-9. NONSTANDARD AMMUNITION AND EXPLOSIVE ITEMS

a. Nonstandard ammunition and explosive items are prohibited from use unless specifically approved IAW AR 385-63 Chapter 2 para 2-3.

b. Once the overall approval has been granted and 30 days prior to execution, a packet will be submitted to Range Control for the Installation Commander's approval for use.

As a minimum the packet must include:

Surface danger zone for the weapons system overlaid on a scaled map

Copy of the source data from which the hazard area was defined

Risk Assessment

Memorandum describing the reason for the use of the munitions

A copy of the approval IAW AR 385-63 para 2-3a authorizing the unit to employ non-standard munitions

The packet will be processed through the Range Officer, QASAS, Installation Safety, JAG and then to the Installation Commander for signature.

CHAPTER 4 FIRING

4-1. GENERAL

- a. Firing will not be permitted until communications have been established, medical coverage meets requirements, the ROIC and RSO are present, the red range flag is flying, and all prescribed safety and firing requirements have been met.
- b. Live-fire range facilities will have, as a minimum, one ROIC, one RSO and proper medical support IAW DA PAM 385-63 on site during all live-fire events.
- c. Range Control personnel will inspect the ranges before during and after occupation. The pre-inspection will ensure the range is in the proper state and the unit's questions are answered. The "during" inspection will ensure all established guidelines are being followed and the post inspection will be to clear the unit of responsibility of the range.
- d. All static firing lines will be raked, sandbags uniformly positioned, and after the range inspection, all foxhole covers replaced. Target sheds, towers, and latrines will be swept and cleaned with trash policed and properly disposed of. Trash bags and toilet paper are a unit responsibility.
- e. Unit Commanders will ensure that M16 rifles assigned to left hand shooters have been modified by the attachment of the M16 brass deflector.
- f. On electrical ranges target mechanisms will be left in the "up" position.
- g. Staple guns and staples, where required, will be issued at Range Control.
- h. Target cloth, paisters, and paste for known distance (KD) targets will be supplied by Range Control.
- i. Range Control provides standard targets for zero and qualification. Other type targets need to be coordinated with Range Control by providing FSN, quantity desired, and training requirement. Need, funding, and time constraints will determine whether they can be provided or if the unit will have to do the procurement.
- j. The following ranges are equipped with PA systems: Ranges 1-5, 8, 9, 32, 34, 35, 37, and 38. Abuse of the equipment provided will result in the ROIC being held liable for repair costs.
- k. Anytime there is snow or ice on electrical targets the using unit is responsible for sweeping the targets clean prior to turning the electrical power on. The ROIC will accompany a Range NCO to check on the targets and ensure that they move freely prior to operation.

4-2. NIGHT FIRE

Ranges 8, 9, and 38 are equipped with "blink light" systems to meet night fire requirements. Ranges 3 and 34 are Enhanced Remoted Electronic Target System (ERETS) equipped ranges with muzzle-flash simulator for night fire. Night fire and method of illumination on any other range facility is by approval of the Range Officer.

4-3. ACCIDENTS, INCIDENTS, AND WEAPONS MALFUNCTIONS

a. In all emergency situations the ROIC/RSO will call an immediate cease-fire and notify Range Control. Emergency situations include any vehicle/weapons accident, personnel injury regardless of how slight, and any weapons malfunctions.

b. When an accident or incident involving weapons or ammunition occurs the weapon and ammunition involved will be suspended from use. The ROIC/RSO will immediately notify Range Control who will in turn notify the Quality Assurance Specialist (Ammunition Surveillance) (QASAS). All associated ammunition and weapons will be maintained intact and the site preserved until released by the QASAS, Range Officer, Installation Safety Manager, or by other technically qualified personnel.

c. When a weapon malfunction such as a jam or normal misfire occurs that does not result in damage or injury, notify Range Control and take action recommended in appropriate FMs/TMs. If "immediate action" procedures fail to correct the problem, that weapon will be set aside and Range Control notified of the malfunction.

d. If a hand grenade fails to function on Range 6, the side of the range with the malfunction will be check fired until cleared by EOD. A hand grenade malfunction on any other range facility will cause operations to come to an immediate cease-fire and all personnel will evacuate to 190 meters from the UXO location.

e. The following procedure will be followed should an indirect fire unit shoot outside their designated safety limit, receive fire, or observe fire that is obviously outside the established impact area:

(1) Call an immediate check fire and notify Range Control with the following information:

- (a) Date and time the erratic round was observed.
- (b) Extent of injury or damage.
- (c) Number of rounds observed.
- (d) Location of impact/height of burst.
- (e) Observer location, name, and unit.

(2) All personnel will immediately fall in at rear of piece and ensure that all weapons, ammunition, and associated equipment remain untouched until cleared by Range Control.

(3) ROICs/RSOs will collect all firing data from their weapons and fire direction centers (FDC) and provide this information to Range Control when requested.

(1) Required Reports. When reportable accidents, incidents, and injuries occur the unit will immediately notify Range Control. Range Control will conduct an initial investigation and collect statements. A copy of the initial incident report form can be found in Appendix F. The Installation Range Officer may require the next senior Commander of the unit determined to be at fault, designate an investigating Officer. Unit Commanders will ensure Range Control receives DA Form 285 u.s. Army Accident Report not later than two (2) working days after the accident and reports required by AR 75-1 are properly filed. Copies of all reports and investigations involved will be provided to Range Control.

4-4. MEDICAL SUPPORT FOR TRAINING UNITS

a. On all live fire ranges, a qualified medical aid man with a dedicated vehicle and medical supplies are required. Trained and certified combat lifesavers can be substituted for qualified medical aid man on live fire ranges when .50 caliber weapons (or smaller) are being fired. When using a combat lifesaver, a dedicated vehicle and medical supplies (combat lifesaver bag) are required.

b. On station MEDEVAC coverage is provided at various times, primarily during the annual training months. Civilian MEDEVAC is available for "life, limb or eyesight " situations at all times either through Range Control when the unit is training or if the unit is bivouacking on the range and the Firing Desk is closed, DPS should be contacted at 8911. MEDEVAC or any additional emergency support can be requested by contacting Range Control on FM 32.00, FM 38.50, or telephone number 8224 from any installation phone. The Fort A.P. Hill Lois E. Wells Army Health Clinic is the evacuation point during normal duty hours Monday - Friday, 0800-1630 hours. All other times will require evacuation to the Post Fire Department at Anderson Campsite.

c. Medical support calls made to Range Control will provide:

- (1) Location of pickup site
- (2) Radio frequency, call sign, and suffix
- (3) Numbers of patients by precedence
- (4) Special equipment required
- (5) Number of patients by type
- (6) Method of marking pickup site

d. On order from Range Control, switch to FM 38.50 (old squelch) in order to direct the aircraft.

e. Radio calls for MEDEVAC have precedence over all other radio traffic. Once Range Control receives a call for aero medical evacuation, all units engaged in live firing will come to a cease-fire status until the MEDEVAC pickup is completed. Range Control will provide notification of a cease-fire imposed due to MEDEVAC operations and when units may resume hot status.

f. The foregoing medical requirements should not in any way be interpreted as a limiting factor in the providing of medical assets on range facilities. Medical coverage is the responsibility of the unit Commander and he may prescribe whatever level desired.

4-5. CIVILIAN/INDIVIDUAL USE OF RANGE FACILITIES

a. The organization will comply with the requirements and procedures established in AR 385-63, this PAM, local regulations and SOPs.

b. Requests for use will be coordinated with the Installation Range Control Office, Safety Office, The Judge Advocate General (TJAG), and submitted to the Installation Commander for approval.

c. A written agreement must be completed between the installation and the non-military, detailing all rights and responsibilities of each party, liabilities, procedures, and regulatory and procedural requirements. This agreement will be incorporated into the report of availability as required by AR 405-80.

d. A blanket waiver of liability signed by each person allowed on a range facility.

e. The non-military organization must designate an Officer in Charge and a Range Safety Officer. Personnel designated as OIC/RSO will complete a pistol and rifle course approved by the National Rifle Association or equivalent (For example the U.S. Pistol shooters Association.) The Installation Commander, based on input from the Range Control Officer, Safety Officer, TJAG and other staff agencies as appropriate will determine the equivalency.

f. The Installation Range Control Officer will ensure that the designated OIC and RSO are briefed on their duties and responsibilities.

g. A combat lifesaver, EMT or Medically qualified individual must be on site during all firing.

h. Ranges must have communication with the firing desk prior to opening the range. Motorola radios may be drawn from Range Control.

i. Target engagement will be from stationary positions. Exceptions to this MAY be granted on a case by case basis for police force or government agencies if the following guideline is met:

j. A scenario, risk assessment and overlay of maneuver must be submitted covering all safety issues and engagement angles. The scenario and overlay must depict the locations of all personnel participating AND observing the event. It must also show angles of fire in relation to those positions.

k. Only range facilities with operating telephones will be used.

l. Authorized times of firing will be from 0700-1630 Monday through Friday and on weekends only when Range Control is supporting other training events.

m. Firing will only take place during daylight hours.

- n. Non-firing observer personnel may not exceed one per shooter.
- o. All users are responsible for providing their own materials, targets and ammunition.
- p. Range clearance will follow standard guidelines.
- q. All shooters must be briefed and receive range certification. The card must be in their possession.
- r. Accidents and incidents are the total responsibility of the Individual or the organization. Range control must be notified of any such event.
- s. Range Control representatives have the authority to shut the range down.
- t. Range Control personnel are always allowed on the range.
- u. Organizations:
 - (1) Range Facilities will not be scheduled for organizations with less than 5 active firing members and a current dated roster will be maintained at Range Control.
 - (2) A non-firing ROIC and RSO at least 21 years of age will be in charge of the range.
- v. Individuals:
 - (1) No more than 3 firers per group of individuals will be allowed use of the Range facilities. Joint use will be at Range Control's discretion.
 - (2) When more than one shooter is present, one of the firers will be designated the decision maker on going down range to the targets. If a non-firing adult is available, he may be made responsible for safety in proceeding down range of the firing line to work on targets.

4-6. INDIRECT FIRE GENERAL

- a. The Fort A.P. Hill indirect fire impact area and range complex consists of over 27,000 acres and 500 miles of roads and trails. Unit training potential is additionally enhanced by the installation's ability to provide multiple target areas and observer locations that allow large shifts between targets, platoon engagements, direct-fire, live-fire hip shoots, and raids which meet mission and doctrine requirements.
- b. Only the ammunition needed for a fire mission will be removed from its container. Final protective fires (FPF), Time-on-target (TOT), and other dedicated ammunition may be prepared ahead of time according to unit SOP but must be covered and protected at all times to prevent ignition from sparks and to protect the ammunition from the environment.
- c. Forward Observers (FO) will have a copy of the safety limits, must be able to observe the rounds impact, and will maintain record of fire for each mission.

d. Rounds will not be fired that impact less than 800 meters from unprotected personnel without Range Control permission. Units must ensure that observer locations are, outside the prescribed surface danger areas A, B, or C of their target areas.

e. Two means to determine direction are required prior to live-firing. Artillery will use two aiming circles and it is recommended that at least one of the instruments used with mortar sections be an aiming circle. The two means must be declinated and agree within 10 mils.

f. Center piece/weapon must be within 100 meters of the survey marker.

g. Each time the guns are emplaced, the first round fired will be at a target close to the center of the safety box. Range Control will be notified with first round information, (i.e. "first round observed safe").

h. Units with survey capabilities may fire from anywhere on the south side of Rt 301 provided they properly coordinate for usage of the area with Range Control. The unit will provide safety overlays to Range Control for all position changes made and the locations and/or modifications will be verified and approved by Range Control prior to live-fire.

i. Firing will not be conducted during limited visibility when round impacts cannot be observed unless radar is being used. When radar is being used a FO is still required at the Observation Point (OP) to confirm the impact by sound in case of radar malfunction.

j. Before clearance to fire is requested a "safety T" will be prepared showing deflections, minimum and maximum elevations, minimum fuse setting for time fuses, and applicable firing point. A separate "safety T" will be prepared for each charge to be fired. The "safety T" must be updated after registration and when new meteorological data is received. The "safety T" must reflect the current safety diagram. All safety Officers and firing battery supervisors will have a "safety T" with them during firing.

k. It is the ROIC's responsibility to ensure that a correct safety diagram is on a chart in the fire direction center and each firing piece has a "safety T" available. The Fire Direction Center (FDC) will have the safety card data showing on the maps, firing charts and entered in the computer as appropriate.

l. Hip Shoots:

(1) Dry shoots may be conducted anywhere the unit has scheduled to operate and do not require an overlay.

(2) Live shoots must be from surveyed positions or any position meeting the requirements of paragraph h above, which are scheduled and have approved safety data. All standard safety requirements apply.

m. Shell Illuminating, White Phosphorous and Smoke will not be fired without Range Control permission when winds exceed 15 knots.

n. Supervision of Safety Procedures for Misfires. When a weapon fails to fire, personnel must follow specific procedures outlined in appropriate FM, TM, and unit SOP for the type weapon and ammunition being fired. The ROIC is responsible for overseeing the safe and proper application of these procedures. Range Control will be immediately notified by the ROIC/RSO whenever any type misfire occurs. Weapons/ammunition malfunctions will be handled according to guidance in Chapter 3.

o. Indirect Firing:

(1) It is the unit's responsibility to contact Range Control far enough in advance of the firing date to ensure overlays can be approved or to coordinate for approval of hand carried overlays at Range Control. Approved overlays will have a control number assigned that must be given as part of the ROIC request to go hot.

(2) Firing will be conducted so as to have all rounds impact within limits shown in current Fort A.P. Hill Trig/Overlay Manual. For positions not listed in the Trig/Overlay Manual, safety overlays will be required from the unit and must be approved by Range Control prior to live firing.

(3) Units who inadvertently shoot out of their prescribed safety fan will immediately put themselves on "cease fire freeze" and contact Range Control.

p. Excess propellant will not be transported.

q. Impact Area buffer zones and target area definitions:

(1) Buffer zones are computed by adding either areas A or B and 8 or 12 "Probable Errors" (PE) depending on direction of fire and troop positioning. Targets in the buffer zone will not be engaged. The buffer zone provides an outside border to the target area.

(2) Target areas are where targets may be engaged and is ringed on the outside by the buffer zone.

Standard airspace clearance (R-6601) for firing at Fort A.P. Hill is 5000 feet above ground level (AGL). In order to conduct firing with a maximum ordinate (Max. Ord) in excess of 5000 feet AGL a Controlled Firing Area (CFA) must be put in place. The CFA will cover from 5001' – 11000' AGL. The max ord for rounds may not exceed 10000' AGL leaving 1000' as buffer zone. A twenty-four hour advance notice of firing must be received from the unit to allow the installation to initiate the CFA.

