Department of the Army
United States Army Garrison Fort Wainwright
1060 Gaffney Road
Fort Wainwright, Alaska 99703-6000
20 April 2010

USAG Fort Wainwright Regulation 350-1

Training

Range Operations

Objective. Provide regulatory guidance in those areas not specifically covered in other regulations.

Summary. This regulation provides procedures for planning, requesting, and operating United States Army Garrison Alaska (USAG), Fort Wainwright, Alaska (FWA) ranges and training areas. It provides standards and procedures for the safe firing of ammunition, demolitions, lasers, guided missiles and rockets for training, as required by Army Regulations (AR). Highlights include the range safety certification program, environmental considerations, and guidelines for medical support, demolitions training, and laser operations. Specific chapters provide procedures for scheduling, ammunition handling, direct fire, indirect fire, special ranges, airspace, and non-firing ranges, and training areas. Detailed descriptions of each facility, by post, including unique requirements are described in the appendixes.

Applicability. This regulation applies to all military units, organizations, and authorized individuals and agencies that use ranges and training areas at FWA, Fort Richardson, Alaska (FRA), or Donnelly Training Area (DTA). Although the instructions contained in this document are primarily directed toward the designated range officer in charge (OIC) and the range safety officer (RSO), they do not relieve the unit officers and noncommissioned officers (NCOs) of their inherent safety duties and responsibilities. The duty of the range OIC and RSO is to ensure unit personnel adhere to proper procedures. It is imperative that unit officers and NCOs be thoroughly knowledgeable and competent in the performance of their duties.

Supplements. Supplements to this regulation are prohibited without prior approval from the Directorate of Plans, Training, Mobilization, and Security (DPTMS), USAG FWA, Attention: IMPC-FWA-PL.

Interim changes. Interim changes to this regulation are not official unless the Director of Human Resources authenticates them. Users will destroy interim changes on their expiration dates unless sooner superseded or rescinded.

Suggested improvements. This regulation's proponent agency is USAG FWA and users are invited to send comments and suggested improvements on Department of the Army (DA) Form 2028 (Recommended Changes to Publications and Blank Forms) directly to IMPC-FWA-PL.

Distribution. This regulation is distributed through USAG FWA Directorate of Human Resources Homepage at http://www.wainwright.army.mil/dhr/asd.asp.

Table of Contents

Chapter 1
General

1-1. Purpose

This regulation provides policy and procedures for the FWA, FRA, and DTA range/training complexes and implements Army Regulation (AR) and DA Pamphlet (PAM) 385-63 and other directives.

1-2. Explanation of Abbreviations and Terms

The abbreviations and special terms used in this regulation are explained in the glossary.

1-3. References

Referenced publications and forms are listed in appendix A.

1-4. Responsibilities

Users of the range complexes and training areas must be familiar with this regulation, as it is the basis for scheduling and control of ranges, training facilities, training areas, and airspace. Safety is of paramount importance in the execution of any operation on the ranges or in the training areas. The OIC/RSO is responsible for reporting to Range Control any safety incident such as but not limited to misfires, malfunctions, medical and non medical injuries, or ammunition impacting out of established safety limits. The OIC/RSO of a range or OIC/noncommissioned officer in charge (NCOIC) of a training area/training facility are the only individuals authorized to sign for ranges and facilities. They must have available their range certification card and a copy of the approved reservation contract for the scheduled range or training facility during operations.

1-5. Range Control

a. Range Control is responsible for providing safe, functional ranges and training facilities, scheduling facilities, and issuing range equipment and targets. Each post has a separate Range Manager who oversees the operation and maintenance of the Range Control staff and the ranges and training lands. The US Army Garrison Alaska Installation Range Officer (IRO) formulates common policy, manages assets, and interfaces between Range Managers, USAG FWA staff and USARAK staff and reports to the USAG FWA Commander.

b. The range operations fire desk is the routine and emergency, communication base station for training. As the designated controlling authority for use of the range complex, range operations issues orders regarding the opening and closing of training facilities, routine and emergency check-fires, resolution of training conflicts, and reallocation of resources. Range Control will make every effort to avoid interference with training, but operational and safety directives from Range Control Firing Desk Operators (RCFDO), Range Inspectors, Range Facility Specialists, and the Range Managers must be obeyed immediately, with discussion and resolution of issues to follow.

c. Range Inspectors, under direction of each post's Range Manager, patrol the range complex to assist units in training, conduct courtesy inspections, and enforce this and other related regulations. Range Inspectors are authorized to check fire ranges or stop training on facilities if safety violations are noted. Range Inspectors also conduct exit inspections of facilities to grant units clearance after training. Range Control may use the Integrated Training Area Management (ITAM) office or the Directorate of Public Works (DPW), Natural Resources Branch personnel for clearance inspections when necessary. These personnel may also be used for general environmental inspections at anytime at Range Control's request.

1-6. Risk Assessments

Unit leaders using ranges, training facilities, and training areas will conduct a risk assessment of each operation. Range officers (OIC/RSO) are responsible for completing the risk-management assessment process before conducting any training. The process will include all steps, i.e., hazard identification, hazard assessment, development and implementation of control measures, and supervision. OICs/RSOs are required to certify in writing that the risk-management process has been completed when signing for range/training facilities. The risk-management process is in Field Manual (FM) 7-1, and FM 3-100.12.

1-7. Medical Support

1. Requirements for medical support increase according to activity and elevated risk. The levels of medical support defined below are the minimum requirements mandated by this regulation.

a. Each training and range activity is assigned a level of medical support based on potential for injury and the severity of injury which may occur during the execution of training events.

b. The minimum levels of medical support associated with the activities referenced in the activity matrix are subject to enforcement by range control. Any deviation from the requirements listed in this regulation or activities not specified will be addressed in a risk assessment. The risk assessment will be signed by the Battalion Commander or equivalent and will be forwarded to the USAG FWA Installation Range Safety Officer.

c. Commanders may request a waiver of medical support requirements through the USAG FWA Installation Range Officer (Figure 1-2).

2. Levels of Medical Support:

a. Level 1. Commanders determine medical support requirements based on their risk assessment. This level is required to support activities and events with a negligible to low risk of injury.

b. Level 2. Combat Lifesaver or equivalent (e.g. EMT level 1 or higher) per every platoon-size element with a fully stocked aid bag; and one litter and one dedicated, litter capable, terrain and season appropriate vehicle with a dedicated driver. Commanders use their risk assessment to determine requirements for additional dedicated evacuation vehicles when training at levels larger than company. This level is required to support activities and events with a low to medium risk of injury.

c. Level 3. One military occupational specialty (MOS)-qualified medic (68W) or equivalent (EMT level 1 or higher), with a fully stocked aid bag, one field litter ambulance (FLA) or equivalent (e.g. ambulance, SAR aircraft) with at least two rigid litters, one back board and C-collar, and one dedicated driver. This level is required to support activities and events with a medium to high risk of injury.

d. Level 4. Two military occupational specialty (MOS)-qualified medics (68W) or equivalent (EMT level 1 or higher) each with fully stocked aid bags, one field litter ambulance (FLA) or equivalent (e.g. ambulance, SAR aircraft) with at least two rigid litters, two backboards, two C-Collars, one dedicated driver, on-call medical evacuation (MEDEVAC) helicopter, designated MEDEVAC LZ. This level is required to support activities and events with a high to catastrophic risk of injury.

Note: Vehicles dedicated to the evacuation of injured personnel will not be used for range support or any other purposes.

3. Activity Matrix

Activity/Event	**Level of Medical Support (unmitigated by Risk Assessment)**
Weapons zero and qualification (up to .50 Cal. FRA/ FWA Small Arms Complex)	Level 1
Land Navigation	Level 1
EIB/EFMB/CTT	Level 1
Aerial Delivery Operations (Cargo, Bundles)	Level 1
Dry Fire Activities	Level 1
LZ/PZ Operations	Level 1
Hand Grenades (Practice)	Level 1
40mm Training Practice (TP/Illumination)	Level 1
Bivouac	Level 1
Road March	Level 1
Field Training Exercises (Non Live-Fire)	Level 1
UAV Operations	Level 1
Helicopter Refueling and Rearming Operations at existing fixed facilities (e.g. airfields), or other compatible areas (e.g. FWA Small Arms Complex)	Level 1
Obstacle Course (Low Risk Obstacles)	Level 2
Weapons zero and qualification (Up to .50 Cal. DTA Small Arms Complex)	Level 2
Maneuver Live-Fire (Buddy Team)	Level 2
Reflexive Fire	Level 2
Close Quarter Marksmanship	Level 2
Marking Cartridge Training (Ultimate Training Munitions, Simunitions)	Level 2
Field Artillery Split Battery Operations Live-Fire (Secondary Site)	Level 2

Activity/Event	**Level of Medical Support (unmitigated by Risk Assessment)**
Field Training Exercises at DTA	Level 3
40 mm HE, Buckshot	Level 3
Demolitions/Mines	Level 3
Demolitions (Breaching)	Level 3
Field Artillery Live-Fire	Level 3
Field Artillery Live-Fire	Level 3
Field Artillery Split Battery Operations Live-Fire (Primary Site)	Level 3
Field Artillery Live-Fire	Level 3
Mortars Live-Fire	Level 3
Hand Grenades (Live)	Level 3
Obstacle Course (High Risk Obstacles)	Level 3
Maneuver Live-Fire (Fire Team and higher)	Level 3
Maneuver Live-Fire (vehicular: Stryker, Convoy)	Level 3
Water Operations	Level 3 with lifeguards and resuscitative capability
Bridging Operations	Level 3
NBC/Smoke Operations	Level 3 with resuscitative capability
Rappelling/Fast Rope Operations	Level 3
Close Quarter Battle (Shoot House, Tire House) Live-Fire	Level 3
Helicopter Refueling and Rearming Operations (Field)	Level 3
Aviation Live-Fire/Gunnery	Level 4 (No FLA requirement to support operations within impact areas)
Combined Arms Live-Fire Exercise	Level 4
Personnel Parachute Drops	Level 4

Note: If an activity is not listed in the matrix, requests for recommendation of appropriate level of medical coverage will be forwarded to the USAG FWA Installation Range Office. Once a determination is made, that standard of medical coverage will apply to all future iterations of the event.

4**.** Emergency Procedures:

a. Ground Evacuation. All injury-producing accidents occurring within the ranges/training complex will be reported immediately to Range Control.

(1) No on-site Medical Support. On those ranges/training areas that do not require on-site medical support, the unit will contact Range Control to request medical assistance. Range Control will contact the medical facility for assistance. The calling unit will provide a road guide to escort the medical team.

(2) On ranges and training facilities that require medical support, units will use their own personnel and equipment to transport injured personnel.

(3) DTA has no on-site medical support. USARAK or approved contractor will provide continuous Air Ambulance evacuation coverage at Fort Greely Alaska (FGA) during all USARAK training events involving platoon or larger units, or while any unit conducts "high risk training" such as LFX, airborne/air assault operations, mountaineering, dismounted cold weather training, etc. at FGA, DTA or the NWTC. Continuous capability during training is defined as the actual missions window for training (LFX, FTX, etc), and the period before or after said training where the unit is in residence at FGA, DTA or the NWTC. Units training at DTA will coordinate for aviation MEDEVAC support no later than 4 weeks prior to occupation of the training site. Aviation MEDEVAC is the primary means of evacuating personnel with life-threatening injuries or injuries of the eye from the DTA. Secondary means of evacuation is via ground to the designated facility in Delta Junction for treatment. Strip maps and contact information for the Delta Junction medical facility are available from DTA Range Control. Units will make a practice run to the facility before training to validate the route. All other non-life threatening injuries will be evacuated back to FWA for treatment via ground transportation.

b. Aero Medical evacuation procedures. For areas not accessible by ground vehicles, or when ground vehicles would not provide acceptable service, a helicopter for aero-MEDEVAC will be provided. Units will contact Range Control on frequency modulation (FM) 38.30 to request MEDEVAC assistance. Range Control will coordinate with the responsible agency/unit to activate and establish a line of communication with the MEDEVAC. The MEDEVAC aircraft will contact Range Control on FM 38.30. Once the MEDEVAC is in progress, units will be directed by Range Control to either monitor and respond on Range Control frequency FM 38.30 or switch to the MEDEVAC frequency of FM 40.50. Telephonic contact with Range Control can be made using the following numbers: FRA 384-6230, FWA 353-1266, and DTA 873-4714. If Range Control at FWA or DTA cannot be contacted by radio or telephone for MEDEVAC assistance, call Emergency Services at 353-7535. At Fort Richardson, if Range Control cannot be contacted by radio or telephone for MEDEVAC assistance, call the Rescue Coordination Center at 551-7230.

(1) For adequate preparation before evacuation, the following information must accompany a request for any MEDEVAC:

(a) Location of pickup site [grid coordinate with common name, if available (e.g., Firing Point 28)].

(b) Radio frequency, call sign, and suffix.

(c) Number of patients by precedence.

(d) Special equipment required.

(e) Number of patients by type (litter or ambulatory).

(f) Number and type of wounds.

(g) Method of marking pickup site.

(h) Patient's status (military or civilian).

(i) Terrain description.

(2) Range Control will monitor FM 40.50 and assist the MEDEVAC personnel as requested to expedite the evacuation.

(3) When necessary, live-fire facilities will be placed into a check-fire situation to allow the MEDEVAC helicopter to enter the area (this includes operations within the restricted area). In the event of lost communications with the medical evacuation aircraft during live fire exercises, an immediate cease fire of all weapons and lasers will be called for all ranges until the MEDEVAC is complete and the aircraft is clear of the range.

(4) Provide landmark information and grid coordinates to aid the pilot in reaching the reported incident. This information will include a description of the landing zone, how the landing zone will be marked, and any hazards in the landing-zone vicinity.

(5) At FRA, for Aero MEDEVAC, FRA Range Control will contact the Rescue Coordination Center (RCC) at Elmendorf AFB. The RCC will dispatch aircraft from available assets from the Alaska Army National Guard, Alaska Air Guard or civilian hospital Lifealert. FRA Range Control notifies the RCC prior to the execution of personnel air drops and other high risk training events.