(3) Execution: The following requirements must all be met for utilization of the Controlled Firing Area:

(a) The cloud ceiling shall be at least 1500 feet above the highest altitude in use within the CFA and projectiles will not enter any cloud formation.

(b) Visibility shall be sufficient to maintain visual surveillance of the CFA and a panoramic distance of five nautical miles.

(c) The unit shall designate a Safety Officer with binoculars, who shall be responsible for the surveillance of the CFA and five nautical panoramic miles.

(d) Ground observers with direct communications with the Safety Officer shall be established at critical observation points to report aircraft approaching the CFA so that the hazardous activities can be discontinued.

4-7. DECLINATION INFORMATION Aiming circles must be declinated prior to use. The declination station is located on North Range Road 100 meters north of Range 10. The station is marked by a 30 cm x 30 cm concrete monument set 6 cm above the ground with a 105 mm brass casing stamped, "Dec Sta 1." The declination information and trig list can be obtained from range control.

4-8. BOUNDARIES OF THE TWO MAIN IMPACT AREAS

All Grids are sequenced clockwise:

Upper Zion		Daniel:
Use column 1 then column 2		
Column1	Column2	Colum1
98551556	03561519	06301676
98781660	03601364	08801775
99541688	03151327	08671703
99521769	02421286	09161683
99171835	02361232	09401567
00731875	01851215	08871455
00761866	00941323	07491490
01651861	00101310	07381480
02491724	99061362	06091543
03801671	98551556	06301676
03181524		

a. Upper Zion impact area contains the buffer zone inside the designated boundaries and must be considered in the construction of safety data.

b. Daniel impact area has the buffer zone outside the designated boundaries; therefore safety limits may extend to the boundary.

4-9. OBSERVATION POINTS (OPS)

a. Locations and Descriptions:

<u>NUMBER</u>	<u>FEATURE</u>	<u>IMPACT AREA</u>	<u>GRID</u>
OP 1	Berm	Upper Zion	01851234
OP 2	Berm	Upper Zion	02271288
OP 3	High Ground	Upper Zion	01141369
OP 4	Hill Top	Upper Zion	01801357
OP 5	Wood Tower	Upper Zion	02181260
OP 8	Berm	Daniel	08671643
OP 9	Wood Tower	Daniel	08501499
OP 10	Wood Tower	Daniel	094158

b. OP's have three basic requirements for use:

- (1) All targets must plot a minimum of 800 meters from the OP.
- (2) The OP for mortars must be completely outside the mortar SDZ.
- (3) Range Control must approve use of OPs prior to occupation.

c. OP's 3, 4, and 9 require special coordination with Range Control to verify weapons to fire, access routes, and safety fans.

4-10. UNOBSERVED ROUNDS A report of a lost round will be submitted to Range Control whenever the impact of a projectile is not observed by the firer or the observer. The report will include:

- a. Type of round.
- b. Launch point, AFP or grid, and azimuth fired.
- c. Grid location of intended target.
- d. Estimated point of impact.

4-11. SIMUNITIONS

a. Simunitions may be used as a force on force training multiplier under the following conditions:

(1) The unit must provide Range Control with a risk assessment and training scenario for the event, just as is required for live fire maneuver. (See Chapter 19)

(2) Distance X for the FX Simunitions round will be considered 300 meters on Fort A.P. Hill and a standard direct fire cone SDZ will be used to determine the hazard Area. If the munitions are to be used as a force on force trainer, then a circle with a radius of 300m may be used in lieu of the cone as long as each firing location has an SDZ.

(3) ROIC, RSO and additional safety personnel must be unit certified in Simunitions training.

(4) The unit must conduct dry fire rehearsals prior to live execution.

(5) A Combat lifesaver, with dedicated vehicle and aid bag, must be on site.

(6) The ROIC will ensure that all personnel inside the SDZ wear an impact resistant facemask, Safety goggles (if the mask does not provide eye protection), throat protection, solid groin protection (not padding), Kevlar and gloves.

b. Simunitions will not be deliberately aimed at the head or groin.

c. No engagements closer than 5 feet will be allowed.

d. The mixing of Simunitions and live munitions is not authorized.

e. The RSO will ensure that the conversion kits are properly installed.

f. Rules of engagement will be established and enforced by the ROIC.

g. Simunitions training will not be conducted in temperatures under 38 degrees.

h. The RSO will ensure that the 18-month shelf life of the ammunition has not expired.

i. The ROIC will follow all range opening and closing procedures, regardless of the training events location.

j. The ROIC must ensure that no live ammunition is present in the Area of training.

k. Blank ammunition is authorized as long as two separate ammunition issue points are used. (One for Simunitions and one for blanks). Soldiers transitioning from one munition to another must be cleared by the RSO.

l. When utilizing Simunitions North of 301 (Outside the Controlled Access Areas), units will report to Range Control during normal duty hours, then they will be handed over to DES if Range Control closes.

CHAPTER 5 TARGETS

5-1. RANGE EQUIPMENT AND TARGETRY

- a. Range Control will supply safety paddles, flags, staple guns, staples, and standard targets for range usage. It is the unit's responsibility to supply the appropriate FMs and TMs for the equipment they will use on the range.
- b. On request and in support of special live fire missions, Range Control is able to provide muzzle flash simulators, hostile fire simulators, Tank Kill simulators, specially designed wooden targetry and many other valuable training assets.
- c. Units are responsible for whatever incidental materials are necessary for range usage such as scorecards, flashlights, toilet paper, special targets, and trash bags/containers for range police.
- d. The ROIC is responsible for all equipment signed out from Range Control along with the equipment and facilities associated with the range. The unit must make arrangements to repair, replace, or pay for all damage or loss to range equipment and facilities in order to clear the installation.
- e. Units must have reimbursable funds at the installation prior to performing special missions that will cause damage to installation property such as roadways or targetry. In addition, Range Control must clear these missions in advance.
- f. Maps are available for issue at DPTMS.
- g. For scheduling questions about special requests, range operations, or availability of targetry or other material, contact Range Control at 804-633-8224 or DSN 578-8410.

CHAPTER 6 SMALL ARMS

6-1. GENERAL

- a. This chapter describes policies specific to those ranges that are primarily for small arms, machine gun (.50 caliber and below), and sub caliber zero, familiarization, field fire and qualification.
- b. Personnel responsible for operating these ranges will be thoroughly familiar with this regulation. Ranges will be conducted IAW provisions of this regulation, pertinent Army Regulations, applicable Technical Manuals, Field Manuals, and other appropriate publications. All personnel when utilizing firing facilities will observe common sense and good judgment.

6-2. SPECIFIC INSTRUCTIONS FOR SMALL ARMS AND MACHINE GUN RANGES

- a. Prior to firing on a small arms range the ROIC/RSO will report to Range Control to receive a user's brief.
- b. The using unit's ROIC and RSO are responsible for the safe operation of the range. The following safety briefings will be given to all personnel prior to firing.
 - (1) Soldiers will receive a safety orientation, applicable to the weapon being fired and firing procedures prior to each firing table.
 - (2) Soldiers will be informed of the danger of firing outside the SDZ.
 - (3) Soldiers will only fire authorized weapons on the range.
 - (4) Soldiers will only utilize designated firing points.
 - (5) All weapons must be pointed in such a manner as to deter rounds landing outside the designated safety area.
 - (6) All personnel on the firing line will wear earplugs.
 - (7) A red range flag will be displayed while the range is in operation.
 - (8) No one will move to or leave the firing line without the permission of the ROIC or RSO.
 - (9) The ROIC/RSO will clear all weapons from the firing line.
 - (10) The ROIC and RSO will ensure the range is thoroughly policed. All trash and ammunition residue will be disposed of properly.
 - (11) The ROIC and RSO will ensure there is no smoking or horseplay on the range.

c. **Weapons Malfunction:** When an individual experiences a weapons malfunction, immediate action IAW the TM should be applied. If immediate action fails to correct the malfunction, the unit needs to notify Range Control and conduct follow up actions.

d. **Unsafe Acts:** Any person observing an unsafe act while the range is operating will call “cease fire”. Firing will immediately cease until the unsafe act has been investigated and resolved. Unsafe acts observed when the range is cold will be brought to the immediate attention of the ROIC or RSO.

e. **Range guards:**

- (1) Guards will be posted at the main entrance of the range. Guards will have communications with the ROIC/RSO.
- (2) Guards will be posted and briefed by the RSO on the following requirements:
 - (a) Allow only authorized personnel to enter the range at those locations designated by the ROIC.
 - (b) Firing will be suspended in case of an emergency or when an unsafe condition exists.
 - (c) Guards will alert the ROIC in the event of any hazardous situation including approaching aircraft.
 - (d) Range Control personnel will not be delayed.

6-3. CONDUCTING RANGE OPERATIONS Ensure that the following activities occur before, during and after each range to ensure smooth operation of the range:

a. **BEFORE:**

- (1) Soldiers are trained and understand what is to take place on the range.
- (2) All required equipment is available.
- (3) Ensure an MOS qualified MEDIC or Combat lifesaver with an aid bag is identified prior to firing and an emergency vehicle for ambulatory casualties is designated.
- (4) ROIC and RSO must know MEDEVAC procedures prior to range execution.
- (5) Ensure the range is properly opened through Range Control.

b. **DURING:**

- (1) Ensure range is operated IAW appropriate regulations, FM, TM and DA PAMs.
- (2) Ensure all required safety personnel are present and aware of their responsibilities.
- (3) Ensure all instructions and commands are understood by all personnel involved with the range.

- (4) Ensure all personnel report equipment deficiencies and or equipment damage immediately upon identification.
- (5) The unit responds to all commo checks initiated hourly by Range Control Center. If commo fails, the range will be placed in a cease-fire until commo is re-established.
- (6) A Range Inspector is notified in adequate time to clear the range.

c. AFTER:

- (1) Ensure all weapons are cleared and accounted for.
- (2) Police and account for all dunage and ammunition.
- (3) Police trash and dispose of it accordingly.
- (4) Check accountability of all personnel, weapons and equipment.

**CHAPTER 7
GRENADES AND GRENADE LAUNCHERS**

a. Personnel handling or throwing casualty producing hand grenades or who are within 150 meters will wear protective helmets and body armor.

b. Once the safety pin has been pulled the grenade will, on command, be thrown. Do not attempt to reinsert the safety pin or tape the handle.

c. Only personnel who have passed the hand grenade qualification course may employ live grenades. [Note that range 6n is a grenade qualification course. Grenade qualification is conducted with practice grenades.]

d. Hand grenade malfunctions:

(1) If a malfunction occurs call an immediate check fire and notify Range Control.

(2) Personnel within 150 meters of the area containing the malfunctioned grenade will immediately take cover. Personnel may be evacuated from the side of the range with the UXO to the rear of the safety wall and with Range Control permission, training may continue on the side without the UXO.

(3) The area will be secured until released by Range Control or EOD personnel. No one will go down range or within 150M of the UXO.

(4) The ROIC/RSO will ensure all personnel are briefed on these procedures prior to initiating live-fire.

CHAPTER 8
ANTITANK ROCKETS

- a. Before firing, the Surface Danger Zone to the rear of the launcher will be cleared of personnel, equipment, and heavy foliage.
- b. Personnel handling or firing antitank rockets will wear protective helmets and body armor.
- c. All back blast areas are doubled when temperatures are below freezing.
- d. Shoulder launched rockets will have all loading, preparation for firing, and unloading accomplished only on the firing line with the muzzle pointed downrange.

CHAPTER 9
RECOILLESS WEAPONS

- a. Personnel will not stand or have any portion of their body directly behind the rifle while ammunition is in the chamber during opening or closing of the breechblock.
- b. Personnel handling or firing recoilless weapons will wear protective helmets and body armor.
- c. All loose material including expended cartridges will be kept out of the back blast area.
- d. Recoilless weapons will not be fired from inside buildings or within 50 meters of a vertical or near vertical backstop.
- e. Recoilless weapons will not be fired over the head of troops.

CHAPTER 10 MORTARS

- a. Range Control will automatically activate the CFA for all mortar firing.
- b. Personnel involved in mortar training will wear protective helmets.
- c. At no time will mortars fire over troops or equipment. Flanking fire will be approved in advance by Range Control and handled according to guidance in Chapter 19.

An "M" designator following a standard location indicates an established mortar firing point.

- d. Split unit operations require a separate RSO for each position.
- e. A record will be kept of all malfunctions, with the number and location reported to Range Control. If the number of malfunctions in the same lot exceeds 5%, cease firing that lot and report the lot number to Range Control.
- f. During a fire mission, mortar units may store charges in wood or metal boxes at the ammo bearer's position as long as the boxes are sealed prior to rounds being fired. At the end of each mission, the excess charges will be moved to a wood or metal box at least 25 meters outside the mortar pit or vehicle position. Prior to clearing the firing position it will be disposed of in accordance with procedures outlined in FM 3-22.90.
- g. Misfires will be handled according to FM, TM, and unit SOP procedures. If still unable to fire the round replace safety pins, repackage the round in its original container, and return it to the ASP:

(1) If unable to replace safety pin, keeping the fuze pointed up, gently move the round a safe distance downrange (at least 50M). Place the round on the ground in such a way that the fuze is maintained in a vertical position (fuze up) and call Range Control for disposition.

(2) If you have a hung round that you are unable to remove from the barrel do not try to force it out. Carry the barrel facing down-range, a safe distance (at least 50M) away from all troops and equipment; lay it on the ground pointing down-range and report it to Range Control.

**CHAPTER 11
FIELD ARTILLERY**

- a. The ROIC may be the unit Commander or his command safety certified direct representative. The ROIC is responsible for all aspects of safety in the firing unit and at the assigned firing position.
- b. The ROIC for field artillery will be a commissioned Officer.
- c. The RSO may be a command safety certified E6 or above. There must be an RSO at each firing position. Split unit operations require a separate RSO for each position.
- d. Field Artillery units will remove excess propellant to a position 30 to 40 feet from the nearest weapon or ammunition. Prior to clearing the firing position it will be disposed of in accordance with procedures outlined in FM 6-50.
- e. Improved Conventional Munitions (ICM) ammunition will not be fired on Fort A.P. Hill.
- f. Units desiring to high angle fire must notify Range Control of their intentions at least 24 hours in advance of firing.
- g. Direct fire, "Killer Junior", and the use of Shell Beehive will be specified in the request for range facilities. Designated locations cleared for these type firings are listed below:

<u>TUBE</u>	<u>DIRECT FIRE</u>	<u>BEEHIVE/KILLER JUNIOR</u>
105/155	Ranges 19, 21, 25G OP2 and OP4	Ranges 19, 21, 25G, and 33
8"	Ranges 21, 25G	

- h. Self-propelled howitzers will be safety taped outside the turret IAW FM 6-50 and towed howitzers will use safety stakes. Before firing the RSO will compare the XO's Minimum Quadrant Elevation (Min QE) with the minimum quadrant on the "safety T" and the higher of the two will be used.