(6) Allow training to resume once the MEDEVAC helicopter has cleared the area, unless directed to hold training by the safety office, military police or Range Control.

1-8. Communications

a. The primary means of communication between the training unit and Range Control is FM radio (FM 38.30) and/or ALMRS radios. When conducting live fire training, units will have a primary and alternate means of communication.

b. Units must establish communication with the RCFDO immediately upon occupation of a range, training facility, or training area. ALMRS Channel settings vary with location. Coordinate with Range control for the appropriate ALMRS channel.

c. Units conducting training are required to maintain constant radio communications with Range Control. RCFDO will conduct communication checks with all live-fire ranges and training facilities/ areas. Cellular telephones do not meet the requirement for communications.

d. Loss of communication between a firing unit and Range Control requires the firing unit to come to an immediate cease fire until communication is restored. The unit will then obtain permission from Range Control to resume firing.

e. Failure to establish communication and continuously monitor Range Control constitutes a violation of this regulation and may lead to training-exercise suspension.

f. Range Control will not pass routine unit administrative messages between garrison and field units; they must use internal radio nets. Units having FM 38.30 in their Signal Operation Instruction will

not use that frequency (FM 38.30 is a dedicated Range Control frequency). This net will not be used for garrison radio checks or other non-training administrative functions. FM 38.30 will not be used except for communication with Range Control.

1-9. Helmets and Hearing Protection

When using small arms ranges (.50 cal. or less), commanders are encouraged to require Kevlar or Military Advanced Combat helmet when prescribing the range uniform. Either the Kevlar or the Military Advanced Combat helmet is required when maneuvering with live-ammunition, indirect, or overhead fire ranges, during use of HE munitions, demolitions, and parachute jumps. Helmets will also be worn by personnel using the rappel or jump refresher towers, and when performing duties in the pit on the Known Distance Range. All USARAK units will wear full Personal Protective Equipment (PPE): Advanced Combat Helmet, Body Armor with plates (front and back) and Ballistic Eye Protection (Authorized Protective Eyewear List). Hearing protection is required during all live-fire training.

1-10. Alcoholic Beverages

Units may not schedule the ranges, training facilities or training areas for picnics or social events. Alcoholic beverages are prohibited.

1-11. Authorized Use

All parts of the range complex are off limits, day and night, to all units and all personnel, military or civilian without approved scheduling or a use permit. Reconnaissance by military personnel for future training is authorized after check-in at range operations but will not interfere with ongoing training.

1-12. Unit Construction

Construction of barriers, emplacements, or other structures must be noted on a memorandum to Range Control during scheduling. Some construction may require an environmental evaluation (see chapter 2). The local Range Facility Manager must approve all construction on or additions to ranges and facilities. Barriers and emplacements must be removed after use unless prior permission to leave them has been obtained from Range Control.

1-13. Privately Owned Vehicles and Weapons

a. Privately owned vehicles are prohibited on the range/training complex but may be parked in areas designated for privately owned vehicle parking within a small arms complex. Privately owned vehicles may also be parked at the following non-firing training facilities:

(1) Jump Tower/Airborne Sustainment Training Area (FRA).

(2) Rappel Tower.

(3) Obstacle Course.

(4) NBC Chamber.

(5) CACTF (FWA).

b. Permission for privately owned vehicle access to other areas within the range/training complex must be reviewed and approved by the appropriate Range Control. Allowing individuals to drive and park their privately owned vehicles in designated areas is for their convenience and as such, if their vehicle is damaged (i.e., gets stuck in mud/snow, flat tire, etc.), they will not be entitled to file a claim against the

government. This policy does not override the prohibition against transporting military weapons in privately owned vehicles.

c. Rental vehicles are allowed the same travel and parking privileges as GSA vehicles in the training areas and at range locations.

d. Privately owned weapons will not be taken into training areas/training facilities or onto ranges in conjunction with military operations.

1-14. Recreational Activities

a. The use of Army ranges and training areas for recreational purposes is authorized subject to the provisions outlined in AR 385-63, DA PAM 385-63, AR 350-19 Sustainable Range Program and the general safety restrictions contained in this regulation. Areas not authorized for recreation are impact areas, ranges and training facilities, and areas published in the post weekly bulletin as being a danger area, restricted area, or off-limits area. Recreational users of training areas will coordinate with the U.S. Army Recreational Tracking (USARTRAK) system before entering any training area.

b. All recreational and sport-firing activities will be conducted per the procedures outlined below.

(1) An outdoor rifle and pistol range where sport-firing activities may be conducted is designated as the Sports Fire Range. The Known Distance Range at FWA and DTA may be used as a sports-fire range.

(2) Each range will have a written SOP, which has been approved by the local Range Manager.

(3) Each range will be operated under the supervision of a range-safety-certified OIC and RSO.

c. Posts may also operate a skeet/trap range. If established, these ranges will conform to the requirements outlined in AR 385-63 and the Folio of Standard Drawings, EP1110-1-6: Outdoor Sports Facilities published by the Office of the Chief of Engineers. The skeet/trap range is controlled by Morale, Welfare, and Recreation.

1-15. Training Areas

Lands available for tactical and field training exercises are divided into training areas and are identified by numbers on the posts' 1:50,000 special maps. Training area scheduling procedures are located in chapter 3. Access for any purpose must be coordinated with and approved by the appropriate Range Control.

1-16. Range and Training Area Maintenance Program

This regulation assigns ranges, facilities, and training areas to installation units for police and maintenance (see Appendix C). Units conducting maintenance or police based on the requirements in this regulation are required to schedule their activities through range scheduling. Some materials and assistance are provided by Range Control.

1-17. Certification Procedures for Range Officer in Charge and Range Safety Officer

a. For all live-fire activities, training areas and training facilities that require medical support, OICs and RSOs must be safety certified as follows:

(1) The range OIC/RSO candidate must be familiar with this regulation, AR 385-63, DA PAM 385-63, the FMs, and technical manuals (TMs) that apply to the weapon systems or training event.

(2) Battalion commanders or equivalent will certify in writing to Range Control a list of their personnel trained to perform the duties of OIC and RSO. The OIC and RSO must receive a local range safety briefing from Range Control as part of the certification process to ensure the candidates are familiar with the regulations, FMs, and TMs mentioned in paragraph (1) above and are knowledgeable in the weapons and/or equipment for the proposed training event.

(3) A certificate of qualification memorandum (sample at Figure 1-1) must be submitted to Range Control before the class, listing the candidates who will receive the range-safety briefings and take an open-book, range-safety, certification test. Individuals who show up but are not listed on a certificate of qualification will not be briefed or tested. Candidates must receive a passing score of 80 percent or higher on the range-safety, certification test to be qualified as range OIC or RSO.

(a) Range-safety certification and environmental briefings are given by Range Control the first Monday of each month and at other times by appointment. If the first Monday of the month is a Federal holiday or a USARAK training holiday, the class will be taught on the following Monday. Units can coordinate for Range-Safety Certification classes to be held at different times.

(b) Certification is valid for the duration of the individual's tour of duty (NTE 3 years), unless otherwise revoked.

(4) The range OIC/RSO will be issued a range-safety certification card from Range Control that is annotated with weapons authorized, and the certification date. The card will be presented to Range Control when signing for a range and whenever the individual is performing duties of range OIC or RSO.

(5) A record of the briefing will be annotated on the unit certification roster and kept on file at Range Control until the individual departs the command (Range Warrior Initiative). The OIC/RSO who transfers between units must be added to a certificate of qualification by the gaining battalion commander or equivalent level commander.

b. Personnel involved in accidents or incidents will be suspended from certification during subsequent investigations. Unit recertification may be required.

c. Units utilizing range facilities on a post to which they are not assigned will be briefed by Range Control personnel before using the range. Range certification from all USAG FWA posts will be recognized. Units that are not stationed in Alaska will be certified by their battalion commander or equivalent level commander and will receive the local range safety briefing by Range Control at the post where they will be training. This local certification will be valid for the duration of the visit.

d. All units firing field artillery and mortars must establish and maintain a command safety certification program for personnel participating in and controlling indirect-fire exercises. FM 6-50 and FM 3-22.90 provide specific data for artillery and mortar safety. Proficiency is tested during the gunner's exam.

e. Combined-arms, live-fire exercise (CALFEX) or live-fire, maneuver exercise certification is conducted by senior commanders (see chapter 8, paragraph 8-3 of this regulation). Battalion commanders or equivalent level commander will provide Range Control with a list of certified individuals.

f. The USARAK demolitions certification program requires that each engineer company commander (C/84th Engineer Battalion and C/864th Engineer Battalion at Fort Richardson, and the 73rd Engineer Company at Fort Wainwright) conduct an internal, demolition-safety program and provide Range Control with a list of certified individuals.

(1) The Explosive Ordnance Detachment commander may certify explosive-ordnance-disposal personnel.

(2) The Cold Region Test Center commander may demolition-safety certify Cold Region Test Center personnel.

(3) If a unit requires demolition safety certification, they will coordinate with the G37 Training for certified demolitions instruction.

g. The purpose of the command certification program is to train and qualify individual members in the safety procedures for their specific areas of responsibility.

(1) The command certification program is administered at the battalion/brigade level. As a minimum, certification is required for personnel serving as:

(a) Artillery, mortar, or demolition range OIC or RSO.

(b) Firing battery commander.

(c) Battery executive officer.

(d) Platoon leader.

(e) Artillery fire direction officer/fire direction center chief.

(f) Artillery chief of firing battery or platoon sergeant.

(g) Artillery gunnery sergeant.

(h) Mortar platoon sergeant.

(i) Artillery howitzer section chief.

(j) Combat engineer.

(k) Construction engineer supervisor.

(l) Chemical operations NCO.

(m) Demolitions, indirect-fire, and chemical-test personnel.

(n) OIC or RSO for maneuver live-fire exercises/CALFEX.

(2) A roster of individuals appointed to perform duties of the range OIC and RSO of demolition or indirect-fire ranges or live-fire, maneuver exercises, lasers, or CALFEX will be submitted to Range Control. Individuals must be range-safety certified through their battalion or equivalent level and receive the range-safety briefing.

Table 1-1
OIC/RSO Appointment Requirements

Weapon System	**OIC**[1]			**RSO**[1]		
	OFF	WO	NCO	OFF	WO	NCO
Practice hand grenades; sub caliber training devices; laser devices; firing devices; simulators & trip flares; small arms and machineguns.	X	X	E6	X	X	E5
Chemical agents and smokes.[2,6]	X	X	E6	X	X	E5
Aerial gunnery & air defense weapons; flamethrowers; live grenades, grenade launchers, and grenade machineguns; live mines & demolitions; tank & fighting vehicle cannons; recoilless rifles.	X	X	E7	X	X	E6
Field artillery.[3]	X	X	E7	X	X	E6
Mortars.	X	X	E6	X	X	E6[7]
ADA rockets and guided missiles.		X			X[4]	
Direct fire antitank rockets and missiles.	X	X	E7	X	X	E6
Live-fire exercises using organic weapons, squad through company, battery, troop.	X	X	E7	X	X	E6
Combined arms live-fire exercises using outside support, troop, battery, squad, platoon, company; or battalion and larger.[5]	X	X	E7	X	X	E6

Notes:
[1] Civilians in the grade of GS-07 or above may act as OIC, and GS-05 or above or equivalent as RSO. Civilian contractors may act as OIC/RSO when approved by the installation commander and in accordance with Contract SOW.
[2] OIC and RSO must be nuclear, biological, and chemical (NBC) qualified when conducting NBC or smoke training.
[3] Use of E7s as OICs is authorized only when approved by the installation commander. Duties of the RSO are normally performed by either the battery executive officer or platoon leader.
[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 E5s to act as RSO for practice hand grenades, Chemical Agents and Smokes.
[7] RSO for Marine Corps can be E5s for mortar training activities.
Source: DA PAM 385-63, 10 April 2003.
[8] OIC & RSO for LASER use, in conjunction with CAS in the rank of E-4 for current and qualified U.S. Air Force JTACs is authorized only when approved by the installation commander

---

DEPARTMENT OF THE ARMY
(Unit Address)

(OFFICE SYMBOL) (Date)

MEMORANDUM FOR Range Control

SUBJECT: Certificate of Qualification

1. References: AR 385-63, DA PAM 385-63 and USAG FWA Regulation 350-1.

2. The following personnel from (your company) are trained per the references and are certified to perform the duties therein. Request a Range Control safety briefing and clearance to receipt for and operate training facilities as range OIC or RSO.

Name	Rank	MOS	1	2	3	4	5	6	7	8	9	10
John Doe	SFC	11B40	X	X	X	X		X			X	
John Smith	SGT	92Y20	X	X	X							

1-Rifle	2-Pistol	3-M203	4-MG	5-Hand Grenade
6-Claymore	7-AT-4/LAW	8-NBC	9-MK-19	10-Shotgun

3. Request that personnel listed above be qualified to perform OIC or RSO duties per USAG FWA Regulation 350-2 Paragraph 1-18.

4. The point of contact for this memorandum is (your POC), (POC telephone number).

(BN CDR)
LTC, IN
Commanding

Note: This memorandum must be typewritten with an **original** signature.