CHAPTER 12 TANK/FIGHTING VEHICLE GUNNERY

12-1. GENERAL

- a. Each separate firing location such as OP 1, and OP 2 will require a dedicated Range Safety Officer (RSO).
- b. The ROIC and all position RSOs will have direct communications with each other and the ROIC will have dedicated communications with Range Control.
- c. The individual Tank Commanders (TCs) are responsible for the safe firing and operation of their tanks.
- d. Once a vehicle begins its battle run and passes the start fire line all weapons are considered loaded and ready to fire.
- e. Laser operations will be conducted in accordance with Chapter 18 of this regulation.
- f. Tanks engaged in tactical training will open laser ports only while actually maneuvering on the approved course and only with appropriate filters installed.

12-2. TANK RANGE OIC

- a. The ROIC must have an approved safety overlay from Range Control as outlined in Chapter 19 of this regulation. It must be in his possession, on the range, with a control number, which will be used when requesting "HOT" status from Range Control.
- b. Prior to requesting a hot time, the ROIC will verify:
 - (1) Surface danger zones and all required firing data.
 - (2) Ammunition to be fired.
 - (3) Target locations.
 - (4) Firing time limits.

12-3. DESCRIPTION OF FACILITIES AND CAPABILITIES FOR FIRING TANKS

- a. Tank firing normally involves a combination of Range 33,
- b. OP 1, OP 2, several small arms impact areas, and the interconnecting trail network.
- c. Up to a modified Table VIII and all machinegun engagement distances are available. There are presently no moving targets for either main gun or machinegun engagement.
- d. Ammunition dock is located on Range 33.

e. The three main firing locations have latrines, bivouac sites, and tank trail connections to the main vehicle holding site.

12-4. DESIGNATION OF FIRING STATUS

- a. During daylight, status flags will be displayed.
- b. At night and during periods of reduced visibility lights will be displayed indicating vehicle status.
- c. Flag and light sets are a unit responsibility.
- d. Color of marking and description of status is as follows:

Color	Status
Red	Tank engaged in firing, weapons must be pointed at the target area.
Green	All tank weapons are clear and elevated. Any live ammunition in the tank is properly stowed.
Yellow	Tank has malfunction. Yellow is used only in conjunction with red or green.
Red and green	Tank is preparing to fire or the crew is performing a non-firing exercise. Weapons are clear but not elevated.
Red and yellow	Tank has a malfunction or misfire. Weapons are not clear and are pointed at the target area.
Green and yellow	Tank has a malfunction. All weapons are clear.
When laser ports are open, tanks will display the same flags or lights as if firing live ammunition.	

12-5. SAFETY

a. Targets will not be engaged at elevations greater than five degrees (89 mils). The following precautions will be taken to ensure safe firing:

(1) TCs will ensure that all weapons are pointed toward the impact area and always at five degrees or less elevation.

(2) Non-stabilized main tank armament will not be fired on the move.

b. Units that wish to move vehicles uploaded with ammunition must inspect the bores of all weapons to include main guns, coaxial machine guns, and small arms when departing a live-fire range. Uploaded vehicles will display a green flag.

c. When crossing main hardtop roads the unit Commander will ensure that two personnel are dispatched as road guards to stop on-coming traffic. One road guard will be stationed at least 100 meters each direction from the tank trail crossing. Road guards will wear reflective vests and use red flags. Light batons will be used at night.

CHAPTER 13 AVIATION GUNNERY

13-1. GENERAL

- a. Ranges 24 and 25 make up the Fort A.P. Hill Aviation gunnery complex. Range 24 supports ball and TPT training, Range 25 supports running/diving fire ball and HE.
- b. Once the aviation gunnery complex is "HOT", standard operations may be conducted without further clearance. All activity on the aviation gunnery complex will be coordinated with and approved by Range Control according to procedures outlined in Chapter 19. Range Control must approve a scenario, overlay and risk assessment prior to the initiation of live-fire.
- c. The aviation gunnery complex requires three red flags flying prior to receiving HOT status. Locations are at the external gate behind the range complex grid UT097156, the road junction of Ashcake Lane and North Range Road grid UT087206, and at the Range Operator's building.
- d. Rotary-wing aircraft will normally execute a left turn flight pattern and fixed-wing will normally use a right turn pattern on the aviation gunnery complex. Deviations from this guidance will be cleared with Range Control.
- e. Primary emergency landing areas for rotary-wing aircraft are shown as hash marked areas on the aviation crash rescue map in the Range Control operations center and on the FT. A.P. Hill Air training Areas and route map located at the Range Control Operations Center. A current hazard map is also maintained at the Firing Desk as well as at Hill Tower when it is in operation.
- f. Tube-launched Optically-tracked Wire-guided (TOW) missile operations will be conducted in accordance with Chapter 15.

13-2. AERIAL GUNNERY SAFETY REQUIREMENTS

- a. The ROIC will ensure that unit personnel are familiar with this document, Fort A.P. Hill Memo 95-1, and have been briefed on the Fort A.P. Hill Pre-Accident Plan and in-flight emergencies.
- b. The unit must have a current weather report and forecasted weather for the period of firing. Weather reports must be updated every 4 hours.
- c. Over flight of the down range area must be conducted to ensure that the range is clear before requesting a hot status.
- d. The ROIC must request and receive permission for the aviation range complex to go "HOT". He will confirm to Range Control the aerial firing points (AFP), range sectors, and operational control numbers to be used for that days firing. Once a "HOT" time is received, the ROIC will control all operations on the aviation gunnery complex. Range Control will consider the entire range complex "HOT" until closed by the ROIC at the end of the scheduled firing day. It is requested that a schedule with daily hours of actual gunnery be provided Range Control on the first day of training.

e. Rotary-wing operations, the ROIC will:

(1) Ensure that each aircrew involved in aviation gunnery is familiar with the location of the AFP's, boundary of range facility, the right and left magnetic limits, maximum range limitations, and position/ orientation of weapons before firing. A copy of this data will be with each aircraft when using any portion of the aviation range complex. The ROIC will be given a complete information packet on the complex when he signs for the facility.

(2) Designate a damaged/misfire ammunition area located a safe distance away from all normal range activity.

(3) Designate an emergency pad to be used for weapons and aircraft malfunctions, ensure it remains clear, and that all personnel are informed as to its location and purpose.

(4) Ensure each aircraft has a qualified pilot in command for the specific aircraft and weapon system involved. Pilots and gunners are qualified when they have:

(5) Successfully completed an approved qualification course or qualification or transition training in accordance with the applicable Aircrew Training Manual for the aircraft and weapon system being fired.

(6) Demonstrated flight and weapon proficiency to a designated Instructor Pilot (IP) in the applicable aircraft and weapon system.

(7) The ROIC will ensure that, depending on the situation, the following is supervised by himself or the RSO:

(8) Ordnance preparation, loading and unloading of ordnance, bore sighting, and stray voltage checks on the weapons systems are done in accordance with applicable aircraft weapon system operating instructions.

(9) Firing is conducted only when the aircraft is in the proper location, oriented downrange, on course, and the weapon system is aimed within the safety limits of the target area.

f. Fixed Wing-wing operations, the ROIC will:

(1) Fixed-wing aircraft must coordinate their weapons, flight paths, and targets with Range Control on an operation overlay according to procedures outlined in Chapter 19.

(2) Ensure that each aircrew involved is familiar with the boundary of the range facility, the right and left magnetic limits, maximum range limitations, min and max altitude, marking of friendly positions and marking of targets, and position/ orientation of weapons before firing. The ROIC will be given a complete information packet on the complex when he signs for the facility.

(3) Designate an emergency jettison point inside one of the dedicated impact areas.

(4) Designate a holding area, IP and air corridor with positive control of each.

(5) The ROIC will ensure that, Firing is conducted only when the aircraft is in the proper location, oriented downrange, on course, and the aircraft has positive identification of the target area.

13-3. COMMUNICATIONS. The ROIC must ensure that communications are established and maintained with the pilots on FM 38.50 and with Range Control on 32.00 at all times. Additionally, internal communications with all safety personnel and aircraft must be maintained during all live-fire operations. Live-fire on the range complex will cease immediately if comms is lost and will not resume until re-established.

The Range operator for the complex will provide hand held radios to be used for internal communication.

13-4. MINIMUM FLYING CONDITIONS

a. For range operations rotary-wing aircraft must have a minimum of 1 NM visibility and remain clear of clouds. Fixed-wing aircraft must have a minimum of 3 NM visibility with a 1,000 ft ceiling.

b. The target area and targets must be identifiable by the aircrew prior to firing. Pilots must confirm to the ROIC or RSO, sufficient visibility exists for firing at each firing position and that the round impact is distinguishable. If the target is indistinguishable or obscured, a cease-fire will be initiated.

13-5. NIGHT OPERATIONS

a. When operations are being conducted at night ground personnel will always carry a flashlight or wear a head lantern, ensure they are equipped with red lenses, and that the light is on when they are working in the vicinity of the aircraft.

b. Night hover firing with the Telescopic Sight Unit (TSU) may be conducted if the target can be positively identified through the TSU and the right and left limits of the target area are identifiable.

13-6. SAFETY

a. All aircraft:

(1) Armament subsystems properly inspected are considered safe for range traffic pattern operations under switches cold/off conditions. Switches cold/off does not include pulling circuit breakers, which would disable the grounding of the system.

(2) Aircraft will only commence course and/or place switches in hot status after cleared by the ROIC/RSO responsible for that position. Switches will be placed in cold status immediately upon completion of the mission and before weapon systems are pointed out of the safety limits for the mission.

(3) Operation and position of the arming switch is the responsibility of the instructor pilot or pilot in command.

b. Rotary-wing:

(1) Aircraft must be grounded prior to any work being performed and before the aircrew enters or exits the aircraft.

(2) Armed aircraft will have weapons cleared and safe before refueling.

(3) When rockets are loaded on board, no external communications equipment will be permitted to transmit within 16 meters of the aircraft.

(4) Unit Commanders will ensure that all external jettison systems are operable and explosive cartridges installed prior to arming external stores.

(5) When conducting Nap of the Earth (NOE) hover fire, the weapon systems will not be armed until arriving at the AFP and are pointed within the prescribed safety limits.

13-7. HELICOPTER IN-FLIGHT EMERGENCIES

a. Aircraft experiencing an emergency will immediately contact the ROIC stating "MAYDAY...MAYDAY" and call sign, location, nature of emergency and ordinance on board. Upon hearing a "MAYDAY" call all other aircraft will go "SWITCHES COLD", cease transmitting but continue to monitor, climb to 4000' MSL and hold awaiting further instructions. The ROIC will cease all operations of non-involved aircraft.

b. Range Control will be notified immediately of any emergency situation with the following information:

(1) Location and description of the accident/incident, time of occurrence, and possible injuries.

(2) Type of aircraft and ordnance involved.

(3) Support required.

c. Once the aircraft is down:

(1) Range Control will coordinate with DPS for site security.

(2) Range Control will coordinate crash rescue, medical, and fire support as necessary.

(3) After landing and aircraft shut down the crew should remain with the aircraft if able, and warn all personnel to remain clear of weapons systems until the area is secured.

(4) The unit is responsible for the necessary personnel and equipment to safely download the aircraft.

(5) The aircraft may only be moved when released by Range Control.

d. When in-flight emergencies occur the Pilot in Command (PIC) must evaluate the situation and make the final decision on where and when he will land his aircraft. He can deviate from landing as

soon as possible only when the nature of the emergency renders immediate field site landing hazardous to the crew and/or the aircraft.

e. If the situation requires the jettison of external ordnance, primary locations to consider should be along main impact area roads away from targets to facilitate recovery.

f. If an aircraft must make a forced landing within the dedicated impact area the PIC must evaluate the post-crash situation and determine whether the danger of exiting the aircraft into a duded area outweighs the danger of remaining in the aircraft until Range Control personnel arrive at the scene.

g. If the exact location of a downed aircraft is unknown, the ROIC will utilize other aircraft in the pattern to pinpoint the position.

h. If personnel in the downed aircraft are injured and Range Control/ EOD personnel are not immediately available, the ROIC must exercise his judgment in providing assistance. Rescue personnel must be informed that the downrange area is heavily duded with a variety of ammunition and great care must be taken in selecting a path to the site.

i. After rescue is completed the range will be kept closed and no personnel allowed downrange without Range Control permission.

j. The ROIC will ensure that no wreckage is moved except to facilitate removal of injured personnel.

k. When a hydraulic failure occurs that requires a running landing the following options may be considered:

(1) If adequate fuel is on board and the aircraft is armed, Quantico Marine Base has firefighting assets, ordnance knowledge, and a hard surface strip.

(2) If adequate fuel is on board and the aircraft is not armed, Davison Field at Fort Belvoir also has a hard surface strip and adequate emergency support equipment.

(3) Hill Army Airfield has runway (05-23) which is a 2186ft grass strip with a fairly level surface. Crash Rescue capability is minutes away.

(4) The Assault Landing Strip is 4300 feet in length and constructed of hard packed crushed gravel. Although the airstrip is capable of supporting up to C17, it should be noted that there are no facilities services available and all effort should be made to reach a hard strip.

l. For malfunctions other than "hot or hung ordnance" or "runaways" the system will be disarmed and the aircraft will immediately proceed to a pre-designated arming pad and land with the system oriented down range.

m. Runaways will be maintained in a down range direction until stopped and/or safe.

n. When a situation occurs involving hung or hot ordnance, primarily with rockets or missiles, where there is a partial firing of the ordnance and it does not detach from the aircraft and/or cannot be placed in a "SAFE" condition:

(1) Declare "CEASE-FIRE" and keep the aircraft oriented "downrange".

(2) Once cleared by the ROIC or RSO, an attempt should be made to relocate the aircraft to a designated ordnance pad on the range. The pad must be cleared of all ordnance and personnel.

(3) If the aircraft cannot return to the pad while remaining oriented "downrange," the pilot must land in a location where he can maintain his orientation "downrange." Primary landing sites in the Impact Area will be on the main roads away from prominent targets.