Figure 1-1. Sample Certificate of Qualification Memorandum

DEPARTMENT OF THE ARMY
(Unit Address)

(OFFICE SYMBOL) (Date)

MEMORANDUM FOR U.S. Army Alaska Deputy Chief of Staff, G-3 (APVR-RPTM), Fort Richardson Alaska 99505-6300

SUBJECT: Request for Waiver of Medical Support Requirements

1. Date/time/location of training:

2. Training Event:

3. Number of personnel:

4. Types of ammunition/explosives/mines/pyrotechnics/simulators:

5. Brief description of training event:

6. Specific medical support requirement to be waived:

7. Justification/mitigating factors/alternatives:

8. Risk Assessment:

9. Impact on training if waiver is not granted:

10. The point of contact for this memorandum is (your POC), (POC telephone number).

(BN CDR)
LTC, IN
Commanding

FIGURE 1-2. Sample Medical Waiver Request

Chapter 2
Protection of Environmental Resources during Training

2-1. General

a. The intent of this section is to enhance training by conserving the training environment and terrain. It is extremely important to use the training resources to your advantage while conserving them for future use. Preventing maneuver damage and maintaining the training quality is a command responsibility. Training will be conducted in a manner that ensures optimum use of the land while adhering to environmental and natural resource regulations, policies, and planning decisions. The Army has an obligation to act responsibly and effectively in the use of land and other natural resources required in fulfilling its mission.

b. USAG FWA is dedicated to maintaining and enhancing the quality of its training lands. This allows for the most realistic training opportunities possible. In fact, the ability to uphold the Army's mission depends on training lands that provide authentic combat conditions. Authentic conditions cannot be met when training lands are damaged.

c. To guide and regulate the actions of Army personnel using and managing training lands, the Army has developed the Integrated Training Area Management (ITAM) program. The goals of the ITAM program are to evaluate, repair, maintain, and enhance training lands. A major component of the ITAM program is environmental awareness, and this regulation is an essential part of the environmental awareness program. Sustainable Range Awareness is important to maintain and enhance the quality of training lands and to comply with federal, state, and Army laws and regulations that require all Army personnel to maintain certain environmental standards and record keeping.

d. Most of USAG FWA land was withdrawn from the public domain to support the Army's mission. While military training is the dominant use of these lands, the Army is required to manage the land for multiple uses as long as the military mission is not compromised. Multiple-use activities and opportunities include hunting, fishing, trapping, kayaking, rafting, canoeing, hiking, mountain climbing, downhill and cross-country skiing, off-road vehicle use, biking, berry picking, wildlife viewing, and scouting. The Army is also mandated to protect sensitive and fragile areas such as wetlands and alpine tundra. In addition, USAG FWA is home to hundreds of wildlife species, which must be managed and protected.

2-2. Policy

Today's environmental laws are the result of public awareness and concern about environmental damage. The Army acknowledges these concerns and recognizes that many environmental laws directly benefit the Army by ensuring protection of irreplaceable training lands. The regulatory agencies with environmental jurisdiction over USAG FWA include the federal and state governments, as well as the Army and each post. Presidential Executive Orders are another source of regulatory mandates. For each jurisdictional level, a brief description and synopsis of the environmental laws and regulations affecting USAG FWA's personnel and actions are provided in the sections below. For important details on the applicable laws and regulations, contact the DPW, Environmental Resources Division.

2-3. Federal Laws

a. National Environmental Policy Act (NEPA) is applicable to all federal agencies receiving federal funds. Of all environmental laws, the National Environmental Policy Act affects military activities most. The law's intent is to assure all Americans and their future generations that the environment will be safe, healthy, productive, and sustainable. Through a process of review and documentation, the law directs all federal and federally funded agencies to evaluate the environmental consequences of proposed actions and consider alternatives. The law requires mitigation for significant impacts. The law also ensures that the appropriate level of public involvement occurs for certain proposed actions. The documentation of potential impacts may include:

(1) A NEPA review checklist.

(2) A record of environmental consideration (REC).

(3) An environmental assessment (EA).

(4) An environmental impact statement (EIS).

b. In many cases, a NEPA review checklist and record of environmental consideration are sufficient for satisfying the National Environmental Policy Act requirements, especially if one or more categorical exclusions apply (see AR 200-2, Appendix A, for the Army's list of categorical exclusions) or if the analysis of the proposed action can tier off a previous NEPA analysis document. However, an environmental assessment is prepared if a proposed action:

(1) Is not an emergency.

(2) Is not exempt from the National Environmental Policy Act.

(3) Does not qualify as a categorical exclusion.

(4) Is not adequately covered by existing National Environmental Policy Act analysis and documentation.

(5) Does not normally require an EIS.

c. According to AR 200-2, which addresses the environmental effects of Army actions, if categorical exclusions do not apply an environmental assessment is required for the following types of projects:

(1) Construction or field training activities that affect more than five contiguous acres or actions that could result in impacts to resources such as soils, wetlands, floodplains, coastal zones, wilderness areas, wildlife habitat, or sensitive areas.

(2) Actions affecting any federal land use or resource management plans.

(3) Actions affecting cultural resources such as important structures, archeological sites, or historic sites.

(4) See AR 200-2 for additional types of actions that require an environmental assessment.

d. If a proposed action is not expected to result in significant environmental impacts, a "Finding of No Significant Impact (FNSI)" is prepared. The Finding of No Significant Impact is a brief statement of why a proposed action will not result in significant environmental impacts. Typically an environmental assessment and draft Finding of No Significant Impact are released for a 30-day comment period. If, however, the environmental assessment reveals the potential for significant environmental impact, there will be a notice of intent to prepare an environmental-impact statement. The environmental-impact statement provides a detailed analysis of all relevant potential impacts.

e. According to AR 200-2 an environmental impact statement "is intended to provide a full, open, and balanced discussion of significant environmental impacts that may result from a proposed action and alternatives, allowing public review and comment on the proposal and providing a basis for informed decision-making."

f. Conditions requiring an environmental impact statement include:

(1) Significant or controversial environmental effects.

(2) High or uncertain environmental risks to resources such as wetlands, ecologically important areas, floodplains, historic sites, archaeological or scientific resources, threatened or endangered species, and interact with other actions to create a significant cumulative impact.

(3) Set a precedent for future actions that could result in significant environmental impacts.

(4) See AR-200-2 for a more types of actions that typically require an environmental impact statement.

g. National Environmental Policy Act review processes are the responsibility of the DPW Environmental Division. Units conducting training actions must notify the DPW Environmental Division at least 60 days before scheduled actions take place and provide the information necessary for the DPW Environmental Division to develop a record of environmental consideration. If it is determined that an environmental assessment is required, the DPW Environmental Division will notify and coordinate with the unit involved. An environmental assessment can take up to 6 months to complete, and an environmental impact statement takes more than one year (typically two to three year). Keep in mind these facts as training exercises are being planned.

h. Other major environmental laws include:

(1) Clean Water Act (1972, as amended through 1987). The Clean Water Act requires a Section 404 wetlands permit for any activity that will fill or potentially fill (includes digging) wetlands.

(2) Clean Air Act (1970, as amended through 1990).

(3) Endangered Species Act (1973).

(4) National Historic Preservation Act (1966).

(5) Resource Conservation and Recovery Act (1976, as amended through 1984).

(6) Toxic Substances Control Act (1976).

(7) Noise Control Act (1972).

(8) Sikes Act (1962, as amended through 1998).

(9) Migratory Bird Act

2-4. Executive Orders

Executive Order 12088, issued by the President of the United States, directs federal agencies to control and monitor environmental pollution resulting from federal actions. Executive Order 12114 addresses environmental impacts caused by federal agencies outside United States boundaries.

2-5. State Laws and Regulations

Environmental laws vary from state to state, and they vary with respect to their relationship with federal laws. Alaska State Law Title 46 requires reporting of any spill or release of oil or hazardous substance.

2-6. Army and United States Army Alaska Regulations

a. There are three important ARs that affect your activities on any military installation: AR 200-1,

AR 200-2, and AR 200-3. Essentially, they mandate that the Army comply with federal laws and integrate environmental protection with planning and executing military operations. The Army has also adopted a set of environmental quality goals, which include additional mandates:

(1) Demonstrate leadership in protecting the environment.

(2) Minimize negative impacts while ensuring combat readiness.

(3) Restore environmental quality.

(4) Support Army recycling and conservation programs.

(5) Prevent and minimize pollution and waste.

(6) Develop strong public relations with neighboring communities.

b. Other Army Regulations include:

(1) AR 190-13

(2) AR 200-1

2-7. Wetlands

a. USAG FWA has obtained a 5-year general wetland permit to conduct military training in wetlands at FWA and DTA. This permit allows limited maneuver or other military activities to occur in some wetland areas, a change from the past, where no activity was permitted at all. Impacts to wetlands from training activities on FWA and DTA may not damage more than 40 acres per year per post (FWA and DTA). If that amount is exceeded, training in wetlands will be prohibited and individuals may be liable for fines and other penalties. Restoration of any such damage is mandatory.

b. As part of the mitigation for potential damage, the **environmental pre-approval overlay** must be used when requesting to train in wetland areas in order to avoid possible fines. The overlay clarifies which activities are approved/restricted for each training area. The environmental pre-approval overlays are described in detail in paragraph 2-8.

c. Upon completion of any activity occurring in a wetland, ITAM staff is required to check the area for damage and make arrangements with the unit for mitigation or restoration.

d. New permanent construction (buildings, roads, pads, etc.), weapons firing into impact areas, bank stabilization, unexploded ordnance, recreational activities, or ice bridges are not covered in this permit and require a separate, individual wetland permit and/or other permits.

e. Use of wetland areas at FRA also requires a wetland permit. Depending on the activity, this process can take up to 6 months. Consult the ITAM/environmental office early.

f. In addition to use of the environmental pre-approval overlays, several additional conditions must be met as part of the 5-year wetland general permit. These include:

(1) Only the minimum footprint necessary shall be used for training. Wetland areas adjacent to military operations not necessary for training will not be encroached upon, thus minimizing additional disturbance.

(2) Only 10-percent, incidental damage is permitted in any given area or trail. This 10-percent figure refers to the clearing of the vegetative mat and the exposure of bare soil. Once that amount has

been exceeded, the areas or trail must be rotated out of use until the area has sufficiently recovered and can once again support training. The percentage of incidental damage will be monitored by ITAM personnel.

(3) When utilizing yellow areas adjacent to red areas, ITAM/environmental staff must flag a 50-meter buffer around the utilized area. The unit must remove flagging before leaving the area.

(4) During excavation activities, the vegetative mat must be stockpiled so that it can be used for reclamation after the exercise.

2-8. Environmental Pre-Approval Overlays

a. The environmental pre-approval overlays were developed as a tool for planning military training activities. Approved/restricted activities are listed in three color-coded categories. The environmental pre-approval overlays are available at each Range Control or ITAM office. ITAM or range staff will provide instruction on use of overlay. Each overlay is available in a summer and winter version. Check with Range Control for which version you should be using when planning your activity. The three categories on the overlays are described in Tables 2-1 and 2-2.

Table 2-1
Definition of land use categories used on environmental pre-approval overlays for USAG FWA during summer months

Category		**Approved Activity Summer**	**Limited Activity** (requires Range Control approval on a case-by-case basis)	**Prohibited Activity**
GREEN	No limitations or restrictions	- Tracked, wheeled, and foot maneuvers - Bivouacs - Defensive fighting positions - Digging - Earth moving - Field kitchens - Laundry and bath facilities - Water purification - Portable latrines - Slit trenches - Vehicle decontamination training - Timber cutting (under 4 inches diameter) - POL distribution	- Smoke generation - Fuel farms	None
YELLOW	Minor limitations or restrictions	- Tracked, wheeled, and foot maneuvers - Bivouacs - Assembly areas - Defensive fighting positions - Timber cutting (under 4 inches diameter)	- Digging - Earth moving	- Laundry and bath facilities - Portable latrines - Slit trenches - Vehicle decontamination training - Smoke generation - Fuel farms - POL distribution

Table 2-1
Definition of land use categories used on environmental pre-approval overlays for USAG FWA during summer months

Category		Approved Activity Summer	Limited Activity (requires Range Control approval on a case-by-case basis)	Prohibited Activity
RED	Significant limitations or restrictions	- Foot maneuvers	- Tracked and wheeled maneuvers	- Bivouacs - Assembly areas - Defensive fighting positions - Timber cutting (under 4" diameter) - Mechanical digging - Earth moving - Laundry and bath facilities - Portable latrines - Slit trenches - Vehicle decontamination training - Smoke generation - Fuel farms - POL distribution

Legend: POL—petroleum, oils, and lubricants.

b. Summer special conditions. The red and yellow categories on these overlays each have special conditions that must be observed while training in those areas.

(1) Green. No environmental restrictions. However, all normal procedures outlined elsewhere in this regulation should be followed. Smoke generation and fuel farms in areas, represented as green on the overlay, require prior approval from Range Control on a case-by-case basis.

(2) Yellow. Notify Range Control when planning to train in yellow areas. Environmental/ITAM staff must pre-survey the area. Stream crossings are permitted at 90-degree angles only.

(3) Red. Notify Range Control when planning to use red areas. Environmental/ITAM staff must pre-survey red areas to determine on-the-ground limits of each red area. Open water and streams have 50 meter buffers around them—NO VEHICLES IN BUFFER—FOOT MANEUVER ONLY. Vehicular maneuver is not allowed except during stream crossings, which must be crossed at a 90-degree angle to the direction of the stream flow. No stream crossing is allowed at shear or cut banks. Earth moving, mechanical digging, bivouacs, assembly areas, fighting positions, timber cutting, laundry and bath sites, portable latrines, slit trenches, vehicle decontamination, smoke generation, and any petroleum, oils, and lubricant (POL) distribution are restricted in any area designated as red on the overlay.

Table 2-2
Definition of land use categories used on environmental pre-approval overlays for USAG FWA during winter months

Category		Approved Activity Winter	**Limited Activity** (requires Range Control approval on a case-by-case basis)	Prohibited Activity
GREEN	No limitations or restrictions	- Tracked, wheeled, and foot maneuvers - Bivouacs - Defensive fighting positions - Digging - Earth moving - Field kitchens - Laundry and bath facilities - Water purification - Portable latrines - Slit trenches - Vehicle decontamination training - Timber cutting (under 4 inches diameter) - POL distribution	- Smoke generation - Fuel farms	None
YELLOW	Minor limitations or restrictions	- Tracked, wheeled, and foot maneuvers - Bivouacs - Assembly areas - Defensive fighting positions - Timber cutting (under 4 inches diameter)	- Digging - Earth moving - Snow plowing - Stream crossing with ADF&D permit	- Laundry and bath facilities - Portable latrines - Slit trenches - Vehicle decontamination training - Smoke generation - Fuel farms - POL distribution
RED	Significant limitations or restrictions	- Foot maneuvers	- Tracked and wheeled maneuvers - Stream crossing with ADF&D permit	- Bivouacs - Assembly areas - Defensive fighting positions - Timber cutting (under 4 inches diameter) - Mechanical digging - Earth moving - Laundry and bath facilities - Portable latrines - Slit trenches - Vehicle decontamination training - Smoke generation - Fuel farms - POL distribution

Legend: POL—petroleum, oils, and lubricants; ADF&G—Alaska Department of Fish and Game.

c. Winter special conditions. The red and yellow categories on these overlays each have special conditions that must be observed while training in those areas.

(1) Green. No environmental restrictions, however all normal procedures outlined elsewhere in this regulation should be followed. Smoke generation and fuel farms in areas, represented as green on the overlay, require approval from Range Control on a case-by-case basis.

(2) Yellow. Notify Range Control when training in yellow areas. Environmental/ITAM staff must pre-survey area. Stream crossings are allowed at 90-degree angles only. Use caution when snowplowing. A minimum of 6 inches of snow pack must remain on trails or other clearings to minimize damage to vegetation and soils. Activities limited in areas shown as yellow on the overlay include tracked and wheeled maneuvers, bivouacs, assembly areas, defensive fighting positions, and timber cutting. These activities may be approved on a case-by-case basis by Range Control or the ITAM office if there are no seasonal wildlife restrictions.

(3) Red. Notify Range Control when using red areas. Environmental/ITAM staff must pre-survey red areas to determine on the ground limits of each red area. Open water and streams have meter buffers around them—NO VEHICLES IN BUFFER—FOOT MANEUVER ONLY. Vehicular maneuver is not allowed except during stream crossings, which must be crossed at a 90-degree angle to the direction of the stream flow. No stream crossing is allowed at shear or cut banks. Earth moving, mechanical digging, bivouacs, assembly areas, fighting positions, timber cutting, laundry and bath sites, portable latrines, slit trenches, vehicle decontamination, smoke generation, and any POL distribution (fuel farms and tankers) are restricted in any area designated as red on the overlay.

2-9. Environmental Considerations

a. Digging.

(1) Mechanical digging and earth moving is limited to areas shown on the environmental pre-approval overlay. Foxholes, trench systems, tank traps, hull down positions, explosive excavations, etc., must be refilled and leveled before redeployment. Where excavation is required, the organic layer will be removed first and stockpiled so it can be spread over disturbed sites after back filling is complete. All overhead cover, such as logs, must be disassembled and scattered. Wire, rope, and string will be removed and disposed of properly.

(2) Units and Range Control will ensure that no digging takes place in wetlands without a permit.

(3) Dig permits are required for activities occurring within the local training areas at all posts. Contact DPW to determine what areas require a dig permit. Dig permits can be obtained at DPW.

b. Snow plowing.

(1) Exercise caution when snowplowing trails and bivouac sites in the winter. A minimum of 6 inches of snow must remain on the ground when plowing trails, bivouacs, tactical operation centers, etc. The blade must be kept elevated to avoid tearing up the vegetative mat or soil beneath the snow pack.

(2) Snow berms around tactical operation centers, battalion support areas, etc., must be leveled after the exercise.

(3) Plowed debris must not be pushed on top of any lakes or streams in winter. Large areas of woody vegetation must not be disrupted.

c. Vehicle movement.

(1) Vehicles will remain on marked trails and designated routes except when directed otherwise during tactical deployment. Vehicles will drive on established roads during administrative time. During breakup (usually 1 April through 15 May), all vehicles are restricted to established roads and dry trails. During summer months (usually May through September), cross-country movement is permitted in all areas except designated creek bottoms, lakes, streams, and open, flowing water as shown on the environmental pre-approval overlay. No tracked or wheeled maneuvering is permitted within a 50-meter buffer around all streams, lakes, and any open, flowing water during the summer unless crossing at a 90-degree angle to the stream. Fish spawning streams will not be crossed during summer. Vehicular stream crossing is allowed in winter months (usually October through March) at permitted ice bridge sites and other areas if there is no flowing water. Tactical turns, such as missile avoidance or neutral steer turns, will be avoided unless absolutely necessary. Vehicles will not drive directly up steep hills.

(2) Movement into off-limits areas is strictly prohibited. Personnel found in violation are subject to disciplinary action.

(3) Parked tactical vehicles must have drip pans placed under the vehicle at all times to catch any oil or fuel dripping from the vehicles.

d. Vegetation (camouflage).

(1) Live trees greater than 4 inches in diameter will not be cut or damaged during training without prior approval. If trees larger than 4 inches in diameter are required, contact the DPW Environmental Resources Division for an approved area to cut in. Destruction of trees and brush must be avoided unless it is required to achieve training objectives.

(2) Trees less than 4 inches in diameter may be cut without coordination with the DPW Environmental Resources Division, if necessary to achieve training objectives. Spruce boughs (limbs) may NOT be cut from live, standing trees. Boughs may be obtained by cutting spruce trees under 4 inches in diameter. Remaining stumps must not be more than 6 inches tall.

(3) Use camouflage nets instead of live vegetation. The nets are designed to break up the visual lines of equipment and structures. Once live vegetation is cut, it wilts quickly, and does not conceal your position.

(4) Communications wire, power lines, and auxiliary cables should be strung along the edge of open areas or trails and run along the ground when feasible and compatible with training objectives. When it is necessary to suspend wire above the ground, care should be taken not to break trees, branches, stems, etc., and the use of nails and wire loops should be minimized.

e. Policing.

(1) Police all training areas before, during, and after use. Even if it is not your litter, pick it up, because it can give away your position. All cartridges, tubes, containers, packing material, and all other material introduced into the environment in conjunction with maneuver activities will be removed to the maximum practical extent. Remove all barbed, communications, concertina, and trip wire and properly dispose of it per post procedures. Wire left behind can injure wildlife and recreational users of the land.

(2) Under no circumstances will units bury or burn waste.

(3) All vehicles are required to have a supply of plastic garbage bags for trash collection.

(4) ITAM/environmental staff is required to assist Range Control when clearing units from training areas.

f. Fish and wildlife.

(1) Harassment of fish and wildlife is prohibited. Any action that disturbs fish and wildlife is considered harassment by federal and Alaska State law. Harassment includes such things as pursuit with vehicles or aircraft, feeding, and shooting of wildlife. Individuals who harass fish and wildlife are subject to prosecution.

(2) Dedicated impact areas are permanently off limits and training areas may be temporarily closed during periods of significant wildlife use (moose calving). Range Control will advise units of closures.

g. Fires.

(1) Immediately report all fires to Range Control. Know the grid location, fire nature, and size. Units will be prepared to assist in suppressing small range fires (up to 100 square feet) that might occur in the training areas. Safety of the Soldiers will not be jeopardized.

(2) The use of pyrotechnics, smoke pots, and grenades may be restricted when fire danger is high. Smoke grenades and star-cluster flares will be used only for emergency operations during high fire-danger times.

(3) Burn pans are required to burn excess powder charges and all residues from burn pans will be treated as hazardous material.

(4) Open fires are **prohibited** except in emergencies or as part of approved training exercises. Units desiring to build fires should submit a request to burn to Range Control. The request should include materials to be burned, quantity, length of burning, and the location. The request should be submitted 12 working days in advance of the planned burning.

h. Off-limits areas. All areas within 1/2 mile of the military reservation boundaries are closed to training activities as a buffer to adjacent, nonmilitary land uses. The 1/2-mile restriction does not apply to the close-in training areas. Exceptions include all access routes and those areas specifically approved by Range Control. Improved recreational areas are closed to training unless otherwise approved by the DPW Environmental Resources Division.

i. Noise.

(1) Firing demolition, artillery, and mortar is prohibited from 2200 to 0600 except for the Yukon Stuart Creek area. Demolition charge sizes are limited as noted in chapter 9. In addition, any training activity that generates noise (firing of blanks, pyrotechnics, simulators, etc.) between 2200 and 0600 in areas adjacent to populated areas is prohibited.

(2) Exceptions to firing hours require public notification of late firing. An exception to firing hours can be obtained by submitting a late-fire request (see sample at fig 2-1) to Range Control. Range Control will submit the notification to the Public Affairs Office so that a notice of firing (see sample at fig 2-2) can be published. Late-fire requests must be submitted 12 working days before the desired training event.

j. Cultural resources. Identified historical and archaeological sites will be left undisturbed. Any historical or archaeological discoveries made as a result of any military activities should also be left undisturbed and must be reported immediately to the DPW Environmental Resources Division.

k. Public access. Per Public Law 87-327 and AR 200-3, USAG FWA controlled lands, when not scheduled for training, are open to civilians and off-duty military personnel for outdoor recreation such as hunting, fishing, trapping, berry picking, hiking, and nature photography. Units may encounter these people during the conduct of training. If the presence of civilians interferes with training activities, units

will contact Range Control to have the civilians removed. Under no circumstances will trap lines or trapped animals be disturbed.

l. Petroleum, oils, and lubricants (POL).

(1) Alaska State law requires that **ALL** spills be reported and cleaned up. A spill can be as little as one drop of POL if it hits the ground. Failure to report a spill will result in punishment of the individual(s) responsible.

(2) POL distribution points and refueling operations shall be set up and operated per AR 200-1. Drip pans must be used at all dispensing points. Each unit shall have a spill kit available that consists of at least a shovel, absorbent material (dry sweep), plastic bags, and drip pans. Improper handling of POL products constitutes gross negligence, punishable by fine or imprisonment.

(3) Immediately report POL spills to the fire department and Range Control. Know the size, location, and type of POL spill. Take immediate action to control, contain, and clean up the spill per the Installation Spill Contingency Plan. Failure to immediately report spills may result in prosecution.

(4) All hazardous wastes and materials will be handled per the USAG FWA hazardous waste and materials management plan for each post. All disposal actions will be coordinated with the DPW Environmental Department.

(5) Always turn in unused or waste oil and fog oil (see USAG FWA Regulation 200-4) for recycling along with empty drums and other hazardous wastes, such as old batteries, solvent, and paints.

2-10. Field Sanitation

Human waste disposal procedures during training differ from those during combat conditions. The ~~"~~bag and drag" method is not authorized on FRA lands and selected off-post training sites, due to recent environmental restrictions.

a. Fort Richardson. Waste disposal will follow either paragraph c or d below. Slit trenches and cat holes can be used during the summer on Training Areas 14A, 14B, and 14C. This policy applies to users of FRA training lands.

b. Fort Wainwright. Slit trenches and cat holes may be used for summertime disposal in the YTA. Bagged human waste from other areas will be disposed of at the FWA post landfill year round. Human waste may not be disposed of in any of the Eielson Air Force Base dump locations when leaving the YTA.

c. Fort Richardson disposal procedures.

(1) Sealable, reusable, 15-gallon cans and large holding tanks will be used for human waste during field activities. Plastic bag liners are not authorized. Major units may obtain an initial issue of these containers and are expected to issue them to subordinate units. The cans are heavy-gauge steel with removable lids and gaskets that are held in place with clamping rings. Units will maintain these cans and requisition replacements (National Stock Number 8110-00-254-5717).

(2) The number of cans needed can be calculated as 4 percent of the number of Soldiers deployed per day. For example, if 130 Soldiers are in the field for 3 days, 4 percent of 130 is 5.2 (cans). Multiply 5.2 (cans) by 3 (days), which equal 15.6 (or 16) (cans). Thus, 16 cans are required for 130 Soldiers for 3 days.

(3) When paragraphs (1) and (2) above do not apply, units will write an SOP on waste disposal procedures. The following information should be included:

(a) No plastic liners permitted. One of the reasons the ~~"ba~~g and drag" method was discontinued is because bags were put into the sewer system and plugged it.

(b) Cans originally issued will be numbered. The supply officer or separate companies will track the assignment of the cans and any additional cans obtained. Cans not returned and accounted for after a field exercise will be retrieved and disposal procedures followed.

(c) Simple Green or other cleaners and brushes may be used to clean the cans and reduce odor in the field.

(d) Cans should be carried by two Soldiers; they weigh approximately 100 pounds full.

(e) If the cans freeze, they can be thawed before emptying.

(f) Take care to ensure an airtight seal is maintained. Rubber gaskets and clamping nuts and bolts can be easily lost or broken, and the clamping ring sprung.

(g) The cans may be dumped into unit latrines and sanitized there, or into the DPW's evacuator truck pad. Units must schedule an appointment with DPW for access during duty hours. A detail NCO will be in charge of the Soldiers and will clean up the evacuator pad to DPW's satisfaction. Units may contact the DPW Roads and Grounds Division at FRA for access to the wash pad.

(h) Raingear, gas masks, and chemical gloves are appropriate attire for the cleaning detail. Units may also procure disposable coveralls, goggles, and rubber gloves from the General Services Administration.

(i) Waste will NOT be buried, burned, or dumped in manholes, streams, the Black Spruce campground dump station, or fixed latrines at ranges or training areas. Visiting units who frequently use FRA land may procure their own drums (National Stock Number 8110-00-254-5717 ($35.00 each)).

(j) Units will maintain and issue cans and write an SOP implementing this change and ensure field sanitation is addressed in operation orders. Replacement cans must be funded and ordered from unit resources. The DPW will prepare and issue cans and devise a procedure for units to dump them.

d. Alternatives (recommended for FRA, FWA and DTA).

(1) Units can activate a standing contract for portable latrines through the Regional Contracting Office. However, contractors may have difficulty responding to changing tactical situations and the contractor's trucks will not have the same mobility in range areas that unit vehicles do.

(2) Use the permanent latrines for human waste, when available. Where permanent latrines are not available, unit commanders must provide ample portable latrines. Unit commanders are personally responsible to prevent contamination of water resources.

(3) Cat holes are for emergencies only and permissible for groups of five or less.

e. Off-post training areas. The rules for human waste disposal on off-post lands are specified in the permit or contract and will be issued as part of the approval for their use. The rules for Spencer and Knik Glaciers are known. Solid human waste must be backhauled. Since access is limited and units are rotated back to back, cans may be exchanged via helicopter. Extra cans should be on hand in case weather prevents flights.