(4) Personnel must wait a minimum of 30 minutes after the aircraft has landed before attempting to clear hung or hot ordnance. The ROIC/RSO should verify the time of the incident and inform appropriate personnel.

(5) In no case will the ROIC/RSO clear personnel or aircraft to proceed downrange until the situation is cleared.

(6) After the 30 minute time limit has elapsed an attempt can be made to SAFE the ordnance and remove it from the aircraft. If the aircraft is located in the Impact Area all movement to and from the aircraft will be done with the assistance of Range Control/EOD personnel. Unit armament personnel will safe the weapons.

(7) Once the incident is resolved and the downrange area is clear, the ROIC can request release from check fire.

13-8. LOST COMMUNICATIONS PROCEDURES. Should a pilot suspect he has lost communication he will immediately go "SWITCHES COLD" and attempt to contact the ROIC, tower, another aircraft, or Range Control using all available frequencies and radios. If unable to contact anyone the aircraft will:

a. Continue to transmit intentions in the blind.

b. Maintain separation from all other aircraft, climb 500 feet MSL, and execute a left traffic pattern inside the normal flow of traffic.

c. When on final, the pilot will flash landing lights to indicate to the ROIC/RSO that he has lost communications. Using caution, the pilot will land on an available ordnance pad and shut down.

d. Under no circumstances will an aircraft continue downrange once it is recognized that communications have been lost.

13-9. FIXED-WING IN FLIGHT EMERGENCIES Aircraft will call the emergency to Hill Advisory; dump ordnance in the impact area and head to Richmond.

13-10. RANGE 24 AND 25 GUNNERY

a. A complete information packet for aviation gunnery is available at Range Control. It will be provided to the ROIC at his certification briefing and is additionally included in the range book for the range complex. The packet contains the latest information on the following:

- (1) All Aviation Firing Positions (AFPs) with left and right limits.
- (2) Primary Safe Set Down Areas and landing strip locations.
- (3) R6601 Helicopter Sector Map with all AFPs plotted.
- (4) Range 24 Running fire lane.
- (5) Range 25 Running Fire Lane.
- (6) Fixed-wing target areas for BDU 33 bombs, 20MM, and 30MM guns.
- (7) TOW firing positions.
- (8) Range 25 Door Gunner Range.

13-11. FAARP OPERATIONS

a. Requirements in this section are aviation specific and in addition to those directed by other parts of this chapter.

b. Administrative, utility, cargo, and non-loaded combat helicopters will not be parked closer than 100 meters from loaded combat helicopters and/or ready ammunition sites on the Range Complex.

c. During active aerial range operations the separation of unarmed aircraft parking areas from combat aircraft parking areas and their ready ammunition storage facilities and ammunition and explosives cargo areas will be considered a unit function and handled according to the unit SOP. When range operations cease for the day the standard minimum distances will again apply.

d. Approach and departure zones for helicopters to field helipads on any Range Complex facility will be routed so as to prevent them from passing over ammunition and explosives contained at the facility.

CHAPTER 14

AIR DEFENSE ARTILLERY WEAPONS SYSTEMS

Currently, the only Air Defense weapon system authorized on FT. A.P. Hill is the Avenger sub-cal. Manual Machinegun Range Estimation must be used, as LRF is not authorized.

14-1. GENERAL

a. Only personnel who have been trained and qualified with Avenger systems will be allowed to participate in service firings and in combat firing exercises.

b. All personnel to fire are given a detailed briefing by the ROIC. The ROIC discusses the purposes, objectives, standards, and firing procedures to be followed. The OIC reviews the gunnery techniques applicable to the type of firing conducted.

14-2. SAFETY. The following general safety precautions for the firing of the sub-cal system will be observed:

a. Before firing, the entire surface danger area will be cleared of all non-mission essential personnel.

b. A qualified NCO must be assigned to coach each gunner.

c. LASER beam emitting devices will be covered to prevent accidental initiation.

d. Range limit azimuths must be annotated on each weapons system in view of the gunner and coach.

e. Dry fire rehearsal and tracking rehearsal must be conducted before live fire.

f. RCMAT operators will rehearse flight patterns to ensure that aircraft do not exit the engagement area during live fire.

g. Surface Danger Zones (SDZ) will be developed IAW AR 385-63, and submitted to Range Control prior to the execution of training.

h. During the firing exercises gunners will not fire except on orders from the coach each gunner.

i. The ROIC must have complete control over the activities taking place on the range. In addition to conducting a successful firing, he has responsibility for insuring that all safety and security procedures during the conduct of the firing exercise are enforced.

j. In addition to the standard briefing given by the ROIC/RSO, all personnel will be briefed that looking through the tracker at the sun, illumination flares, or other bright lights could result in serious eye damage.

k. Weapons will not be fired for target practice at manned targets or targets towed by manned vehicles.

CHAPTER 15 ANTITANK GUIDED MISSILES

15-1. GENERAL

a. Only personnel who have been trained and qualified with inert or loaded components, simulated or actual propellants, and inert or loaded complete rounds will be allowed to participate in service firings and in combat firing exercises.

b. Precautions covering specific types of material, items, or components are given in the applicable weapon systems manuals and will be strictly followed.

15-2. SAFETY

a. The following general safety precautions for the firing of guided missiles will be observed:

b. Before firing, the entire surface danger area will be cleared of all non-mission essential personnel.

c. All personnel involved in training will wear helmets and body armor.

d. Surface Danger Zones (SDZ) will be developed IAW AR 385-63, Chapter 16 and submitted to Range Control prior to the execution of training.

e. Smoking is prohibited within 50 feet of firing pads, ready storage sites, or assembly sites. The possession of matches or flame producing devices is prohibited in these areas.

f. Missiles will not be fired from within buildings or within 100 meters of a vertical or near vertical backstop.

g. Wire guided missiles will not be fired from any position which would allow the guidance wire to contact electrical power lines, electrified target locations, or any source of power that would be hazardous to the control of the weapon or the firing personnel.

h. A suitably equipped ambulance and two medical aid men will be available for all guided missile firings with the exception of any periods where MEDEVAC is on station. When MEDEVAC is available, a single medic on site will be considered adequate.

i. Firing of guided missiles over personnel or material objects in training or target practice is prohibited. This prohibition includes the entire Surface Danger Zone (SDZ).

j. In addition to the standard briefing given by the ROIC/RSO, all personnel will be briefed that looking through the tracker at the sun, illumination flares, or other bright lights could result in serious eye damage.

k. Ground fired missiles in training will not exceed ± 20 degrees from the horizontal plane.

1. Missiles will not be fired for target practice at manned targets or targets towed by manned vehicles.

15-3. TOW SPECIFIC FIRING CONDITIONS

a. The unit Commander, with Range Control concurrence, may allow mission essential personnel directly associated with, but not actively engaged in the fire mission, to be located within area H in protected enclosures or behind earthen berms.

b. Personnel will neither stand nor permit any part of their body to be directly behind or in front of the TOW launcher while a missile is in the launch tube.

c. Firing positions for High Explosive Warheads are Range 21 with a 1200-meter range, TOW berm 2 at grid UT024151 with a 1300-meter range and OP4.

d. Inert warhead TOW weapons may be fired at any location that meets the 75-meter back blast requirement and the standard downrange distance X. Suggested firing locations are TOW berm 1; OPs 4; and Ranges 19 and 21.

15-4. DRAGON SPECIFIC FIRING CONDITIONS

a. Personnel within 50 meters of the firing position will wear flak vest, helmet, eye protection, and hearing protection.

b. Personnel will never stand or permit any portion of their bodies to be directly behind or in front of the launcher when the tracker and missile are mated.

c. All missiles should be tested using the missile test set prior to missile firing.

15-5. MISFIRES, HANG FIRES, AND MALFUNCTIONS. If any lot of guided missiles or components thereof has malfunctioned in such a way that further use of that lot will probably result in injury to personnel or damage to property, the particular lot involved will be suspended from use. This suspension will be made by the unit Commander, ROIC, or senior safety Officer and immediately reported to Range Control and QASAS. The material involved in the malfunction and any evidence such as components or fragments of the missile involved will be carefully preserved until disposition is directed by Range Control.

15-6. ANTITANK WEAPONS EFFECT SIGNATURE SIMULATOR (ATWESS)

a. ATWESS devices must never be armed until ready to fire as a sudden jolt could cause the device to function.

b. The ATWESS cartridge will not be cut, opened, or misused in any way other than what is specifically allowed in the appropriate FM/TM.

CHAPTER 16
CHEMICAL AGENTS AND SMOKES

16-1. NBC TRAINING

a. Units desiring to use chemical agents during firing will only use Riot Control Agents (RCA). The intent to use Chemicals in training must be included in the scheduling request.

b. The use of RCAs in training is limited to CS, CSX, CS-1, CS-2, and CR. Minimum safe distances for RCAs used in training will be 500 meters from the nearest heavily traveled road or inhabited area and 1000 meters from the installation boundary. Range Control will be notified immediately of any RCA drifting off the installation.

c. The ROIC or RSO for any range facility employing chemical agents will be NBC qualified or the unit NBC NCO will be assigned as an additional RSO during the time chemical agents are used. Range Control personnel will be briefed on the NBC operation and provided a copy of the schedule of events.

CHAPTER 17

MINES, FIRING DEVICES, TRIP FLARES, SIMULATORS, AND EXPLOSIVE CHARGES

17-1. GENERAL

a. Personnel acting as ROIC/RSO will have a separate Explosives and Demolitions briefing in addition to the standard ROIC/RSO briefing. All items required for normal range operations outlined in the basic ROIC/RSO briefing apply.

b. Requests for targetry such as silhouettes, target vehicles, metal, etc., will be filled within the capabilities of Range Control. Target procurement and movement to the demolition site may require unit assistance and funding. Requests for this support should be included on the scheduling letter and followed up telephonically to Range Control at least one week prior use.

c. Roads and trails will not be cratered, blown, or blocked without permission from Range Control. Permission will normally be contingent upon the unit's capability to repair the damage at the completion of their training.

d. Range Control will be notified ten minutes prior to any single, multiple, or combined detonation in excess of 50 lbs.

17-2. DEMOLITION SITE SCHEDULING. Range Control may change scheduled Demolition Sites that conflict with other live-fire training in order to allow other Soldiers to train. When scheduling, and in order to provide for your requirements should a change occur, the following must be provided in your scheduling letter:

a. Type charges i.e. shape, cratering, Bangalore, etc.

b. Maximum charge to be fired in lbs TNT.

c. Special training requirements or targets needed such as trees for cutting, vehicles, etc. (if open area is all that is required show "None").

d. In the event your Demo Site is changed, the ROIC will be informed of the new location when he signs for the facility.

17-3. SAFETY

a. Safety procedures used in demolition training will be in accordance with those outlined in FM 5-250.

b. General Safety Guidelines.

(1) Responsibility for preparing, placing, or firing of charges will not be divided. One individual will be responsible for the supervision of all phases of the demolition mission.

(2) Do not use blasting caps underground.

(3) Ensure all personnel are accounted for prior to detonating a charge.

(4) Give "FIRE IN THE HOLE" warning three times prior to initiating demolitions.

(5) The use of any explosive for other than its intended purpose is not allowed and the Range Officer must approve training involving field expedient demolitions or improvised explosive devices.

(6) All demolition-training operations will be discontinued during or on the approach of an electrical storm.

(7) Commercial fireworks will not be handled, stored, or used in any way on Fort A.P. Hill.

(8) All cratering charges will be dual primed with detonating cord.

(9) All personnel will wear protective helmets and hearing protection in addition to observing safe distances listed in table 17-1 below when firing explosives,.

(10) When firing shaped charges, personnel will be at least 300 meters from the detonation and in defilade or at least 100 meters from the detonation in a missile proof shelter.

(11) When firing Bangalore torpedoes, personnel will evacuate at least 500 meters from the point of detonation, 200 meters if a defilade position is available, or 100 meters if in a missile proof shelter.

(12) For missile proof shelters, units may construct field expedient bunkers, bring ballistic box shelters, or use military vehicles such as the family of armored personnel carriers (APCs). Range Control must be advised in advance and approve the shelter or vehicle prior to actual use.

(13) Safe distances for bare charges and charges on targets are shown in FM 5-250 tables 6-2 and 6-3. A general guide for surface charge evacuation distance (SCED) is:

Weight	SCED
Less than 27 lbs	300 meters.
28 - 125 lbs	500 meters.
126 - 300 lbs	700 meters.

Table 17-1

(14) It is a unit responsibility to ensure that all explosive charges, simulators, and pyrotechnics used during their training are properly detonated. All emplacements including misfires and unexploded ordnance will be blown in place prior to the unit clearing the area.

c. Non-electric.

(1) Never store blasting caps with explosives or carry them loose.

(2) Use only M2 crimpers for all crimping operations.

d. Electric.

(1) Do not remove short-circuiting shunt or un-shunt the lead wires unless testing or connecting the cap.

(2) Electrically initiated operations will not be performed in training within 200 meters of energized power transmission lines.

(3) Demolition training areas will be controlled to prevent entry of portable transmitting equipment within 5 meters minimum and in all instances in order to comply with distances shown in Table 18-2 of AR 385-63.

17-4. MISFIRE PROCEDURES

a. Misfire procedures will be in accordance with FM 5-250 and appropriate weapons TM.

b. Immediately notify Range Control of the misfire.

c. Never leave the area of the misfire unsecured or attempt to move or disarm a misfire.

d. Never abandon misfired explosives - they are the unit's responsibility. EOD will not respond to a misfire request. If the unit cannot adequately handle a misfire, they do not belong on the range complex. Notify Range Control when the misfire has been cleared.

e. Non-electric Misfires.

(1) After attempting to fire the charge, wait at least 30 minutes plus the time remaining on the secondary before investigating the problem.

(2) The Soldier placing the charge should be the one who checks it and corrects any problems.

(3) To clear above ground misfires, use a primed 1 lb charge placed next to the misfire. Do this for each misfired charge or charge separated from the firing circuit that contains a blasting cap. Do not move scattered charges containing blasting caps - blow them in place. Do the same for charges primed with detonating cord.

(4) For underground charges, carefully dig to within one foot of the charge and place a primed 2 lb charge on top or to the side and detonate the new charge.

f. Electric Misfires.

(1) Immediately attempt to fire twice more and if unsuccessful, use a secondary system.

(2) Check to ensure wire connections are tight, if loose - tighten and again attempt to fire the charge.

(3) Disconnect the blasting machine or power source and test the blasting circuit. If the circuit tests good change blasting machines or power source and attempt to fire the charge.

(4) If a charge does not fire and only one initiation system is employed, disconnect the blasting machine, shunt the wires, and immediately investigate. When employing more than one electrical system or a combination electrical/non-electrical system, wait 30 minutes before inspecting.