2-11. Damage Control

a. Careless use of the training areas will result in terrain damage. If the mission of USAG FWA is to be fulfilled, realistic training conditions are required. Maneuver damage will decrease the training realism. This will result in substandard training conditions and will undermine the training mission. Maneuver damage needs to be kept to a minimum. The damage that occurs must be repaired. If not, the damage will result in artificial constraints on maneuver training including loss of training acreage, creation of safety hazards, decreased tactical maneuverability, increased maintenance costs, loss of vegetation, loss of quality training terrain, destruction of natural camouflage, and controversy with the general public.

b. The key to preventing maneuver damage is knowledge on how to respond properly to different situations. As leaders, the decisions you make will affect the training area by promoting or preventing damage. Once the training land is damaged it is extremely hard and expensive to replace or repair. Training for combat on the modern battlefield often cannot be conducted without damage, but trainers are expected to consider the impact of events, modify plans to avoid damage that violates Army policy, and ensure the repair of unavoidable scenario-driven damage. Training plans will include locations of known sensitive areas and plans for maneuver-damage repair. Procedures to reduce maneuver damage include the following:

(1) Avoid making tactical turns such as missile avoidance or neutral steer turns, unless necessary. These types of turns will rip up all the vegetation and it will take the terrain several years to recover.

(2) Avoid digging or damaging wetlands or any wet areas. Avoid damage to trees.

(3) Drive on established roads during administrative time. Although it may take longer than moving cross-country, the expense incurred in repairing maneuver damage is very high. Units causing ruts must fill them in as soon as possible.

(4) Stay away from the edges of roads. Driving on the edges will cause the edges to break and crumble. This can cause the road to wash out from rain and result in erosion problems.

(5) Do not drive directly up steep hills.

(6) Use camouflage nets instead of live vegetation. The nets are designed to break up the visual lines of equipment and structures.

(7) Do required training with a concern for conservation and future use of range areas.

c. Units will report maneuver damage to Range Control. Range Control will determine the cause of the maneuver damage. If the damage was caused as a result of unavoidable scenario-driven maneuvers, the units will not be assessed for maneuver-damage repair. However, if Range Control determines that the damage was unnecessary and negligent, the DPW Environmental Resources Division will conduct a damage assessment and offending units may be charged for maneuver-damage repair. The DPW Environmental Resources Division will provide technical guidance on cleaning up hazardous materials and the ITAM office will provide guidance on rehabilitation of damaged lands.

2-12. Information and Assistance

a. The range-facility manager and ITAM staff will assist trainers at any stage of planning with advice on the possible impact of exercise scenarios. Trainers must use these resources early in their planning cycles to provide for protection of known sensitive areas and reduce possible maneuver damage to those areas within the training complex.

b. Activities that require environmental assistance and coordination include the following:

(1) Large exercises (battalion to brigade size) must have, at a minimum, one environmental or ITAM staff person attached to each tactical operation center or battalion support area in the field. This resource is at no cost to the unit and will function solely as the environmental intelligence to the commander. The ITAM coordinator should be contacted as soon as possible in the planning process so that appropriate number of personnel will be available to the commander.

(2) Ground-disturbing activities, such as bulldozer work where soil and vegetation is displaced, disturbance of vegetation in wetlands, construction of new trails, and the opening of new borrow areas, etc., will be coordinated with the ITAM office before taking any action.

(3) Activities that will have an impact on waterways or result in discharge of material into waterways will be coordinated with the ITAM office and the range-facility manager before taking any action. These actions may require a Clean Water Act, Section 404 wetlands permit and could take up to 6 months to obtain.

(4) Units will coordinate with the ITAM office for the use of trees over 4 inches in diameter for construction or demolition purposes.

(a) Fort Richardson: 384-3163

(b) Fort Wainwright: 353-3016

(c) Donnelly Training Area: 873-1614

DEPARTMENT OF THE ARMY
(Unit Address)

(OFFICE SYMBOL) (Date)

MEMORANDUM FOR Range Control

SUBJECT: Late Firing

1. Request (unit, battalion, etc.) be granted permission to fire (weapon, firing system) between 2200 and 0600. Training will be conducted at (range/training facility).

2. The purpose is to accomplish _____.

3. The point of contact is _____.

Signature Block

Figure 2-1. Sample Late Fire Request Memorandum

DEPARTMENT OF THE ARMY
(Unit Address)

(OFFICE SYMBOL) (Date)

MEMORANDUM FOR Public Affairs Office

SUBJECT: Special Activity Notice

1. Request special activity notice for civilian population of late firing of ___(range/training facility)_____. The ____(unit/activity)____will be conducting this exercise during the period of _____date(s)_____.

2. Special activity notice of the firing of:

   a. Artillery—Date: _____ Time: _____.

   b. Mortar—Date: _____ Time: _____.

   c. Demolition to exceed 50 pounds.

3. Date, time, and range area: _____.

4. The point of contact is _____.

Signature Block
Range Facility Manager

Figure 2-2. Sample Special Activity Notice

Chapter 3
Scheduling

3-1. General

a. The Range Scheduling Office located at each Range Control processes requests for the assignment of training areas, ranges, and training facilities.

b. An off-post land use request will be submitted and processed per USARAK Regulation 405-2, Off Post Maneuver Permits (or as otherwise permitted).

c. IAW USARAK Regulation 400-5, requests to use Knik and Spencer glaciers will be forwarded by memorandum through the USAG FWA Installation Range Office to the USAG FWA Commander.

d. Requests for use of Black Rapids training site should be forwarded by memorandum to the Northern Warfare Training Center Commandant.

3-2. Range and Training Facilities Inventory

a. A brief description by post of range name and type is listed in appendix B. Weapons and courses of fire not described therein may fall in the category of live-fire, maneuver courses, or CALFEX for special, live-fire exercises (See chapter 8).

b. Training facilities are also listed in appendix B; occupation, use, and clearance information is in the local, range-control SOP. Training facilities inside training areas are scheduled separately from maneuver lands. Units conducting field exercises in training areas may not enter an unused facility or interfere with another unit training on the facilities.

c. Maneuver land is divided into numbered training areas as described on each post special 1:50,000 map.

3-3. The Scheduling Process

a. Range and training area requests are reviewed and processed by range scheduling at each post. Normal operating hours for range scheduling are 0800 to 1530, Monday through Friday. Trainers must avoid block scheduling in lieu of detailed planning. Shared use of training areas and ranges is the norm.

b. Request for ranges, training areas, training facilities and airspace must be submitted through the Range Facility Management Support System (RFMSS). If RFMSS is not available, contact the scheduling office for further coordination.

(1) The Range Facility Management Support System is a web based range, training area, training facility and airspace scheduling program accessed through the internet which allows requestors to remotely access range scheduling at any time to:

(a) Review the availability of a range, training area, or training facility.

(b) Submit an electronic request for a range, training area, or training facility.

(c) Receive and print reservation contracts.

(2) Routine requests, with no conflicts, are generally processed within 2 workdays of receipt. Submitted requests are not a guarantee that a facility is available. Units will not be guaranteed the facility until the request has been formally approved. Conditional approvals will be granted when units have met

additional requirements prior to the use of the range. Failure to meet these requirements will result in disapproval of the request.

3-4. Scheduling Priorities

Assignment of, training areas, ranges, and training facilities and special use airspace will be completed by Range Control. Assignments will be based upon the following priorities unless overridden by the USAG FWA Commander or USARAK G3:

a. Priority 1. CRTC When testing and conducting test support. (The USAG FWA Commander will be the approval authority for testing or test support preempting a Red Flag Alaska Launch with less than 48 hours notice for any other scheduled activity. In no case will testing preempt any scheduled activity with less than 3 hours prior notification.)

b. Priority 2. Red Flag Alaska

c. Priority 3. Joint Exercises if USARAK

d. Priority 4. Army EDRE/USAF ORI/NORAD Exercises

e. Priority 5. Army ORI/USAF ORE

f. Priority 6. Reserve Component – USA/USAF/NG

g. Priority 7. USARAK Priorities: 1) USA TRADOC Schools, 2) ARTEP, 3) CONUS visiting units, 4) LFX, and 5) Battalion FTX

h. Priority 8. USAF Alaska

i. Priority 9. Other Services

Note: Red Flag Alaska exercises are defined as a major flying exercise, generally running for 10 flying days, but could last as many as 15 flying days, not to exceed a total of 60 days per year. A flying day will normally consist of two, 2-½-hour periods or one, 5-½-hour period per day.

3-5. Scheduling Protocol

a. Use of areas in the range and training complexes will be scheduled a minimum of 28 days before the activity as determined by priorities listed in paragraph 3-4. Within 27 days of a given date, units will be scheduled, regardless of service branch, on a first-come-first-served basis. Any requests for training received less than 21 days in advance will require a letter of lateness/exception to policy from the Battalion Commander or equivalent through the USAG FWA Installation Range Office to the G3 for approval. A Priority 1 activity can exercise its priority up to 3 hours before a scheduled activity. The Cold Region Test Center is routinely scheduled concurrently with other users when test conditions are likely to occur. When testing during these conditions does occur, it is considered —scheduled" with the test taking priority over the other concurrently scheduled users.

b. Airspace Scheduling. Training periods should be developed to occur within the range hours listed in the Flight Information Publication. All requests for extensions will be made by the Army to the controlling agency listed in the Flight Information Publication. United States Air Force Alaska scheduling will be made through 354 Operations Support Squadron for R2202, R2205, and R2211 to the appropriate Range Control. The United States Air Force and other users will schedule with the appropriate Range Control. Requests for extension will be made through the respective Range Control. All aerial Deployable Aerial Reflective Target (DART) missions flown west of the Delta River will require activation of R2202B and

R2202C. No other aircraft or ground training will be conducted in R2202 west of the Delta River during DART missions.

(1) All air-to-ground activities will be scheduled according to the published airspace limitations that shall include the associated underlying land space; special modifications of air/ground space to facilitate maximum training/testing requirements shall be coordinated between the scheduling agencies as required.

(2) All users will request range and training area times and schedule areas per this regulation and current memorandums of agreement.

(3) The assignment of a range or training facility to a unit does not include the exclusive use of roads and trails within the area unless special requirements are justified and sole-use authority has been approved by range scheduling.

(4) The coordination areas within memorandums of agreement will not be used without the coordinated concurrence of the corresponding Army Range Control. Coordination procedures exist in the current operational memorandum of understanding for R2202, R2205, R2211, and coordination areas within the memorandums of agreement.

c. The USARAK G3 or designated representative is the resolution authority for scheduling conflicts that cannot be settled by applying the scheduling priorities between Department of Defense elements using Army-managed lands and related airspace. Address unresolved scheduling conflicts through the USAG FWA Installation Range Office to the USARAK G3.

3-6. Monthly Range Scheduling/Range Facility Management Support System Conference

a. A monthly, training resource, scheduling conference is conducted by Range Control at FRA/FWA/DTA. The date, time, place, priorities, and other particulars for each conference will be provided at the preceding month's meeting. DTA conference will be held in conjunction with FWA.

b. The purpose of the monthly range and training area coordination meeting is to enhance unit training by detecting and eliminating scheduling conflicts and ensuring all training needs are met. Attendees include, at a minimum, but are not limited to:

(1) Brigade training officer or designated representative.

(2) Battalion training officer or designated representative.

(3) Separate company training NCOs.

(4) Alaska Army/Air National Guard representatives.

(5) United States Army representatives.

(6) Post range representatives.

(7) United States Air Force representatives.

(8) DPW Environmental Division, Natural Resources Branch representative.

(9) ITAM program representatives.

c. Range complex users must attend the conference prepared to coordinate for training support resources. Unit representatives will have the authority change requests to match available resources.

Results of the conference and attendance will be a briefing item at QTBs. Units that are not represented at the conference may only schedule for facilities on a first come first served basis, at a minimum of seven working days after the conclusion of the conference to provide the scheduling section at Range Control sufficient time to process the request received at the Range Conference.

d. Each representative will present his/her unit's projected range and training area requirements for the next 90-day period. Each unit's requirements will be recorded on a calendar so that conflicts may be detected and resolved. Internal unit training conflicts will be resolved by the unit training officer at the highest level, i.e. Brigade/Battalion.

e. Unit training requirement presentations will address the following:

(1) Range(s)/training area(s) are required.

(2) Dates that range(s)/training area(s) are required.

(3) Brief overview of training objectives.

(4) Participating units.

f. Special coordination measures that should be considered (e.g., road closures, use of riot control agent —CS", and airspace restrictions).

g. The calendar schedules used at the Range conference are planning documents and do not replace the formal request for ranges and training areas.

h. Assignment of training areas, ranges, and training facilities will be conducted by Range Control. Assignments will be based upon the scheduling priorities.

i. A portion of the conference will be devoted to Range Facility Management Support System information and updates.

3-7. Multiple Use of Training Areas

a. All training areas will accommodate more than one unit and can be scheduled for multiple units unless sole use is approved. Joint use of training areas is encouraged and must be coordinated between the using organizations. When coordination is complete, the remarks section of the RFMSS reservation request will reflect the date, the time, and the person with whom the coordination was made. Informal agreements between units will not be honored if the primary unit cancels use of the training facilities.

b. Units without priority may request co-use of facilities, training areas and ranges through the scheduled unit. However, should the scheduled unit cancel a reservation, the ~~"p~~iggy backing" unit must reserve through RFMSS with range control. Co-use contracts are not recognized as reservations for a piggy backing unit.

3-8. Cancellations

A memorandum of cancellation (see example at fig 3-1) will be submitted by the requesting official as soon as a unit decides to cancel. Cancellations and rescheduling are done through range scheduling only; units may not conduct independent internal reallocation of ranges, training areas, or special-use airspace. Cancellations, except for weather, made within 21 days of use require the approval of a Battalion level Commander.

3-9 . Usage Confirmation

The unit OIC or RSO must confirm with Range Control 1 to 3 days prior to training. Units using DTA are required to contact Range Control by telephone of their intent to use the scheduled range/training area or training facility which was approved for their use. Units that fail to confirm usage for the range in the designated time frame may be denied use of the range and the OIC and RSO are subject to decertification.