(5) If you suspect the electrical cap is the problem, do not attempt to remove or handle it. Place a primed 1 lb charge next to the misfired charge and detonate the new charge.

g. Detonating Cord.

(1) If detonating cord fails to function, attach a new cap to the remaining cord and detonate the new cap. Treat branch lines in the same manner.

(2) If the detonating cord leading to the charge detonates but fails to explode the charge, do not investigate until all signs of burning have stopped. Wait 30 minutes if the charge is underground. Re-prime and attempt to detonate the charge.

(3) Scattered pieces of detonating cord that do not contain blasting caps may be collected and detonated together.

h. MICLIC misfire procedures: As a minimum, the following safety procedures will be followed:

(1) Rocket Repeated Failure to Fire.

(a) After repeated firing attempts, disconnect the blasting machine and ensure the selector switch is set to OFF. Keep all personnel protected and wait 30 minutes before proceeding with misfire procedures. Range Control will be notified at the start and end of the 30 minutes.

(b) After 30 minutes, remove rocket cable from receptacle number 3 and immediately secure protective cap on rocket cable.

(c) Install shunt into receptacle number 3 and continue with misfire procedures according to Safety of Use Message 105-1A "CHANGE OF MISFIRE PROCEDURES FOR LAUNCHER MINE CLEARANCE MK 155 AND ROCKET MOTOR 5-INCH MK 22.

(d) If the rocket still fails to fire and a replacement rocket is not available, the line charge will be turned back to the ASP.

(2) Linear Charge Failure to Fire.

(a) After repeated firing attempts, disconnect the blasting machine and ensure the selector switch is set to OFF.

(b) Move towing vehicle forward enough to reduce cable tension and wait 30 minutes. Range Control will be notified at the start and end of the 30 minutes.

(c) Check all electrical connections for proper assembly and if problems are found, correct and repeat firing procedures.

(d) If still no fire, start again with "(2)(a)" above and repeat misfire procedures.

(e) Remove linear charge electrical lead from receptacle number 2 and secure protective plug on receptacle number 2.

(f) Remove arresting cable hook from container eye-bolt and disconnect linear charge electrical connector.

(g) Contact Range Control for permission to manually prime and fire the linear charge as prescribed below:

(1) Prepare two (2) non-electric ten (10) minute set-ups.

(2) Prepare a charge by taping two (2) blocks of C-4 together and make two (2) cap priming holes.

(3) Individually take the prepared charge and priming set-ups to the linear charge and place the prepared charge next to the linear charge. Emplace the cap ends of the priming set-ups in the prepared cap priming holes.

(4) Yell "FIRE IN THE HOLE" three times, pull the igniters, and walking briskly, evacuate the area and call Range Control for a ten (10) minute warning on the shot.

(5) Notify Range Control when the misfire has been cleared.

17-5. MAXIMUM CHARGE (MAX CHG)

a. Maximum charge is defined as the total of any single or combined detonation set off simultaneously or with less than a 30 second interval between charges. Maximum Charge detonations must be separated by at least a 30 second interval with no more than three allowed before a fifteen minute wait is required.

b. Standard Max Charge allowed at Fort A.P. Hill is 100lbs and is what may be detonated without special approval. Approval to increase Max Chg must be requested from the Range Officer and is contingent on unit training requirements, weather and the availability of an area capable of handling the size charge requested.

c. Max charges will be reduced by 50% at dusk with exceptions being handled on a case-by-case basis by Range Control on the day of firing.

17-6. EXPLOSIVES FIRING LOG AND EXPLOSIVE/MINE FIRING LOG. The ROIC will be given an Explosives Firing Log and/or an Explosive/Mine Firing Log when signing for a demolition facility. Once the ROIC has requested and received permission to go "HOT", he will control and log every shot fired on the Explosives Firing Log or the Explosive/Mine Firing Log. The completed form must be turned in to Range Control before the range facility will be cleared.

17-7. TRAINING NEW PERSONNEL

Requirements for training new personnel are as follows:

- a. Fire all charges electrically with the exception of specific non-electric training instruction.
- b. Fire charges untamped above the ground surface.
- c. Assure that not more than five trainees actually insert cap or primer in charges, supervised by one instructor.

17-8. TRANSPORTATION AND TEMPORARY RANGE STORAGE

- a. Vehicles transporting explosives and units using field storage sites will comply with guidelines outlined in Chapter 3.
- b. Temporary range storage of explosives in the open will contain no more than 500 lbs per pile/stack and the distance between each pile/stack will be a minimum of 45 meters. Demolition material, dynamite, black powder, and detonators will each be placed in a separate pile/stack. Temporary range storage will include those steps necessary to ensure explosives are kept dry and protected. Dunage and cover, as circumstances require, are unit responsibilities and stores will be guarded at all times. Further guidance will be IAW Chapter 3 of this regulation, AR 385-64, FM 5-250.
- c. Never mix live and dummy/training explosives together. This includes transportation, storage, demonstration, or training.

17-9. DEMOLITION SITE CLEARANCE

- a. Final clearance is dependent on proper completion and turn in of Explosive Firing Log and/or Explosive/Mine Firing Log and Range Acceptance/Clearance Checklist.
- b. Partially expended explosives will not be removed from the site without permission from Range Control.
- c. Scrap will not be removed from the site unless it has been certified as clear by EOD qualified personnel and a certification memo has been processed through DPTMS to the installation Commander.

17-10. STEEL CUTTING AND CONCRETE

- a. Steel cutting is normally done using Demo Site 22, 71C and 75:
 - (1) Charges placed on steel will not exceed 2 pounds.
 - (2) If charge is placed in the pit, personnel will evacuate the pit to a distance of 100 meters.
 - (3) If the charge is outside the pit, it must be at least 100 meters from the pit and personnel will evacuate into the pit.

b. Charges placed on steel or concrete objects in the open will use evacuation distances listed in Para 17-3b(13) and be in defilade.

c. Charges placed on concrete will not exceed 40 pounds and should be placed on the side nearest to personnel.

d. All personnel will wear protective helmets, protective vest and hearing protection.

17-11. MINES, FUSES, FIRING DEVICES, TRIP FLARES, AND SIMULATORS

a. Mines:

(1) All mines and the explosives used in conjunction will be recorded on the EXPLOSIVES/MINE FIRING LOG.

(2) Practice mines and their fuses contain explosives and will always be treated as live ordnance.

(3) Mines will be detonated by an electrically primed one-half pound charge placed 6 inches beside mine. Personnel involved will wear protective helmets, hearing protection, protective vests, and will be in defilade at least 200 meters from the detonation.

(4) No anti-personnel mines will be used for live-fire (M-14/M-16).

(5) Live mine training is authorized with the M-15, M-19, M-21 AT mines, and Claymore mines.

(6) Use of tilt-rods is prohibited.

(7) Live mines will be surface laid only- never buried. Mine fields will be enclosed on all 4 (four) sides with wire to prevent accidental access to the area.

(8) The unit is required to brief the mine-field training plan to range control on the actual site, prior to arming any live mines. Ground guides will be provided for any vehicle moving within 100 meters of the wire enclosing the mine-field.

Fuses: Antipersonnel mine fuse M605 will be assembled, armed, and disarmed in accordance with TM 9-1345-203-12.

b. Firing devices:

(1) Instructions in TM 9-1375-213-12 will be followed when installing, arming, and disarming firing devices.

(2) Firing devices and fuses will never be pointed at personnel.

(3) Claymore clackers will be carried by the Soldier emplacing the claymore and shunts will be covered.

(4) Claymore training will cease during thunderstorms.

(5) Standard bases containing unfired percussion caps, firing devices, and fuses will not be carried in pockets.

(6) Standard bases containing unfired percussion caps will be kept separated from firing devices and fuses until the firing device or fuse is ready to be installed in the mine or booby-trap.

(7) Camouflage of mines and booby-traps will be completed before removing the positive safety from the fuse or firing device.

d. Trip flares M48 and M49 used in training will be protected by barriers or guards to prevent personnel from approaching closer than two meters to the flare emplacement.

e. Simulators:

(1) M80 simulators will not be held when detonated nor will M1 and M2 type fuse igniters be used to ignite the M80 fuse.

(2) All personnel will follow the procedures in TM 9-1370-206-10 concerning safe use and handling of simulators.

(3) At no time will personnel attempt to disarm or disassemble simulators.

f. Atomic Simulators M142:

(1) Requests to use atomic simulators will include 8 digit grid coordinates of the proposed detonation point.

(2) M142 firing procedures and precautions are contained in TM 9-1370-207-10.

17-12. EXPLOSIVES ORDNANCE DEMOLITION (EOD)

a. EOD training at the installation will comply with the same rules as any other training unit.

b. EOD teams in mission support of Fort A.P. Hill will conduct operations in accordance with appropriate EOD regulations, directives, and unit SOPs.

c. On arrival at the installation, EOD personnel will report to Range Control for an update on the situation and will be briefed on the following post requirements:

(1) Range Control will escort the EOD team to the site. Range Control will provide area security and radio communications link to the Firing Desk.

(2) The EOD OIC/NCOIC will fill out an inventory of the type and number of items destroyed. The list will be given to Range Control prior to leaving the installation or as soon as possible after the mission is complete.

(3) All other procedures will be normal SOP for EOD operations and/or coordinated as required with Range Control.

(4) No treatment or disposal is authorized unless approved by the Installation Environmental Division.

(5) All handling and training will be in accordance with the Military Munitions Rule.

(6) EOD will provide the Environmental Division their training inventory for all Class H munition.

CHAPTER 18 LASER RANGE SAFETY

18-1. GENERAL

a. This chapter prescribes specific safety procedures to be followed in the use of LASER devices on Fort A.P. Hill. Procedures, guidance, and safety directed in this chapter is in accordance with and/or in addition to that prescribed in AR 385-63, TB MED 524, AR 11-9 or appropriate laser equipment manuals.

b. The Range OIC and Safety Officers will be thoroughly familiar with and comply with all of these directives before operating or supervising the operation of laser devices on Fort A.P. Hill.

18-2. RESPONSIBILITIES

a. Fort A.P. Hill Range Control.

(1) Will perform a quarterly target area survey to ensure that there are no specular surfaces down range.

(2) Will ensure that appropriate signs are in place prior to the lasing facility going hot.

b. Using Unit Commander.

Will designate, train, and safety certify a Laser Safety Officer (LSO) in the grade of E-6 or above. The LRSO certification will include, but not be limited to; Laser hazards, categories, equipment operation inherent to the unit, DA laser safety policies and unit laser SOP.

c. The Laser Range OIC and Laser RSO Will:

(1) Be familiar with this regulation, the documents listed in paragraph 9-1, and the FM's and TM's applicable to the particular laser device being used.

(2) Ensure compliance with the unit SOP for laser operations and training.

(3) Visually inspect the range area for reflective surfaces immediately notifying Range Control if any are found. The LSO must verify to Range Control that the area has been inspected and found free of specular surfaces prior to receiving permission to go "HOT".

(4) Do an on site survey to establish the left and right target limits ensuring that the laser to target angle is at least 10 mils below the horizon. Range Control will be provided with an overlay for approval based on the site survey with an additional 15-degree safety area identified right and left of the firing limits that will be an exclusion area. The overlay will additionally state: "All targets will be at least 10 mils below the horizon". Once approved one copy will be kept at Range Control and one will be maintained by the ROIC/RSO at the lasing site.

(5) Ensure laser signs are posted.

(6) Immediately stop lasing if positive control of the laser beam is lost.

(7) Ensure that individuals within the LSDZ, such as moving target operators, wear laser protective eyewear with curved protective lenses during laser firing. Eyewear must be approved for the wavelength and the laser device being fired.

(8) Establish and maintain continuous communication with personnel in the target area. Lasing will cease immediately if communication is lost and will not resume until the ROIC is confident reliable communication has been reestablished.

(9) Ensure that the visibility level is such that all targets to be lased are clearly visible.

(10) Visually inspect the range area for reflective surfaces immediately notifying Range Control if any are found. The LSO must verify to Range Control that the area has been inspected and found free of specular surfaces prior to receiving permission to go "HOT".

(11) The LSO will issue a briefing to all personnel on the range covering as a minimum the following criteria:

- (a) A general orientation for all personnel as to what lasers are and what they do in order to provide confidence and competence in those personnel involved in laser operations.
- (b) It must prescribe instruction on hazards for specific devices and personal protective measures.
- (c) It must outline reporting procedures for overexposure.

18-3. LASER TEST FACILITY (TA17/19)

- a. TA17/19 Is an impact area with controlled access through Range Control.
- b. Will comply with all standard range requirements.
- c. Requirements for testing outside of standard procedures requires the following:

(1) The Installation Range Officer and Safety Officer must be briefed and given a written plan and risk assessment to comment on.

(2) Installation Commander approval.

18-4. AIR TO GROUND AND GROUND TO AIR LASERS

a. Will be used in controlled areas within the installation's restricted airspace (R6601) that will accommodate the required Laser Surface Danger Zone (LSDZ).

b. If used outside of R6601, will have the unit LSO and ROIC address all necessary controls and safety considerations and have them approved by the Installation Range Officer and Safety Manager. A scenario and risk assessment will be prepared and submitted to Range Control for review and

comments at least one week prior to the start of the operation.

c. Will have controlled airspace out to the Nominal Ocular Hazard Distance (NOHD) or a 10-mil backdrop available to contain the beam with adequate controls in place to ensure a stable platform and positive control of the laser.

d. Will have the boundaries of the LSDZ clearly marked, visible, and/or recognizable from the lasing aircraft.

e. Will have permissible minimum and maximum aircraft elevations and aircraft pitch attitude for safe use of the laser determined by the ROIC/LSO and approved by Range Control prior to actual use of the laser device.

f. Must ensure the ROIC or LSO have positive control of the laser device on the aircraft so that if the beam exceeds the established safety limits it is immediately terminated.

g. For surface to ground, the LRSO must over-fly target areas in a dry status to ensure no specular surfaces exist prior to live-fire target engagement.