DEPARTMENT OF THE ARMY
(Unit Address)

(OFFICE SYMBOL) (Date)

MEMORANDUM FOR Range Control Scheduler

SUBJECT: Training Resource Cancellation

1. Request cancellation of the following scheduled training resource:

   a. Facility/resource: _____.

   b. Originally dates scheduled for: _____.

   c. Dates to be canceled: _____

   d. Request Notification Identification Number: _____

2. Reason for cancellation: _____

Requesting Official Signature Block

Figure 3-1. Sample of Memorandum of Cancellation

3-10. Recreational Activities

a. Portions of the range/training complex may be used for recreational purposes by military personnel/nonmilitary permit holders and individuals who are registered for USARTRAK. Every effort will be made to ensure multiple use of military lands; however, safety is the main consideration. Military training has priority.

b. Recreational swimming in any stream, pond, or lake is prohibited year-round.

c. Impact areas are off limits for all recreational activities.

d. USARTRAK Phone numbers:

(1) Fort Wainwright: 353-3181

(2) Fort Richardson: 384-3181

(3) Donnelly Training Area: 873-3181

3-11. Hunting and Fishing

a. Hunting and fishing activities are administered by the DPW Environmental Resources Division and the Alaska Department of Fish and Game. These programs are described and regulated through Alaska State hunting and fishing regulations and USARAK Regulation 190-13. Training areas will be blocked as necessary to ensure proper game management during hunting and trapping seasons per instruction from the DPW Natural Resource Branch managers and Alaska Department of Fish and Game.

b. Seasons and license requirements are published by the Alaska Department of Fish and Game. USARTRAK is the single point of contact for daily information on available hunting, fishing, and recreational areas on post and for sportsman check in and check out.

3-12. Privately Owned Vehicle Access

Privately owned vehicle access to recreational areas and facilities by the most direct route is authorized, but no detours into training areas or onto ranges are permitted.

3-13. Firewood

a. Contact the DPW Environmental Resources Division for information on personal-use, forest-product permits.

b. Once issued, the firewood permit must be in the possession of the cutter or the group leader during firewood collection.

c. Firewood may be collected only in the permit-designated areas. A permit may be obtained through DPW.

d. Permit holders must check in and check out with USARTRAK.

3-14. Recreational Conflicts

Trainers encountering recreational users during scheduled training will first ensure their military activities are in the authorized location. They will then inform the non-training party of the military activities ongoing and the associated hazards. At the same time, a report will be made to range operations of the conflict. Permit holders are usually neighbors and understand the need to avoid training sites. If the problem cannot be resolved, range operations will dispatch an inspector to the area to resolve the conflict and when necessary request assistance from the military police desk sergeant.

3-15. Implemented Policies that Affect Training

Appendix D provides historical information of conditions and situations affecting training that were identified by past commanders as training distracters. Appendix D addresses the situations and/or

conditions with the applied solutions and thereby informs commanders/trainers of some unique requirements that must be followed to conduct training or to preserve training assets in Alaska.

Chapter 4
Ammunition

4-1. General

a. AR 385-63, DA PAM 385-63, this regulation, and local directives are used by range inspectors as guides in checking unit control of ammunition on ranges and firing points. Field ammunition supply points will be scheduled with Range Control and established per AR 190-11 and USARAK Regulation 190-1. The OIC must ensure that communication is established and maintained with Range Control.

b. Smoking on ranges is prohibited except in designated areas

c. Ammunition will remain in sealed containers until the shortest time possible before firing. Unpacked ammunition must be protected from the elements.

d. Exercises using live ammunition and blanks will not normally be conducted concurrently. If it is necessary to do so, the live-fire portion will be conducted as the final phase of the exercise. The range OIC is responsible for taking positive control measures to ensure there is no mixing of blank and live ammunition.

e. Ammunition losses must be reported immediately to Range Control, the unit chain of command, and the military police desk.

f. Ammunition .50 caliber and below found on ranges or training areas will be accepted by the ammunition supply point under the no-questions-asked policy. Ammunition above .50 caliber must not be touched. These items will be marked, guarded, and reported to range operations immediately. Range operations will notify the 716th Explosive Ordnance Detachment for ordnance disposal.

g. Military ammunition and weapons may not be transported in privately owned vehicles.

h. The use of nonstandard items or explosives (including commercial ammunition and ammunition having explosive components) is prohibited in training except for those specifically approved by the CG, Army Materiel Command.

i. Ammunition, including blanks, will never be abandoned, destroyed, concealed, or fired indiscriminately to avoid ammunition supply point turn in.

j. All residue will be removed from ranges or training sites.

4.2. Seasonal, Fire Hazard, Ammunition Restrictions

a. General. Seasonal fire hazards caused by dry weather may restrict use of tracer and other potentially incendiary ammunition. Units using ranges, training facilities, and training areas are responsible for knowing the daily fire index and adhering to the restrictions in this section. This information is available from the applicable Range Control office. Regardless of the season, trainers must ensure that flame-producing pyrotechnics are not used on or near fuels that may start a forest or range fire. Throwing away cigarettes, matches, or other burning materials is prohibited.

b. Fire Weather index (FWI). The FWI is based on the Fine Fuel Moisture Code (FFMC). The fire chief has the responsibility for the computation of the Daily Fire Index. The Installation Range Office will disseminate this information daily. The fire index for each post is calculated and distributed through the

Command Operations Center daily prior to 0930. This index is valid for execution for the next 24 hours. If the 0930 index increases the FWI which would restrict training, the unit can operate under the previous FWI until 1200 that day. At that point they will either cease operations or have a waiver in place to continue operations. The Bureau of Land Management provides the fire chief with the information used for computation of the fire index. This information is provided by a series of remote sensors located in each of the respective range areas and provides timely, accurate information regarding the index conditions. Range Controls are responsible for obtaining the daily index and disseminating that information to units using the range. The specific methodology for computation of the fire index and other technical aspects of this program will be coordinated annually in a memorandum of agreement between Installation Range Office (RPTM-R), the Bureau of Land Management, the fire chief. The four fire index categories are low, moderate, high, and extreme.

c. Restrictions. Questions regarding these restrictions, including restrictions on any specific type of ammunition should be directed to the specific Range Control office responsible for the range. These restrictions apply to all authorized users of USAG FWA ranges. The USAG FWA Commander in coordination with the USARAK G3 may modify these restrictions as environmental conditions and risk analysis may dictate. All references to Air Force restrictions apply to the foreign equivalents of these weapon systems.

(1) Low. No restrictions.

(2) Moderate.

(a) Ball and Blank Ammunition can be used without restrictions.

(b) Tracer and M918 TP (MK19) ammunition is authorized on the Small Arms Complexes only.

(c) Pyrotechnics prohibited unless they are burned in a container that completely contains all burning elements of the device. An example of this would be using a cut off drum to contain a smoke grenade. Any device used will be observed until the device is completely burned, and no external fires have been started.

(d) Demolitions are authorized in approved designated ranges only.

(e) Artillery and mortars can be used without restriction in Stuart Creek, Washington and Delta Creek Impact Area.

(f) Air Deployed Ordnance.

1 Inert and cold spot Bomb Dummy Unit-33s (BDU) can be used without restrictions.

2 Remaining authorized ordnance restricted to Stuart Creek and Delta Creek Impact Areas.

3 Flares will be deployed 1500 feet above ground level.

(3) High.

(a) Ball and Blank Ammunition can be used without restrictions.

(b) Tracer and M918 TP (MK19) ammunition is prohibited for use in all areas with exception of the Small Arms Complexes where these munitions may be used after a successful prescribed burn has been executed and with the approval of the local Range Manager.

(c) Pyrotechnics prohibited unless they are burned in a container that completely contains all burning elements of the device. An example of this would be using a cut off drum to contain a smoke

grenade. Any device used will be observed until the device is completely burned, and no external fires have been started.

(d) Demolitions are authorized in approved designated ranges only.

(e) Artillery and mortars are restricted to HE only.

(f) Ground units will carry fire fighting equipment IAW paragraph 4-2e.

(g) Air Deployed Ordnance.

1 Inert and cold spot BDU-33s can be used without restrictions.

2 Remaining authorized ordnance restricted to Stuart Creek, Washington and Delta Creek Impact Areas.

3 Flares will be deployed 5000 feet above ground level.

(4) Extreme.

(a) Ball and Blank Ammunition can be used without restrictions.

(b) Tracer and M918 TP (MK19) ammunition is prohibited for use in all areas with exception of the Small Arms Complexes where these munitions may be used with prior approval from the local Range Manager in coordination with the Fire Chief.

(c) Pyrotechnics are prohibited.

(d) Demolitions are prohibited.

(e) Artillery and mortars are prohibited.

(f) Ground units will carry fire fighting equipment IAW paragraph 4-2e.

(g) Air Deployed Ordnance. Artillery and mortars are prohibited.

1 Inert and cold spot BDU-33s can be used without restrictions.

2 Remaining authorized ordnance is prohibited.

3 Flares will be deployed 5000 feet above ground level.

d. Reporting. Anyone observing a fire in any range area will report it immediately to Range Control by one of the following methods:

(1) Range Control frequency (FM 38.30).

(2) Post fire department—dial 911 at all posts.

(3) Range Control has responsibility for ensuring the fire department and Bureau of Land Management are notified of the fire. Normally, the fire and emergency services will be notified first, then they will, in turn, notify the Bureau of Land Management. However, some situations may warrant simultaneous notification.

e. Preparedness.

(1) Training. The fire chief, in coordination with Bureau of Land Management, is the proponent for providing introductory training on safety, proper fire-fighting techniques, and fire behavior. This training is only familiarization and does not fully qualify Soldiers according to Bureau of Land Management and national fire safety standards (normally a 40-hour course). Units are responsible for scheduling and maintaining current proficiency on this training.

(2) Equipment. During critical fire periods (high and extreme), all units using ranges or training areas will carry fire-fighting materials. Proper fire-fighting tools include, but are not limited to, Pulaskis, beaters, portable water extinguishers, and a water supply such as full water trailers or drums. Units will be prepared to assist in suppressing small range fires (up to 100 square feet) that might occur in the training areas.

(3) Exceptions. The requirements for training and having equipment on hand is intended for ground based units that are at the greatest risk of being involved in a fire situation.

f. Fire-fighting actions. Range fires may occur at any time of the year on any range. Fires are most likely to occur on ranges where tracers or HE ammunition are used.

(1) On ranges where dud-producing ammunition are used, fires will be reported to range operations (see paragraph d above). Training activities will be stopped.

(2) On all other ranges, the range OIC will report the fire to range operations. For small fires (see paragraph e(2) above), with Range Control's authorization, dispatch troops to fight the fire.

(3) The range OIC will exercise judgment to ensure the fire does not endanger unit personnel. The range OIC will ensure control of weapons, ammunition, and government property is not lost and evacuation of these items is possible if the fire becomes a hazard.

(4) Once a representative from the fire department or Bureau of Land Management arrives on the scene, they assume command of the situation. The unit will take direction from the on-site fire commander.

g. Waivers. Waivers to the FWI restrictions will be carefully evaluated by the USAG FWA Garrison Commander in coordination with the USARAK G3 before approval is granted. Requests for FWI waiver will be processed through Range Control. A thorough risk analysis will be completed as part of the decision to approve any waiver. This analysis will include consideration of the loss of training time and cost associated with fighting a wild-land fire. Training time lost due to wild-land fire can have a significant impact on readiness. Training activities that impact the overall readiness of the command will be considered for waiver. Waivers to the above restrictions may be requested per the following:

(1) Waiver authority. Authority for waivers of fire-index restrictions rests with the USAG FWA Garrison Commander in coordination with the USARAK G3 and has been delegated to the Installation Range Officer when FWI conditions are High or less. Waiver requests under Extreme FWI conditions will be forwarded directly to the USAG FWA Commander and the USARAK G3 for action. In all cases the local Range Manager will provide a recommendation to the Installation Range Officer for consideration in approving any waivers.

(2) Waiver requests. A waiver request can be submitted any time during the coordination process for a range. When the OIC/RSO signs for the range they will be reminded it is their responsibility to submit the request for waiver.

(a) Request for waiver must be submitted by memorandum. The request must state the specific area of operations, restrictions to be waived, and the required risk assessment for the operation. An example of the format for a waiver is at figure 4-1.

(b) Requests for waiver will be initiated by the unit, signed by a battalion level commander, and forwarded to the respective range manager for staff action. The range manager will review the request and forward it to the on-duty fire chief at the respective post for coordination with the Alaska Fire Service (AFS) and the Bureau of Land Management (BLM). The on-duty fire chief will return the coordinated recommendation to the range manager who forwards the recommendation to the Installation Range Office. The Installation Range Officer reviews the requests and either approves or disapproves the unit's request. The waiver is then returned to the respective range manager for distribution to the unit and the on-duty fire chief. The on-duty fire chief is responsible for notifying AFS and BLM of the decision. In situations where the timeliness of the decision is critical (i.e., troops on the ground) VOCO approval will be given to the local range manager with hardcopy to be forwarded immediately. Waivers are valid for 24 hours from approval. Appeals regarding waivers denied by the Installation Range Officer may be addressed through the USAG FWA DPTMS to the Garrison Commander. Blanket waivers for the duration of training events will not be granted because the FWI changes daily. Extensions of waivers must be re-staffed daily for consideration.

(c) Request for waivers will not be processed any earlier than 1 working day before the scheduled event. Due to rapid changes in the fire index, this will ensure the action is based on the most current conditions and most likely projected conditions.

(3) Waiver responsibilities.

(a) Range Control has staff responsibility for timely processing of waivers. Requests for waivers will be processed within 1 workday of submission.

(b) Range Control will actively monitor all units operating under waived conditions.

(c) Range Control will notify the fire chief and BLM (as appropriate) of units that are operating under waived conditions.

(d) Units will ensure they have the proper fire-fighting equipment, (paragraph 4-2e) on site throughout training during the waiver. Failure to have the equipment on hand will cause immediate revocation of the waiver.

4-3. Small Arms and Grenades

a. Live-fire maneuver courses requiring small arms fire over the heads of troops must use ammunition cleared for overhead fire. It is identified by the national stock number in appropriate supply catalogs or Department of Defense, consolidated, ammunition catalogs.

b. To meet record-keeping requirements of AR 385-63, range OICs conducting training with dud-producing munitions must report the locations of all duds to range operations at the end of each day, using USARAK Form 8-E (Range Firing Record). Negative reports are required.

c. Every precaution will be taken when using grenades to prevent injury from flying fragments. Compliance with the requirements in AR 385-63, DA PAM 385-63 and FM 3-23.30 are mandatory. Requirements for personal protective clothing and equipment will be strictly enforced (hearing protection, flak jackets, helmets, etc.). HE grenades that fail to function (dud) will not be approached except by Explosive Ordnance Disposal personnel. A dud will result in an immediate cease-fire and notification to Range Control. Resumption of fire will not occur until Explosive Ordnance Disposal personnel have destroyed the dud and/or Range Control has given permission to resume fire. Unauthorized personnel

will not approach, move, touch, or handle dud grenades. Individuals being transported by vehicle or aircraft will not carry fragmentation, offensive, or white-phosphorus grenades attached to web equipment.

d. During summer, units using HE hand grenades on live-fire, maneuver courses must ensure that the target area is free of holes, ditches, or high grass that may conceal a dud. For winter operation, the target area will be cleared of snow down to the soil surface. Such hand-grenade use must always be coordinated with range operations as a special firing course per chapter 8.

4-4. Artillery and Mortars

Range OICs and RSOs must be familiar with appropriate weapon and ammunition publications governing handling and firing of indirect-fire ordnance and have these publications with them during training.

a. The following procedures apply when any part of Area D, as defined in DA PAM 385-63, is occupied. United States artillery ammunition must be cleared for overhead fire. Foreign forces commanders must certify non-United States artillery ammunition as cleared for overhead fire.

b. Mortars will never be fired over any personnel.

c. Propellant-charge increments must be kept dry. If the range OIC or RSO has any doubt as to whether moisture has affected the propellants, the charge or round must not be fired. Increments may be cut only to support the mission being fired. Excess increments must be kept in a metal or wooden, covered container at least 25 meters to the rear of each piece, and must be burned daily or before leaving each firing position, whichever occurs first. **Excess propellant** should be burned in burn pans per chapter 7; however, commanders have the authority to conduct tactical burns as part of training provided appropriate FWI conditions exist.

(1) White-phosphorous rounds will only be fired in upland areas approved by Range Control.

(2) Improved Conventional Munitions will not be fired.

4-5. Pyrotechnics

a. Use of pyrotechnics may be restricted during fire hazard season, per paragraph 4-2 above.

b. Dud or malfunctioning pyrotechnics must not be disturbed. The item will be marked and reported to range operations for explosive-ordnance-disposal notification.

c. Unit commanders must be aware of the quantities of pyrotechnics issued to ensure these dangerous items do not leave post. Pyrotechnic devices emplaced but not used must be removed from training areas and returned to the ammunition supply point. Atomic simulators will be used per TM 9-1370-207-10. Commercial fireworks will not be used in training.

d. Aerial flares will not be set off within 1,000 meters of local airfields when any aircraft is overhead.

e. Small-arms, blank ammunition will not be fired at personnel at distances less than five meters. The use of blank ammunition in hand-to-hand combat training is prohibited.

4-6. Chemical Training Munitions

a. Lethal or incapacitating chemical agents will not be used in training. Persistent chemical agents are prohibited; use will not be requested.

b. A special activity overlay (1:50,000) will be submitted to Range Control for approval when Riot Control Agent (RCA) is used in training. A chemical corps officer/NCO NBC Qualified OIC and RSO Only CS in capsule form may be used in a CS chamber. See appendix E for a sample overlay.

c. Do not use RCA:

(1) Within 500 meters of an improved road.

(2) Within 500 meters of any railroad.

(3) Within 200 meters of open water.

(4) Within 1,200 meters of the post boundaries, public highways, or recreation areas (Otter Lake, golf course, etc.).

(5) When civilians are seen in the area.

(6) During field, mess operations (except meals, ready-to-eat).

(7) In quantities greater than three CS grenades in 1 hour at the same location. If more than three CS grenades are to be used in 1 hour, the sites must be at least 1,000 meters apart.

(8) Within 10 meters of personnel, vehicles, and tents.

(9) When the fire weather index is moderate or higher.

(10) When the vent factor equals less than 600 square feet per second.

d. Before deploying CS:

(1) Notify Range Control 10 minutes before deployment.

(2) Ensure that the vent factor equals or exceeds 600 square feet per second.

(3) Use a smoke grenade to determine the drift and dispersion area.

(4) Ensure the site has been reviewed and approved by Range Control. A copy of the approved overlay must be on site.

4-7. Smoke Operations

a. Smoke operations will be conducted per FM 3-50. Computations will consider temperature gradients and the direction and speed of the wind. Test grenades will be used before smoke pots are employed. All smoke must completely dissipate before leaving the reservation boundary. Under marginal conditions, an NBC-qualified officer should evaluate all factors and recommend the type and uses of smoke. The range OIC has the responsibility to decrease the amount of smoke to ensure that the smoke dissipates before leaving the reservation. A special-activity overlay (1:50,000) will be submitted to Range Control no less than 12 working days ahead for approval of all smoke operations. Failure to meet this timeline will result in a disapproval of smoke-generation training.

(1) Large smoke areas. The use of smoke generators, or more than three smoke pots or five smoke grenades in 1 hour at the same location is a large smoke area operation. Submit a special activity overlay (1:50,000) when large smoke area operations are conducted. The precautions in paragraph d below apply to all smoke operations including HC, white phosphorous, plasticized white phosphorous, colored smoke and diesel smoke.

(2) Small smoke areas. The use of smoke pots or smoke grenades not exceeding three smoke pots or five smoke grenades in 1 hour at the same location is a small smoke area operation.

b. The Alaska Department of Environmental Conservation issues a permit for units in USARAK to conduct smoke-generation training at FRA, FWA, and DTA. The permit expires annually and must be resubmitted for approval. The permit authorizes USARAK units to use up to 10,600 gallons of fog oil and 5,000 gallons of diesel fuel-arctic for fogging operations on military lands.

c. All request(s) for smoke generation must be reviewed and commented on by the USARAK Chemical Officer before submission to Range Control.

(1) Units are required to record fog oil and diesel fuel-arctic rates used each day that smoke is produced, its rate of movement of the fogger, global-positioning-system data for locations of foggers, temperature, and wind speed and direction. Units are required to provide this information in memorandum format to the respective range manager where the training takes place.

(2) Smoke generation is not authorized within 300 meters of a water body (i.e. lakes, rivers, or streams).

(3) Smoke generation is not authorized within 1,000 meters of the post border, urban area, and cantonment area.

(4) Smoke generation is not authorized within 500 meters of major roads (i.e., Richardson and Glenn highways).

(5) Smoke generation is not authorized within 100 meters of the Alaska Railroad tracks.

(6) Spill-prevention measures must be taken to prevent spills while using and refueling smoke generators. Spill-response equipment to contain and cleanup any spills that occur must be available in the field. All spills are to be reported to the respective Range Control manager immediately.

(7) Use of the smoke generators must be annotated on all range requests that include smoke generation. Probable smoke-generation locations will be identified to at least training area level, i.e., smoke generation will occur in YTA-4. Range Managers are required to capture utilization data in the Range Facility Management Support System.

(8) A scientific-monitoring team (Cold Regions Research Engineering Laboratory) will be conducting monitoring activities concurrent with training activities. These monitoring activities will be coordinated with Range Control.

(9) Units must give no less than 12 working days prior notice when requesting to conduct smoke operations. Failure to do so will result in a disapproval of smoke-generation training.

(10) Units must consult the fog-oil, smoke maps when requesting to train. These maps will show the environmental/geographical restrictions and are available at Range Control.

d. Caution. To prevent burns when Hexachlorethane- (HC-) smoke pots are fired manually, the firer must keep his/her face averted and, after igniting the smoke pot, move quickly to a distance of 30 meters. HC-smoke pots will not be fired inside buildings, tents, or other enclosed areas because of fire and health hazards from the fumes. The addition of water to the HC-smoke mix may cause it to burn erratically, explode, or produce spontaneous combustion; therefore, HC-smoke pots must be kept dry before use. Prolonged exposure to HC smoke may cause lung and eye irritation. Personnel exposed to any concentration of HC smoke will wear field, protective masks and reduce skin exposure by rolling down shirtsleeves. Laundering of clothing and showering following smoke training will reduce the risk of skin irritation.

e. Mortar and field artillery smoke projectiles will be fired per chapter 7 of this regulation, DA PAM 385-63, current Range Control safety data, and appropriate weapon and ammunition publications.

f. All personnel must carry a protective mask during exercises involving smoke.

(1) Personnel will mask before exposure to any concentration of smoke produced by M8, white-smoke grenades, smoke pots, or metallic-powder obscurants.

(2) Personnel will mask when passing through or operating in dense smoke causing visibility to be less than 50 meters, such as smoke blankets and curtains.

(3) Personnel will mask when operating in or passing through a smoke haze with visibility greater than 50 meters and duration of exposure exceeding 4 hours.

(4) Personnel will mask anytime exposure to smoke produces breathing difficulty, eye irritation, or discomfort. Such effects in one individual will serve as a signal for all similarly exposed personnel to mask.

(5) Personnel will mask when using smoke during urban training featuring operations in enclosed spaces. WARNING: THE PROTECTIVE MASK IS NOT EFFECTIVE IN OXYGEN DEFICIENT ATMOS-PHERES. CARE MUST BE TAKEN NOT TO ENTER CONFINED SPACES WHERE OXYGEN MAY HAVE BEEN DISPLACED. SMOKE GRENADES MAY NOT BE USED OR THROWN INSIDE BUILDINGS OR CONFINED SPACES.

(6) Smoke-generator personnel will mask when it is impossible to stay upwind of the smoke.

4-8. Misfires, Hang Fires, and Malfunctions

a. A misfire or hang fire occurs when the propellant chain does not function and the round does not leave the tube. These are handled by the unit per weapons publications. Explosive-ordnance-disposal assistance will be requested through Range Control for misfires or hang fires only if the unit cannot resolve the problem.

b. Malfunctions include early discharge, premature detonation, or short rounds. The procedures are:

(1) Check fire the range. Equipment, ammunition, residue, and debris will not be disturbed except to treat casualties, if necessary.

(2) Inform range operations of the malfunction. MEDEVAC will be processed immediately, if needed. Otherwise an incident description will be provided. Range Control will inform the command operations center/field officer of the day, the ammunition supply point, the 716th Explosive Ordnance Detachment, the Installation Safety Office, and others as required.

(3) The ammunition supply point will notify the Directorate of Logistics, quality assurance specialist for ammunition surveillance, who will investigate as needed and clear the unit to move or fire the weapon or other ammunition.

(4) A member of the investigating team will notify Range Control when the unit can resume firing.

DEPARTMENT OF THE ARMY
(Unit Address)

(OFFICE SYMBOL) (Date)

MEMORANDUM THRU Installation Range Officer

FOR Commander, U.S. Army Garrison Fort Wainwright

SUBJECT: Request for Fire Weather Index (FWI) Waiver

1. The FWI today at FWA, FRA, or DTA is LOW/MODERATE/HIGH/EXTREME.
2. The estimated FWI for our training event is LOW/MODERATE/HIGH/EXTREME.
3. Training Event Parameters.
   a. Date:
   b. Location:
   c. Types of Ammunition, pyrotechnics, or simulators required for training: _____
   d. Fire fighting equipment on hand (IAW USAG FWA Regulation 350-1, para 4-2 e. (2)).
   e. Impact upon training and unit readiness if waiver is not granted: _____
4. The point of contact is _____

Commander's Signature Block

Figure 4-1. Sample FWI Waiver

Chapter 5
Impact Areas

5-1. General

The impact area is the ground and associated airspace within the training complex used to contain fired or launched ammunition and explosives and the resulting fragments, debris, and components from various weapon systems. A weapon-system, impact area is the area within the surface danger zone used to contain fired or launched ammunition and explosives and the resulting fragments, debris, and components. Indirect-fire, weapon-system, impact areas include probable error for range and deflection. Direct-fire, weapon-system, impact areas encompass the total surface danger zone from the firing point or position downrange to distance X. During all live firing, the impact area will be kept under constant observation, visual, or radar.

a. A temporary impact area is an impact area within the training complex used for a limited period of time to contain fired or launched ammunition and explosives and the resulting fragments, debris, and components. Temporary impact areas are normally used for non-dud-producing ammunition or explosives and must be able to be cleared and returned to other training support following firing termination. Requests to create temporary impact areas for small-arms firing must be reviewed and approved, in writing, by the responsible Range Manager. Requests for temporary impact areas for dud producing weapons must be reviewed and approved by the Installation Range Officer.

b. A dedicated impact area is an impact area that is permanently designated within the training complex and used indefinitely to contain fired or launched ammunition and explosives and the resulting fragments, debris, and components. Dedicated impact areas are normally used for less sensitive ammunition and explosives than those that are employed in a high hazard impact area. However, any impact area containing fuzed HE or white-phosphorous duds represents a high risk to personnel and access must be limited and strictly controlled.

c. A high-hazard impact area is an impact area that is permanently designated within the training complex and used to contain sensitive, HE ammunition and explosives and the resulting fragments, debris, and components. High-hazard impact areas are normally established as part of a dedicated impact area where access is limited and strictly controlled due to the extreme hazard of dud ordnance such as Improved Conventional Munitions (ICM), high explosive antitank weapons (HEATs), 40-millimeter (mm), and other highly sensitive ammunition and explosives.

d. Impact-area requirements vary with the training requirement and the surface danger zones. New, contaminated, impact areas will **not** be created unless an exception to policy is approved per AR 200-1, DA PAM 385-63, AR 210-20, AR 350-19, and the Bureau of Land Management agreements for YTA and DTA. The creation of new and/or the expansion of existing HE-dud-contaminated, impact areas must be approved by the Assistant Secretary of the Army for Installations, Logistics, and Environment. Existing dedicated, impact areas will be used by the maximum extent feasible when firing dud-producing munitions.