18-5. SAFETY

a. If more than one type of device is used protective measures must cover all devices.

b. For devices of the same wavelengths, the highest required optical density will be used.

c. Signs warning of laser operations will be posted at entrances to the hazard area and at locations designated by Range Control prior to opening the range facility.

d. The use of magnifying daylight optical devices to observe the target during laser operation is permitted only if the LSO certifies to Range Control that the target area has been inspected and is free of all flat mirror-like surfaces. Mirror-like targets can be observed only if appropriate laser safety filters are placed in the optical train of the magnifying optics.

e. The range will always be considered "HOT" when laser devices are present even though they may not be in a firing status.

f. Laser ports will not be opened in motor pools or cantonment areas except when maintenance is being conducted on the laser and all proper safety procedures have been followed.

g. Laser devices of any type will not be left unattended with the laser port open.

h. Laser devices will never be used to laze specular reflective surfaces.

i. Maintenance in a controlled environment may be performed with the ballistic cover removed in accordance with prescribed operating procedures.

j. Pre-fire checks that require operation of the laser can be made in a controlled area with the laser beam terminated by an opaque backstop. Pre-fire checks that do not require operation of the laser but

require use of the optics can be safely made in a controlled area with the ballistic cover removed by instituting operating procedures that insure power to the laser is turned off.

k. Tactical exercises can be conducted in a controlled area with the laser cover removed by instituting procedures that insure power to the laser is turned off.

l. The laser exit port must be covered when the laser or laser-equipped vehicle is not in use, parked, traveling on range roads, or moving from one area to another and not engaged in tactical operations in a controlled environment.

m. Laser devices will not be used in a two sided force on force tactical exercise.

n. Targets must be clearly visible. If weather causes targets to be obscured from sight, they will not be lased.

CHAPTER 19 LIVE FIRE EXERCISES

19-1. GENERAL

a. This chapter prescribes policies and procedures to be followed on Fort A.P. Hill during the planning, execution, and clearing of live-fire and maneuver, combined arms live-fire exercises and non-standard training events.

b. Every effort will be made to allow maximum training realism during exercises within the governing safety parameters.

c. The Installation Range Officer has final approval of all plans that fall under the directives of this chapter. He will be directly responsible for ensuring proper coordination and information is exchanged within Range Control, the directorate, and the command where required.

19-2. SCOPE. The guidance in this chapter applies to all situations where:

a. Live-fire and maneuver and/or combined arms are in any way involved in an operation.

b. Weapons will be used that are not normally fired from a specific range or location.

c. Firing positions are different than standard static positions located on the designated range facility.

d. The range facility does not have designated firing positions or weapons.

19-3. RANGE PACKETS. Units must submit a Range Packet a minimum of 30 days prior to execution.

a. Ensure the required risk assessment is properly completed IAW FM 100-14 and is on file at Range Control with a control number assigned.

b. Furnish a detailed plan to Range Control for approval. The plan will include:

(1) Written scheme of maneuver and fire support that clearly explains what will happen, when it will happen, and all safety, command, and control measures that will be employed. The unit OPLAN may not be used to meet this requirement. An example is included in Appendix H.

(2) A separate safety overlay will be developed showing firing fans, troop and weapon emplacements, maneuver boxes, target locations, routes of travel, and list weapons, ammunition, explosives, pyrotechnics, smoke, and chemicals to be used. For operations that involve personnel, aircraft, or equipment maneuvering through firing lanes it must clearly show how shifting or lifting of fires, and times of fire and maneuver provide positive control for safety.

(3) Range control is able to provide remote controlled lifters, hostile fire simulators, muzzle flash simulators, a variety of targets as listed in TC 25-8 and bunker construction material. It is the

units' responsibility to coordinate these items in advance as part of the range packet. Last minute requests will not normally be approved. It is the units responsibility to set up these items.

(4) The safety overlay must show the safety chain of command with names and rank of the ROIC and the RSOs.

(5) There must be an RSO at each major live-fire location. Range Safety Officers at the individual firing positions cannot have any other duties and may not participate in the exercise.

(6) Once approved, the safety overlay will be given a control number and both the range facility and Range Control will have copies on hand during the operation.

19-4. PLANNING

a. Units conducting live-fire tactical problems involving fire and movement must have sufficient red smoke grenades for day and red star clusters for night available for control personnel to signal an emergency "CEASE FIRE".

b. It is recommended that the operation initially be planned as a realistic tactical operation based on objectives and terrain. Once weapons positions, objectives, and maneuver are laid out, adjustments required for safety can easily be accomplished. This allows the least amount of modification for safety and the maximum amount of tactical realism for training. Restrictions on maneuver and weapons employment will only be applied when surface danger zones and safety require their use. With proper planning all training objectives and requirements can be accomplished.

c. Surface danger zones must be briefed to leaders and safety personnel before starting the exercise.

d. Leaders and Unit safety personnel will do a terrain walk and survey the physical limits of the maneuver area and surface danger zones prior to conduct of the operation.

e. Maneuver in dedicated impact areas is not permitted. Maneuver in buffer areas and temporary impact areas is permitted when approved by Range Control and done in compliance with AR 385-63. Maps of Fort A.P. Hill are not accurate in their designation of these areas.

f. Coordination lines for shifting of fires, lifting of fires, and maneuver must be identified on the ground by both maneuver and support elements prior to the start of live-fire.

19-5. FIRING PRECAUTIONS

a. Support by Fire positions (SBF)

(1) Small arms will maintain a 15-degree safety angle between the direction of fire and all maneuvering personnel. In addition, all rounds will impact at least 50 meters beyond the lead individual or element.

(2) Individual weapons will not be fired in the automatic mode during flanking fire.

(3) Machineguns will be tripod mounted and will have traversing stops/or use left and right limit stakes provided to maintain the safety angle between the limit of fire and maneuvering troops.

(4) Controllers for both the SBF positions and maneuver elements must pre-identify limits of fire and maneuver.

(5) The RSO with the maneuver element must have positive confirmation that the SBF has lifted and shifted prior to moving forward of the shift-phase line.

b. SBF over head fire

(1) Weapons will have positive traverse and elevation controls, which will prevent fratricide.

(2) Rate of fire will not exceed 70 rounds/minute for 5.56mm and 7.62mm or 40 rounds/minute for 50-caliber machinegun.

(3) Will not impact behind troops or be delivered at targets at a range greater than 800 meters or less than 400 meters from the gun.

(4) All members of the gun crew must have safety limits identified prior to engagement.

(5) Weapons will be test fired to verify the effectiveness of the positive traverse and depression stops.

c. Indirect Fire.

(1) The Installation Range Officer must approve all overhead fire.

(2) Indirect fire weapons will not impact closer than Area A plus 100 meters for mortars or area A plus 200 meters for artillery.

(3) Indirect fire weapons will register prior to delivering flanking fire or a Final Protective Fire (FPF).

(4) Weapons authorized for overhead fire are field artillery and tripod mounted small arms.

(5) Weapons positions will be predetermined and only ammunition approved for overhead fire will be used.

(6) Direct fire weapons, including machineguns, will be fired from positions that provide an unobstructed field of fire.

(7) Indirect overhead fire:

(a) Unit must register and receive MET prior to delivering close supporting fires.

(b) Will only fire high explosive (HE) rounds that impact forward of the lead troops by Area B plus 500 meters.

(c) If VT fuzes are used, their minimum arming time plus 5.5 seconds will establish the near edge of the impact area.

d. Hand Grenades.

(1) An RSO will directly supervise and control the throwing of hand grenades.

(2) Hand grenades will only be thrown into areas approved by Range Control.

(3) All personnel within 150 meters of the target will wear protective helmets, body armor and be in defilade with a minimum of 20 inches of earth or sandbag protection.

(4) Individual throwers will be at least 5 meters apart.

(5) Grenades can be issued when other live ammunition is issued but will not be carried on web equipment while individuals are transported in vehicles or aircraft.

(6) Grenades will only be stored in grenade pouches.

e. Air Support.

Standard guidance for aviation gunnery outlined in Chapter 10 applies with the following additions:

(1) There must be positive identification of target and troop locations by the aircraft and ground controllers.

(2) Direct communications must be established and maintained between either the forward air controller, scout aircraft, high bird, or attacking aircraft and the ROIC/RSO on the ground. The ROIC/RSO will have direct communications with fire support centers delivering indirect fire.

(3) Coordination of fires must be accomplished in a manner that does not permit aircraft and indirect fire in the same air corridor at the same time. Indirect fires must clear occupied corridors by a minimum of Area B plus 500 meters for the weapon being fired.

(4) Unguided rockets will not be used if wind or wind gusts exceed 30 knots.

(5) The FLOT will be positively controlled and marked as visible from the air prior to IP. (Marking can be with colored smoke or VS17 panels.)

CHAPTER 20 ENGINEER LANES

20-1. GENERAL The engineer lanes will allow squad through platoon size combat engineer units to perform all associated ARTEP tasks. Leader validation, unit movement, obstacle construction, and obstacle breaching operations can all be performed in a tactical live-fire environment. The lanes start in an assembly area consisting of a covered bleacher/briefing area and fixed latrine and end at an after action review site also consisting of a covered bleacher/briefing area and fixed latrine.

a. Engineer Lane 1.

(1) Engineer Lane 1 is a platoon size lane that starts in TA25 vic UT082209 and is most suited to "light" units. The area will accommodate up to a company bivouac and has sample obstacles provided to allow for unit train-up and leader validation. The AA and AAR sites may be accessed by either ground or air

(2) The unit maneuvers west to the Range 22 area where it encounters a series of obstacles that must be breached in order to get to the final objective, which is a command bunker at the far end of the range. The facility also contains two personnel evacuation bunkers, one on each side of the range 100 meters from the final objective.

(3) When the bunker has been neutralized the unit then proceeds along a trail to the extraction point vic UT070201 which is the AAR site. This trail has a timber bridge crossing that can also be incorporated into the scheme of maneuver.

CHAPTER 21 INTEGRATED TRAINING AREA MANAGEMENT (ITAM)

21-1. GENERAL.

a. The intent of ITAM is to support sound natural resource management practices in order to provide stewardship of land assets while sustaining those assets to support training and other installation missions. This translates to employing methods and procedures that will prevent damage to the flora and fauna associated with our lands; mitigate negative impacts of maneuver and live fire to top soils; and prevent any migration of munitions effects from our facilities into local areas. ITAM establishes a systematic framework for decision making regarding use of Army training lands at or controlled by Army installations. It integrates elements of operational, environmental, master planning, and other programs to identify and assess land use alternatives.

b. To limit adverse environmental damage from military training, this chapter defines the directives for implementation by all training units. All training units will plan, initiate, and carry out activities to minimize environmental damage without impairment to the training mission.

21-2. WATERWAYS

a. Operators of vehicles will prevent excessive destruction of vegetation along stream banks. Operation of vehicles shall be minimized as much as possible within 30 meters of stream banks.

b. Fording of streams is prohibited other than designated fording sites unless specifically approved by Range Control.

21-3. FIELD SANITATION

a. If field food preparation facilities are established, soakage pits for utensil washing facility will be established IAW FM 21-10. Grease traps will be utilized, if possible.

b. Individuals will not dispose of food scraps in streams, rivers, or open bodies of water; solid waste will be collected and disposed of in approved containers for proper collection of trash, no free liquids will be disposed in this manner.

c. Soakage pits will not be located within 50 meters of a waterway.

21-4. LATRINE FACILITIES

a. Field expedient latrines will be constructed and closed IAW FM 21-10 with Range Control and Environmental Division (ext-8255) approval.

b. Latrines will not be placed within 50 meters of a stream, river, well, or open body of water.

c. Latrines will not be placed in areas subject to flooding or in marshy areas.

d. Established latrine facilities will be used on ranges.

21-5. FIELD SHOWERS/LAUNDRY

- a. Will be established IAW FM 21-10 with soakage pits.
- b. Will not be established in areas subject to flooding (water standing on surface) or marshy soils.
- c. Soakage pits will not be located within 50meters of any waterway.

21-6. POL AND HAZARDOUS WASTE (HW) STORAGE FACILITIES

- a. POL storage facilities will be constructed IAW FM 10-67-1 and TM 10-4930-229-12&P; the location of all POL storage facilities will be reported to Range Control and the Environmental Division (ext. 8255).
- b. POL will not be stored within 100 meters of any waterway.
- c. Facilities will be inspected periodically during the operation to ensure no spillage and/or seepage has occurred. If spillage has occurred, the responsible activity will immediately attempt to stop and control the spill. Contact Range control and range control will contact the Fire Station and the Environmental Division for assistance in spill containment; free standing fuel recovery, and determination of remedial action requirements.
- d. No POL products will be stored in areas with a slope greater than 1 foot to 20 feet.
- e. Any POL spills will be immediately reported to Range Control and the Environmental Division (ext-8255). If a spill occurs, efforts should be immediately instituted to stop the spill and to contain the spilled product.
- f. Care must be taken in handling and storing POL products to prevent seepage into the ground. Waste POL products and hazardous wastes (HW) will not be burned, dumped in trash containers, deposited at trash collection points, spread on the ground, or dumped in sewers, ditches or streams. Waste POL and HW will be segregated by type, placed in properly marked and labeled containers supplied by participating units, and deposited at the waste POL/HW collection point. Contact the Environmental Division (ext.8255) for proper storage and disposal of POL and HW.

21-7. SOLID WASTE

- a. Solid waste will be collected and disposed of in an approved container. No free liquids to be disposed in solid waste containers.
- b. Remaining edible foodstuffs will be disposed of IAW appropriate regulations.
- c. Individuals will dispose of foodstuff containers (MRE's rations) in a designated receptacle.
- d. Open burning of refuse is prohibited.

e. Ordnance material or residue will not be disposed with refuse. Such material will be turned in and evacuated through channels to appropriate Class V points.

21-8. CAMOUFLAGE.

- a. Cutting of trees, bushes for use as camouflage is prohibited.
- b. Nails and other objects will not be driven into trees for any purpose.
- c. Communication wire will not be attached to, or hung from any tree.
- d. Individuals will not intentionally destroy vegetation. Trees will not be cut for any reason.
- e. Individuals will not initiate any action that may disrupt, endanger, or cause damage to any degree, the habitat of any species.

21-9. VEHICLE USAGE

- a. Vehicle operators will:
 - (1) Avoid areas that are highly susceptible to erosion, e.g., steep slopes.
 - (2) Do not operate vehicles in marshy soil, except when necessary.
 - (3) Avoid stream, river or lake banks, except for the purpose of stream crossing; stream fording should normally be done at identified fording sites.
 - (4) Do not intentionally destroy vegetative cover on the ground other than that required for accomplishing the assigned mission or intentionally disturb soils through unnecessary vehicle operation.
 - (5) Maintain maximum use of established tank trails and range roads for administrative moves and road marches; operators will not create new trails when existing trails are available for use.
- b. Vehicle movement should minimize damage to ditches, drain-offs, fire lanes, fences.
- c. Movement of vehicles will be generally limited to existing roads.
- d. Vehicles, upon exiting roads, will exercise extreme care not to damage the shoulder of the road and water drain systems adjacent to the roads. All shoulder damage will be reported to Range Control.
- e. Individuals will not intentionally destroy natural resources such as forest products, fish and wildlife, and specified wild species of flora and fauna.
- f. Units will utilize existing roads and tank trails during hours of darkness. Military vehicles will use service drive.

g. Neutral and pivot steering of tracked vehicles will be avoided to the maximum extent possible.

h. All road signs, traffic restrictions, and established weight limits on roads and bridges will be observed. Route reconnaissance should be made prior to all moves, with particular emphasis on weight and width limitations. All road restrictions will be followed.

i. Vehicles, upon exiting roads, will exercise extreme care not to damage the shoulder of the road and water drain systems adjacent to the roads. All shoulder damage will be reported to the S5 & RCC.

21-10. ENGINEERING TRAINING/TANK OBSTACLES

a. Road criterion and tank trap construction will not be allowed unless previously approved by Range Control. The unit that will perform the work will report the location of all proposed road criterion and tank trap sites. Obstacles constructed adjacent to improved roads will not disturb the surface, shoulder, road base, or compromise the integrity of appurtenances such as bridges, culverts, headwalls, wing walls, etc.

b. All tank obstacles and hull down positions will be filled and properly compacted as soon as practicable following the termination of the exercise; hull down positions are prohibited on non-exclusive areas.

c. Damming of creeks/streams is prohibited.

d. Abatis are prohibited without the Director DPTMS Approval..

21-11. ARCHAEOLOGICAL AND HISTORICAL RESOURCES AND GRAVESITES

a. Bivouac and tactical positions will not be located within 100 meters of a , archaeological, or historic resource.

b. Should a cemetery be discovered during a training exercise, its exact location will be reported to Range Control and the Environmental Division (ext.)8255.

c. Individuals will not disturb or remove any archeological resources.

d. If potential cultural or archeological resources not previously inventoried are discovered in the course of training exercises, the newly discovered items will be preserved and protected pending a decision on final disposition by the installation Commander.

APPENDIXES

APPENDIX A DESCRIPTION OF RANGE FACILITIES

1. The Table below is a composite listing of the range facilities. It is meant to be an abridged version to assist in planning training events. Detailed information can be found by visiting our website at <http://www.aphill.army.mil> or contacting Range Control at 804-633-8410.

2. The use of a range facility for other than the standard listed in this document is strictly prohibited without approval and coordination of Range Control. Non-standard usage always requires a packet IAW Chapter 19 of this regulation with a control number assigned by Range Control.

3. Improper or unauthorized use of range facilities may cause immediate cease fire of the facility and the ROIC/RSO to be relieved of their duties. All damage to range facilities caused by unauthorized use will be the offending unit's responsibility to repair, replace, or provide funding to correct. This includes, but is not limited to, damage or destruction of targetry, emplacements, grounds, equipment, and structures. The ROIC may be held personally liable for damages.

4. A range book will be issued to the ROIC for each listed range facility. The range book contains a copy of this regulation, detailed information on range operations, clearance procedures for the facility, and field manuals for the standard weapons used on the range. The range book's contents should be checked according to the list in the front of the book before leaving Range Control. It will be inventoried for completeness when it is turned back in. Missing manuals are the unit's responsibility to replace.

5. It is the unit's responsibility to ensure appropriate weapons and ammunition manuals are on site for approved non-standard range usage.

6. The primary weapons listed in the table below are the LARGEST weapons that can be used on the range. Any small arms with a lesser SDZ may be used by default.

RANGE	LOCATION	PRIMARY USE	PRIMARY WEAPONS
1	97391655	15 Lanes CPQC/MPFQC	12gauge
2	97561667	15 Lanes CPQC/MPFQC	12gauge
3	98001688	10 Lanes (3 for M2) MPMG	.50 cal
4	98191736	100 Lanes 25-Meter Zero/Alt-C/NBC	5.56
5	98491781	50 Lanes Machine Gun 10-Meter	.50 Cal
6	99231803	10 bays	HE

		Hand Grenade Live-Fire	
6N	991183	Round robin Hand Grenade Qualification	Practice
7	99771835	5 Lanes Claymore/Basic Demolitions	M18A1, Basic 1/4 lb Demo Chg
8	00291850	34 Lanes Automated Field Fire/Night Fire/NBC Alt-C	5.56
9	00521848	40 Lanes Night/NBC /25-Meter Zero/Alt-C	5.56
10	00731849	15 Lanes Known Distance (KD)	.50 Cal
10A	00731849	Access Control Point	7.62
14	01121946	30 Lanes 25-Meter Zero/Alt-C/NBC	5.56
15	01311977	15 Lanes Anti-Armor	M203/AT-4
16	01842045	4 Lanes Anti-Personnel/Anti Armor	M203/AT-4
17	02562105	4 Lanes M203 Qualification	40MM TP
18	03142126	1k x 1k Fire and Movement	7.62/M18A1/light demo
19	04662251	1 Dragon or 4 M203 Lanes Heavy Weapons	MK-19/ .50 Cal/Dragon/Mortar AT-4
20	05702102	Squad LFX Infantry Squad Battle	7.62/40mmTP/M18A1
21	06002028	2 lanes Heavy Weapons	.50 Cal/40mm/Dragon/ MK-19/TOW(inert) Mortar direct lay
22	07462040	Platoon LFX Engineer Qualification	.50 Cal Demo (100lbs)
23	08422051	30 Lanes 25 Meter Zero/Alt-C/NBC	5.56
CLFC	08702000	One lane 3 objectives	7.62
24	10341863	6 AFPs or one Vehicle lane Aviation Gunnery/Vehicle gunnery	30mmTP/MK-19TP/Dragon subcal/FFARTP/.50cal/Javelin
25H	09351564	9 AFP's, 2 running lanes, 2 Tow positions or 2 bombing/srafining lanes. Aerial Gunnery Complex (AWSS)	30mm/MK-19/Dragon/ TOW/FFARHE/ MK32/AC130
25G	09351564	500m x 1k deep	All Infantry PLT org weapons

		Ground Unit Special Use	
26S	10231389	Squad LFX	7.62/40mmTP/AT-4 Sub-Cal, Claymore
28S	03331291	Squad LFX	7.62/40mmTP/AT-4 Sub-Cal, Claymore
26P	09251373	Platoon LFX	7.62/40mmTP/AT-4 Sub-Cal, Claymore
27P	06651256	Platoon LFX	7.62/40mmTP/AT-4 Sub-Cal, Claymore
28P	04781273	Platoon LFX	LAW & AT4 Sub Cal Claymore, 1/4lb Demo Blocks
29	08101240	Small boat, vehicle swimming, riverboat and assault bridge Assault Bridge Crossing	.50 Cal/40mmTP and Illum
32	97971289	16 Lanes MRF/NBC/Field Fire	5.56
33	97851340	4 Lane MPMG/SFF	.50 Cal and below
34	97241430	16 Lanes MRF/Night Fire/NBC/Field Fire	5.56
35	97311562	25 Lanes 25-Meter Zero/Alt-C	5.56
37	97381591	34 Lanes Automated Field Fire	5.56
38	97371600	10 Lanes Night Fire/NBC	5.56
Finnegan Field		3 Tubes Mortar	subcal
Demolition sites			
DS 70A	0515212	R&D Testing/Training	100Lbs
DS 71A	06701948	R&D Testing/training	
DS 71B	06091920	Heavy demo	
DS13	190020	ATF Testing/Training	
DS 75	08301648	Heavy Demo	
DS 79	00391800	Light Demo	
DS 80	01311359	Light Demo	
DS 71C	06821880	Heavy Demo	
Firing Points			
FP1	99681174	FA	
FP2	00631153	FA/MORTAR	
FP3	01211191	FA/MORTAR	
FP7	08681701	FA/MORTAR	
FP8	08951645	FA/MORTAR	
FP9	08831368	FA/MORTAR	
FP11	08481320	FA/MORTAR	

FP12	01081308	FA/MORTAR	
FP14	05231313	FA	
FP15	05401301	FA	
FP16	08001998	FA	
FP17	08761855	FA/MORTAR	
FP18	09681937	FA/MORTAR	
FP19	10001911	FA/MORTAR	
FP20	09142031	FA/MORTAR	
FP21	08841961	FA	
FP22	08802050	FA/MORTAR	
FP23	06341889	R&D TEST SITE	
FP24	06261921	R&D /APOBS	
FP25	06922019	R&D TEST SITE	
FP26	06672117	FA	
FP27	03142126	FA	
FP28	05072316	FA	
FP31	99371771	FA/MORTAR	
FP34	96971459	FIELD/ASP STORGE SITE	
FP39	99071240	FA/MORTAR	
FP40	99051213	FA/MORTAR	
FP41	00811214	FA/MORTAR	
FP43	09341483	FA/MORTAR	
FP44	09371505	FA/MORTAR	
FP46	09281613	FA/MORTAR	
FP47	08421646	FA/MORTAR	
FP48	08491676	FA/MORTAR	
FP51	10302056	R&D TEST SITE	
MP3	99851807	Mortar	
MP4	99621802	Mortar	
MP5	04872236	Mortar	
Observation Points			
Name	Location	Type	Impact Area
OP1	01851234	Berm	Upper Zion
OP2	02271288	Berm	Upper Zion
OP3	01141369	High Ground	Upper Zion
OP4	01801357	Hill Top	Upper Zion
OP5	02351252	Wood Tower	Upper Zion
OP8	08671643	Berm	Daniel
OP9	08501499	Wood Tower	Daniel
OP10	094158	Wood Tower	Daniel

APPENDIX B UXO BRIEFING

1. Purpose: The purpose of this briefing is to impress upon each individual the danger of unexploded ordinance, (UXO), that may be found while occupying the range and training facilities on Fort A.P. Hill. It is imperative for each individual to know the exact procedures to follow upon location of any of these items.

2. Introduction: Fort A.P. Hill has been in existence since 1942 and since that time high explosive ammunition has been fired daily. There exist large quantities of unexploded ammunition throughout the impact area and to some extent even in the training areas. Because proper records of firing were not maintained by the Army during the 40s and 50s, there is no way to confirm what may or may not be in a certain area. There have even been Civil war cannon balls found on the installation. Some of this deadly material is difficult to distinguish because of the effects of time and nature to the point it may appear as a branch or rock at first glance. Although we have an aggressive and continuous clean up policy, it is likely that you may encounter UXO during the conduct of training on Fort A.P. Hill. The most important rule to remember from this briefing is: NEVER TOUCH UXO. It is not a test of courage; it is a test of intelligence. UXO varies in sensitivity and may require only a near vibration to execute the primer. Rounds fired with VT and prox fuzes are a specific hazard as if the timer is initiated, or the sensor activated on VT, the primer will function.

3. Procedures: If you discover UXO, stay well away from the object. Mark the area off with engineer tape or VS-17 panel and post a guard near it. Do NOT drive stakes near the item. Notify your OIC, NCOIC, or supervisor immediately and report the exact location. Notify Range Control by radio FM 32.00/38.50 or phone 8374/8410. Range Control will come and relieve the guard immediately so as not to delay your training. Only trained EOD and 18C personnel are qualified to deal with UXO.

APPENDIX C CERTIFICATION MEMORANDUM



REPLY TO
ATTENTION OF:

LETTER HEAD

#####

#####

DATE

MEMORANDUM FOR: Range Control

SUBJECT: ROIC/RSO Certification

- 1. Reference: DA PAM 385-63 DTD 10 APR 03.

I hereby certify that the below listed individuals are competent with the weapons indicated IAW DA PAM 385-63. Competency includes but is not limited to employment, misfire procedures, malfunctions, loading and unloading ammunition, handling, storage, weapons clearing procedures and other hazardous characteristics of the weapons being employed.

<u>NAME</u>	<u>RANK</u>	<u>LAST 4 SSN</u>
#####	#####	####

The Soldiers are certified on the following weapons systems:
(List weapons Soldier is certified on)

POC for this memorandum is #####

COMMANDING

APPENDIX D SPILL REPORTING PROCEDURES

(SEE APH REGULATION 200-2)

1. Purpose: To establish procedures to be followed in the event a spill.
2. Policy: This directive applies to spills of all hazardous or toxic liquids. Actions to control, contain, remove, and clean-up spills are to begin immediately to contain the damage. The responsibility for initiating these procedures rests with the ranking military or civilian at the scene. It is their additional responsibility to ensure that the spill is promptly reported as outlined below.
3. Notification: The ranking individual observing a spill of any type or quantity will immediately notify Range Control on FM 32.00, 38.50, or by telephone (8374). The report should include:
 - a. Location.
 - b. Time of occurrence.
 - c. Type of spill (ie POL, etc) if known.
 - d. Estimate of quantity and if spill is still in progress.
 - e. Affected area.
 - f. Cause if known.
4. Range Control will notify the proper points of contact) to assist the unit in recovery.

**APPENDIX E AMMO FOUND ON POST (AFOP) AND AMMUNITION
AMNESTY PROGRAM (AAP)**

1. AFOP Recovery Program.

a. All AFOP will be considered hazardous and will not be moved or disturbed by anyone other than Range Control or Explosive Ordnance Demolition (EOD) personnel.

b. When AFOP is discovered immediately notify Range Control 8374/8410 or the Military Police 8425/8239.

c. The Provost Marshal's Office (PMO) will immediately notify Range Control on all calls and respond to any area outside the Impact Area to secure the site until released by Range Control. PMO will respond to locations in the Impact Area when requested by Range Control.

d. Range Control will respond to all calls of AFOP, identify the type ordnance, and make the decision on disposition to include contacting (EOD) when required.

e. Range Control will maintain an emergency notification roster in their briefcase at the DPS location to be used whenever Range Control is closed.

f. Range Control personnel will document receipt of AFOP on DA Form 3265-R and accountability and/or turn-in will be handled as follows:

(1) Hazardous explosive ordnance that cannot safely be moved will be blown in place by EOD with appropriate documentation given to the Ammunition Supply Point (ASP) and the Environmental Office. The site will be secured by PMO personnel, when requested by Range Control, until EOD arrives and disposes of the hazardous ordnance.

(2) AFOP that can safely be moved during normal ASP operating times (0800-1530 Monday - Friday) or anytime the ASP is open for operation will be turned in by Range Control or EOD personnel to the ASP.

(3) AFOP found during times when the ASP is not operational, that can safely be moved, will be transported by Range Control or EOD to DS 77 where it will be stored until normal operating hours of the ASP.

2. Ammunition Amnesty Program.

a. The Ammunition Amnesty Program is necessary to ensure maximum recovery of military ammunition, explosives, and residue material. Individuals will be provided an opportunity to return ammunition which has been stolen, misplaced, or erroneously left in

the possession of a unit after turn-in and reconciliation has been finalized. These returns can be made without fear of prosecution and will not be the basis for initiating an investigation of the individuals making the turn-in.

b. Individual turn-in. To ensure proper control and safety, ammunition amnesty boxes are not used. However, any individual may turn in ammunition to an ASP operator or any Range Control personnel and no paperwork or questions will be asked. Range Control personnel will turn in AAP ordnance to the ASP according to paragraphs 2c(2) and 2c(3) of this document.

c. Unit turn-in. The Ammunition Amnesty Program is not a substitute for normal turn-in procedures and will not be used to circumvent standard supply procedures. Units discovering ammunition on hand after having reconciled their accounts are encouraged to make an amended turn-in. An amended turn-in is accomplished by preparing a new DA Form 581 for the remaining ammunition. Note in block 11 the original issue document number if known, and state "This is an amended turn-in document." The unit is responsible for maintaining security and control of AAP ordnance until it can be turned in to the ASP.

(1) When prompt turn-in of "amended return ammunition" cannot be accomplished due to the ASP being closed and the unit's mission and/or scheduled departure would be significantly affected, turn-in may be made to Range Control. This may be accomplished either at the Range Control operations center or to a site designated by Range Control. The unit is still required to provide Range Control with their completed DA Form 581.

(2) The advantages of amended turn-ins over other amnesty turn-in procedures are that ammunition can be immediately accounted for and credited to the unit's account.

d. The benefits of the AAP is that individuals can hold, transport, and turn-in items without documents authorizing them to be in possession of ammunition and without fear of prosecution. The intent is to encourage return of ordnance rather than dumping, hiding, or stealing it.

e. The PMO will assist Range Control with security of AAP ordnance when requested, until final turn-in to the ASP can be accomplished.

3. Briefings.

a. Annual Training (AT) unit Commanders will brief their Soldiers on the FT A.P. Hill AFOP and AAP prior to drawing any ammunition for training. This briefing may take place up to 30 days prior to AT at home station.

b. All other active and reserve component Commanders using the installation will ensure that a briefing has been provided to all their personnel within 90 days of the scheduled training period.

c. The briefing will include the following points of contact for information and assistance:

ASP 8801/8803

Range Control 8224/8374

PMO 8425/8239

APPENDIX H EXAMPLE MANEUVER SCENARIO MEMORANDUM



DEPARTMENT OF THE ARMY
Unit

REPLY TO
ATTENTION OF:

#####

DATE

MEMORANDUM FOR Range Control

SUBJECT: Convoy Live Fire Range Scenario

1. Purpose. To provide information on range requirements and safety control measures planned for a fire and maneuver range from 3-5 February 2002 at Ft A.P Hill Virginia.
2. Background. The 188th Military Police Company will conduct a Convoy live fire exercise (CLFX) at Ft A.P Hill Virginia. This range will focus on react to ambush operations. On 2 February range safeties and squad observer controllers (OC) will be certified to conduct their duties. Squads executing the CLFX will be certified prior to execution. To be certified OC, safeties, and squads conducting CLFX will be required to conduct a dry fire and blank fire rehearsal on the range. The battalion S3 will be the certifying authority for range safeties, OC, and squads conducting CLFX. Participants will be required to conduct as many dry fire rehearsals as the S3 deems necessary to ensure they are proficient at the required skills to execute the lane. At a minimum, participants will walk the lane once, dry fire once, and blank fire once.
3. Maneuver Plan. Squads will start from Assembly Area (AA) ALPHA. At this point the Squad will receive its safety brief and be issued its ammunition. Upon completion of the safety brief, the squad will move out from the start point (SP). At the SP the RSO will give the "lock but not load" command (**No ammunition will be in any chamber**). The SP is also PL BLUE which indicates the no passage line. This PL will only be crossed by authorized personnel (all personnel authorized passage will be approved by the BN S3). Prior to LD the Range Safety Officer (RSO) will receive an all accounted for report from the BN S3 CP. The BN CP will be required to account for all personnel executing and supporting range operations. The unit will then begin to move down range in a convoy formation. Once the unit reaches Engagement Area (EA) COWBOYS and all personnel are in position, the RSO will initiate an admin/safety halt and give the command "lock and load". Upon completion, gunners will begin to engage targets 6-10 and dismounts will engage targets 1-8. The unit leader will then request indirect fire support and begin calling for fire at tank hulls located in the impacted area. The BN FSO (not a permanent position) and the mortar safety Officer will confirm all shots fired by mortar teams. Once the

training objective is met, the RSO will give the “cease-fire” command. All weapons will be cleared and rodded. The squad will then prep to continue mission. Once the squad is ready to continue mission, the RSO will give the “lock but not load” command (No ammunition will be in any chamber). The squad will then continue down route TIGER until they reach EA FORTYNINERS. Once lead vehicle crosses PL PURPLE a simulated land mine will detonate. All vehicles will stop and execute react to a far ambush measure. Soldiers will then dismount and prep to bound on the enemy. Once in position, the RSO will initiate an admin/safety halt and give the command to “lock and load” ammunition. All Soldiers will begin to engage targets 11-21 as they present themselves. Target 15 will be a live grenade bunker. Once the squad reaches PL ORANGE, all weapons will be placed on safe. Two Soldiers will maneuver forward and engage the enemy with a live hand grenade. Upon completion, the RSO will give the “all clear” command and the remaining portion of the squad will bound forward. Once on line, the squad will continue to engage the enemy until they reach their LOA. Once the squad reaches the LOA the RSO will give the “go clear” command. Range safeties will rod all weapon systems. At the LOA the squad will conduct all the appropriate TTP’s for a far ambush (SITREP, reconsolidate and reorganize, etc...). Once all the training objectives have been met, the RSO will give the “cease-fire” command. All weapons will be cleared and rodded. The squad will then prep to continue mission. Once the squad is ready to continue mission the RSO will give the “lock but not load” command (No ammunition will be in any chamber). The squad will then continue down route TIGER until they reach EA REDSKINS. At PL YELLOW the convoy will reach a roadblock. All vehicles will stop and execute react to a near ambush measure. Soldiers will then dismount and prep to bound on the enemy. Once in position the RSO will initiate an admin/safety halt and give the command to “lock and load” ammunition. All Soldiers will begin to engage targets 22-33 as they present themselves. Once on line the squad will continue to engage the enemy until they reach their LOA. When the squad reaches the LOA the RSO will give the “go clear” command. Range safeties will rod all weapon systems. At the LOA the squad will conduct all the appropriate TTP’s for a near ambush (SITREP, reconsolidate and reorganize, etc...). Once all the training objectives have been met, the RSO will give the “cease-fire” command. Range safeties will rod all weapon systems and do a thorough brass and ammunition inspection. Squad will then move to the AAR area for debriefing.

For night fire operations all control measures will remain the same for maneuver. There will be no HE 81mm mortar fire at night. Mortar teams will provide illumination for far and near ambush sites. Two road guards will be placed on route TIGER at PL BLACK and PL RED to prevent all movement between these PL’s during illumination fire due to SDZ requirements.

4. Target Plan. To conduct this range we need 25 infantry lifters with 25 3-D type-E silhouettes, two armor mobile target systems (with two frontal BMP silhouettes), and two M203 troops in the open pits. In addition, we request a special target be built to replicate an infantry bunker. Request that the bunker meet the safety requirements to engage with live hand grenades. This will be the order format:

EA COWBOYS

Target Exposure Order by Number	Exposure Time	Type
2,3,4,6,10	10 Sec	Type-E, BMP
2,3,4,9	10 Sec	Type-E, Mobile
2,3,4,11	10 Sec	Type-E, Mobile
2,3,4,7	10 Sec	Type-E, Mobile

Note: Will adjust exposure time on the ground

EA FORTYNINERS

Target Exposure Order by Number	Exposure Time	Type
12,13,14,15,17	10 Sec	Type-E
12,13,14	10 Sec	Type-E
15,17,20,21	10 Sec	Type-E
18,19,20,22	10 Sec	Type-E

Note: Will adjust exposertime on the ground

EA REDSKINS

Target Exposure Order by Number	Exposure Time	Type
23,24,25	10 Sec	Type-E
26,27,28,30	10 Sec	Type-E
249,31,32,33	10 Sec	Type-E

Note: Will adjust exposure time on the ground

5. The battalion S3 section will be at the range the day prior to coordinate for target placement.

6. The point of contact is,.

Encl 1 SDZ Overlays
 Encl 2 Maneuver overlay
 Encl 3 Risk assessment

SIG BLOCK

APPENDIX I EXCEPTION TO POLICY MEMORANDUM



REPLY TO
ATTENTION OF:

LETTER HEAD

#####

#####

DATE

MEMORANDUM THRU Directorate of Plans, Training, Mobilization and Security,
ATTN: Scheduling Section 18902 A.P Hill Drive, Fort AP Hill VA 22427

FOR Director, Plans, Training, Mobilization and Security, 18902 AP Hill Drive, Fort AP
Hill VA 22427

SUBJECT: Request Exception to 30 day Scheduling Policy.

1. Request an exception be made to FAPH Regulation 350-2, section 2-2d.

Due to <reason>, it is essential that <unit> be granted an exception to the policy. We understand that since the requirement falls under the 30-day window, some support may not be readily available or special adjustments may be required to fill our training needs.

Dates of Requirement: <from-to>

2. What is the effect on the unit if training is disapproved: <impact on unit readiness if training is not fulfilled>.
3. POC is <name and phone>.

O-5
COMMANDING

APPENDIX J REQUIRED AND RELATED PUBLICATIONS

Section I. Required Publications

AR 350-1, Army Training and Leader Development
AR 385-63, Range Safety
AR 385-64, U.S. Army Explosives Safety Program
DA PAM 350-38, Standards in Weapon Training
DA PAM 385-63 Range Safety
DA PAM 415-28, Guide to Army Real Property Category Codes
FM 5-250, Explosive and Demolitions
FM 7-0, Training the Force
FM 7-1, Battle Focused Training
TC 25-1, Training Land
TC 25-8, Training Ranges

Section II. Related Publications

AR 11-9, The Army Radiation Safety Program
AR 75-1, Malfunctions Involving Ammo & Explosives
AR 75-15, Policy for Explosive Ordnance Disposal
AR 95-1, Army Aviation: Flight Regulation
AR 200-1, Environmental Protection and Enhancement
AR 200-2, Environmental Effects of Army Actions
AR 385-10, The Army Safety Program
AR 385-40, Accident Reporting and Records
DA PAM 40-501, Hearing Conservation Program
DA PAM 350-9, Index and Description of Army Training Devices
FM 1-02, Operational Terms and Graphics
FM 3-0, Operations
FM 3-01.11, Air Defense Artillery Reference Handbook
FM 3-04.140, Helicopter Gunnery
FM 3-09.31, Tactics, Techniques, Procedures for Fire Support for the Combined Arms Commander
FM 3-11, Multiservice tactics, Techniques and procedures for Nuclear, Biological and Chemical Defense Operations
FM 3-19.30, Physical Security
FM 3-22.1, Bradley Fighting Vehicle Gunnery
FM 3-22.9, Rifle marksmanship M16A1, M16A2/3 M16A4 and M4 Carbine
FM 3-22.91, Mortar Gunnery
FM 3-23.24, M47 Dragon Medium Anti-Tank Weapon System
FM 3-22.27, MK19 40m Grenade Machine Gun Mod 3
FM 3-22.31, 40mm Grenade Launchers, M203 and M79
FM 3-22.34, TOW Weapon System

FM 3-22.65, Browning Machinegun Cal .50 HB, M2
FM 3-22.68, Crew-Served Machineguns, 5.56-MM and 7.62-MM
FM 3-22.90, Mortar Training
FM 3-23.25, Shoulder Launched Munitions
FM 3-23.30, Grenades and Pyrotechnic Signals
FM3-23.35, Combat Training with Pistols M9 and M11
FM 3-25.26, Map Reading and Land Navigation
FM 3-52, Army Airspace Command and Control in a Combat Zone
FM 3-90.1, Tank & Mechanized Infantry Company & Team
FM 3-90.3, The Mounted brigade Company Team
FM 4-30.5, Explosive Ordnance Disposal Service and Unit Operations
FM 4-25.11, First Aid
FM 6-30, Tactics, Techniques and Procedures for Observed Fire
FM 6-40, Tactics, Techniques and Procedures for Field Artillery Manual Cannon
FM 6-50, Tactics, Techniques and Procedures for The Field Artillery
FM 7-8, Rifle Infantry Platoon and Squad
FM 17-12-7, Tank Gunnery Training Devices and Usage Strategies
FM 17-95, Cavalry Operations
FM 20-32, Mine/Countermine Operation
FM 21-10, Field Hygiene and Sanitation
FM 21-75, Combat Skills of the Soldier
FM 22-100, Army Leadership
FM 23-10, Sniper Training
FM 23-11, 90mm Recoilless Rifle, M67
FM 44-100, US Army Air Defense and Missile Operations
TB 9-1300-385, Munitions Restricted or Suspended
TB MED 524, Occupational and Environmental Health Control of Hazards to Health from Laser Radiation
TC 23-2, 66mm Rocket Launcher M202A1
TM 9-1010-230-23 & P, Unit and Direct Support Maintenance Manual (Including Repair parts and Special Tools List) For Machinegun, 40-MM, MK-19 MOD 3 (NSN1010-01-126-9063) (EIC4AE) and Machinegun, MK19, 40MM, MK19, MOD 3 With Sight Bracket (1010-01-490-9697); Machinegun, MK19, 40MM, Upgunned Weapons Station (UPWS) (1010-01-362-6513) {TO 11W2-5-16-2; TM 8521A/09761A-23&P/2A; SW 363-C3-MMM-020}
TM 9-1300-200 (2), Ammunition, General
ARTEP 1-126-MTP, Mission Training Plan for the Attack Reconnaissance Helicopter
ARTEP 3-117-40, Mission Training Plan for the Chemical Section and Nuclear
ARTEP 5-053-11-MTP, Mission Training Plan for the Assault and Obstacle Platoon
ARTEP 5-337-35-MTP, Mission Training Plan for the Engineer Company, Engineer Battalion
ARTEP 7-8 MTP, Mission Training Plan for the Infantry Rifle Platoon and Squad
ARTEP 7-10 MTP, Mission Training Plan for the Infantry Rifle Company
ARTEP 7-20-MTP, Mission Training Plan for the Infantry Battalion
ARTEP 7-92-MTP, Mission Training Plan for the Infantry Reconnaissance Platoon
ARTEP 71-1-MTP, Mission Training Plan for the Tank and Mechanized Infantry