5-2. Access to Impact Areas

Access to impact areas will be restricted to mission-essential activities and coordinated with Range Control before entry. Appropriate clearing of unexploded ordnance will be done before entry except under emergency situations (example, aircraft mishaps or life safety). Entry into Army impact areas by other than Army-authorized personnel must be coordinated in advance with the Installation Range Officer (IRO). The requesting agency assumes all responsibility and liability of personnel and costs associated with entry into the impact zone.

a. Personnel who must enter an impact area will be thoroughly briefed on the hazards of unexploded ordnance by Range Control and/or explosive ordnance disposal.

b. Range Control will strictly control access into impact areas. Those portions of impact areas authorized for training or other authorized purposes (e.g., environmental) will be surface cleared of dud ammunition before access is permitted. Cleared areas that become contaminated during live-fire exercises/training will be cleared when the exercise/training is completed.

c. Personnel access to high hazard impact areas is limited to qualified EOD personnel, Range Control, Range Maintenance and safety personnel designated by the IRO. The Garrison Commander may approve entry into the impact areas by non-DOD personnel on a case by case basis.

d. Digging entrenchments, foxholes, slit trenches, constructing roads, or conducting other activities that disturb earth within an impact area is not permitted unless authorized by the IRO. Open fires will not be permitted.

e. Impact areas are marked with warning signs and/or barriers. Passing any of these hazard warnings without approval is prohibited. Unauthorized entry (trespassing) and handling or removing unexploded ordnance/munitions is punishable offenses.

f. Access to ranges and other areas containing or suspected of containing Improved conventional munitions (ICMs) or submunitions are prohibited unless permitted under a DA waiver. In addition, range operations, in coordination with Installation Safety and EOD representatives, will determine and monitor implementation of safety controls required for personnel access.

5-3. Duds

a. All dud ordnance is extremely hazardous and **WILL NOT BE DISTURBED**. Any dud or ammunition item higher than .50 caliber found along the boundary of or outside an impact area will be reported to range operations immediately for evaluation by Army Explosive Ordnance Detachment. Ammunition .50 caliber and lower found on post will be turned into the ammunition supply point. Hand-grenade duds will be reported to range operations immediately for destruction by the 716th Explosive Ordnance Detachment. Duds occurring on the 40mm/Antitank 4 (AT4) Range at FRA, and 40mm/AT4 ranges at FWA, and all indirect firing points will be reported by number and location at the end of each firing day at all posts. All duds will be reported to Range Control at the end of each training day using the authorized dud reporting form USARAK Form 8-E.

b. The range OIC or RSO of a range that is using HE ammunitions will submit a verbal and written dud report after each day's firing of dud-producing munitions to Range Control. Negative reports are required.

(1) A verbal report will be rendered during the passing of range closure information.

(2) A USARAK Form 8-E will be prepared in triplicate for submission to Range Control.

(3) Both reports will include the following:

(a) Name or number of the range or firing point.

(b) Number and type of dud munitions.

(c) Exact location (grid coordinates) within 10 meters of each dud.

(d) Name, rank, and unit of the range OIC.

c. If an EOD team can be dispatched when the verbal report is given to Range Control, the range OIC/RSO will be instructed to remain on the range, monitor the Range Control frequency (FM 38.30), and follow the instructions provided by EOD team members.

d. The completed USARAK Form 8-E will be given to the senior EOD team member, who will note and sign that the duds were destroyed and the range is in a clear status. The USARAK Form 8-E will be returned to Range Control.

e. If an explosive ordnance disposal team is not available, the range OIC/RSO will be instructed to close the range and return all materials, including the completed USARAK Form 8-E, to Range Control. This does not apply to dud hand grenades. The using unit must provide a guard detail to ensure personnel do not enter the danger area until EOD personnel have cleared and released the area/range.

f. Range Control will contact the EOD and schedule a time period for range clearance. The 716th Explosive Ordnance Detachment will follow the safety requirements for opening and closing ranges.

g. If the number of duds encountered during firing is equal to or greater than the reportable dud rates as prescribed in AR 75-1, appendix B, the unit will submit a report to the Directorate of Logistics, quality assurance specialist for ammunition surveillance.

h. Commanders and range OICs will ensure all personnel are aware of their responsibility in the care, marking, and reporting of duds. UNDER NO CIRCUMSTANCES WILL A DUD BE HANDLED, MOVED, OR TRANSPORTED BY OTHER THAN AUTHORIZED EOD PERSONNEL.

5-4. Impact Requirements

a. All firing on standard ranges and firing points must be conducted to cause bullets or projectiles to impact in the designated impact area. Impacts outside an authorized area will require a cease fire and must be reported to Range Control immediately.

b. Range OICs of special firing courses involving direct, indirect, aerial weapons, or laser devices must know and identify to their personnel the azimuth or deflection and elevation limits established by approved overlays that will keep weapon, ammunition, or device effects within the designated impact area.

5-5. Visual Clearance Barriers and Guards

a. All established ranges and training areas require visual clearance before firing and positioning barriers and/or road guards. Clearance will be by airborne reconnaissance or by ground reconnaissance.

b. Some established ranges and special firing courses have barrier and guard requirements to keep nonparticipating personnel out of hazard zones. Placement of these barriers and guards are the responsibility of the using unit and will be checked by range inspectors.

c. Barriers may be permanently positioned gates, posted signs, or temporary barricades. Temporary barricades receipted from Range Control will be returned upon training completion.

d. Hazard-area guards placed by a unit must have radio or telephone communication with the range or OIC/RSO. Roving patrols must have radio contact with the OIC/RSO.

5-6. Impact Area Trespass

Anyone observing personnel or vehicles in an impact area will inform range operations (FM 38.30) immediately. Range Control will investigate and request military police assistance at the site.

5-7. Explosive Ordnance Disposal Assistance

Units planning target placement or maneuver in a dudded impact area will be informed during scheduling if an Explosive Ordnance Detachment-assisted surface sweep and dud clearance is required. If so, the following must be included in unit plans:

a. Due to priority commitments, explosive-ordnance-disposal support may not be available. Direct coordination between units and the Explosive Ordnance Detachment is encouraged as early as possible. The 716th Explosive Ordnance Detachment requires range-control verification that terrain is scheduled for the event. Requests are by memorandum through IRO Safety Officer, to USARAK G3 for tasking to the MACOM for the EOD, and must be submitted at least 60 days before the event.

b. The unit must provide a range-sweep detail, composed of and equipped as follows:

(1) Range OIC (E7 and above), RSO (E6 and above), safety NCOs, staking party (size determined by the Explosive Ordnance Detachment, based on area to be cleared) and one MOS 68W qualified medic.

(2) Dedicated MEDEVAC vehicle with a litter and driver, vehicles for explosives transportation, marking materials, and scrap (determined in coordination with the Explosive Ordnance Detachment), and reliable radio communications with range operations.

(3) Dud-marking stakes and fluorescent tape obtained from range operations (quantities determined by the Explosive Ordnance Detachment).

(4) During operations in a dudded area, all personnel must wear helmets, body armor (flak vest), eye protection, and work gloves.

5-8. Annual Impact Area Clearance and Retargeting

The impact areas may be closed periodically for retargeting and dud clearance.

5-9. Firing Limitations

a. There will be no firing across or into:

(1) Federal or Alaska State highways.

(2) Railroad right-of-ways (except artillery).

(3) Explosive ordnance disposal areas (except artillery).

(4) Reservation boundaries.

(5) Any type of occupied building or structure.

(6) Navigable waters unless listed in the National Register.

(7) White phosphorous will not be fired into wetlands.

(8) Firing across the Alaska Pipeline is prohibited.

b. Overhead and flanking fire will be conducted in strict adherence with DA PAM 385-63 Chapter 6, paragraphs 6-2 and 6-3.

c. The firing of unfuzed artillery is prohibited.

d. Because the snow cushion causes a disproportionate number of duds, 40mm HE will not be fired into snow. Plan to fire 40mm HE from summer through September. Do not fire 40mm, HE grenades into snow. You may fire 40mm training practice (TP) rounds into the snow. Firing the MK-19 HE munitions into four or more inches of snow is prohibited.

e. The firing of AT4 HE into 4 or more inches of snow is prohibited. AT4 TP ammunition may be fired into snow. AT4 will not be fired from the interior of buildings.

f. The firing of ammunition below temperature restrictions as imposed by TM 43-0001-28 and other pertinent TMs is prohibited.

g. The Eagle River Flats Impact Area at FRA must have an ice cover of five or more inches before HE point detonating artillery rounds or two or more inches of ice before HE point detonating mortar rounds can be fired into it. The area contains particles of white phosphorous, which are brought to the surface when rounds detonate in the soft soils. Migrating birds eat these particles, killing themselves and predators that feed on them.

h. Throwing HE grenades into snow-covered or vegetated areas is prohibited (see paragraph 4-3d).

Chapter 6
Direct-Fire Ranges

6-1. General

a. Direct-fire ranges are scheduled per chapter 3. No range may be used unless it has been scheduled and permission to fire has been granted by the Range Control Fire Desk Operator.

b. Operation or use of a range for purposes not specifically authorized by this regulation or local range SOPs is prohibited without coordination with Range Control. Construction on and special use of ranges must be approved by the local Range Facility Manager.

c. Unscheduled ranges are off limits. Range operations will coordinate special entry for personnel on reconnaissance or from DPW, the Directorate of Emergency Services, the EOD, or other agencies.

d. Active ranges are off limits to personnel not connected with the training in progress. Range OICs and RSOs will maintain close control of their ranges and will ensure personnel with no official business are escorted out. Active ranges and hazard areas are announced in the weekly bulletin.

e. Troops may not go beyond the firing line on any ranges where dud-producing munitions are fired. Exceptions must be authorized by range operations and will require escort by personnel from the Explosive Ordnance Detachment or Range Control, unless the surface area has been visually cleared by explosive ordnance disposal.

f. Range OICs and RSOs must ensure firing is kept within range limits as set by boundary markers or approved overlays. Range limits are marked with red-and-white, barber poles, vertical, reflective panels, or triangular, red-and-white panels.

g. Aircraft frequently overfly the impact areas of CFAs regardless of range status. The RSO will appoint an aircraft spotter to watch for approaching aircraft and a method to communicate a check fire until aircraft has departed the CFA.

6-2. Warning Signals and Signs

a. Before firing, scarlet streamers will be raised on all ranges during daylight hours. During periods of darkness or reduced visibility, red-blinking lights will be posted and limit markers illuminated. No firing will begin until these conditions are met.

b. Warning signs are posted on impact-area boundaries. Entry past a warning sign without Range Control permission is prohibited. Impact areas are extremely hazardous and OFF LIMITS. Exceptions are approved on a case-by-case basis (see chapter 5).

6-3. Targets

See appendix F for more information about targets.

a. Hard-wired, electronic-target lifters are maintained by range maintenance. Units will not tamper with these systems in any way.

b. Portable, radio-controlled targets are available for nonstandard ranges. The portable targets must be requested at least 12 working days before the live-fire exercise. Radio-controlled devices must be installed per the special-firing contract, used per instructions from range-control personnel, and protected from weapons fire. The using unit must arrange for pick-up, emplacement, and return of these devices. Portable targets will not normally be issued if the temperature is or projected to go below the mechanism's operating parameters. Range Control can provide additional information on the temperature operating limits for portable targets. If units desire to operate targets below this temperature, they will be liable for all damaged equipment.

c. Requirements for non-electric targets (rifle/machine gun zero, Known Distance, personnel silhouette, and stake sets) will be requested by separate memorandum at least 12 working days before the live-fire exercise. The unit must list the type and number of targets, the date of firing, the pick-up date, the return date, a point of contact, and a telephone number. Range OICs will not receive range clearance until all targets and debris are removed.

d. Target sheds on established ranges are stocked with paper targets, target frames, and target stands and will be issued upon request.

e. Range Control can fabricate silhouette and three-dimensional wood targets, full-size or scaled for live-fire, training events. Orders for large targets or large amounts of special targets will not be accepted less than 30 working days before firing. Unit assistance may be required depending on the complexity of the unit's target request.

6-4. Range Reconnaissance

a. The safety-certified range OIC or RSO for a scheduled direct fire range should check the range 1 to 3 days before use. The reconnaissance should include a review of the range SOP, a visit to the range to check the condition/layout of the facilities, and coordination with the appropriate Range Control.

b. Access to the control tower of automated ranges is limited to one unit personnel to facilitate giving commands over the range public address systems. Range-Control personnel are the only personnel authorized to activate and operate the computerized-target systems.

6-5. Range Receipt

a. The range OIC/RSO will ensure that this regulation, request summary, approved range fans, and the FMs, TMs, circulars, and pamphlets that are pertinent to the weapons being used are present on all live-fire facilities during training.

b. The range OIC or RSO must sign for the range and its support equipment from range operations. Targets are generally located on each range but special-use targets are receipted from Range Control. Range-support equipment must be returned upon training completion. Loss or damage of range materials attributable to unit negligence will result in a statement of charges or a report of survey.

c. If the receipt holder is replaced during a multi-day firing, the relieving range OIC/RSO must sign for the range and property at range operations. Special arrangements may be made with Range Control for property transfer in the field during multi-day exercises.

6-6. Range Support (set up) and Firing

a. The range OIC is responsible for the overall safe and proper operation of the range before, during, and after firing. The range OIC will designate an RSO with necessary assistants to ensure firing is conducted from prescribed points, weapons effects are kept within posted limits, and ammunition security is adhered to at all times. The range OIC will:

(1) Ensure the RSO is familiar with AR 385-63, DA PAM 385-63, this regulation, and pertinent FMs, TMs, safety-of- use messages, etc.

(2) When required, ensure that qualified medical personnel and dedicated MEDEVAC vehicles are on site.

(3) Verify that the correct range or firing position has been occupied.

(4) Ensure the scarlet streamer is flown during daylight firing and is replaced by a blinking, red light during periods of reduced visibility or night firing. The limit markers must also be illuminated by a non-blinking light during night firing.

(5) Ensure weapons not used in training are adequately stored and security is posted.

(6) Ensure all weapons and ammunition are listed on an approved RFMSS request summary; that only authorized ammunition, including proper charges and fuzes, are used, and that all ammunition is within prescribed, safe-temperature limits.

(7) Ensure that all live-fire participants receive a safety briefing before firing on standard and nonstandard ranges. The briefing will include that anyone observing an unsafe act will immediately issue the command —cease fire," all firing will stop, and the OIC or RSO will investigate the situation.

(8) Ensure all required road guards, aircraft spotters, and road barriers are in position before firing.

(9) Provide internal communications to road guards and air spotters for all live-fire exercises. Communication may be a radio, field telephone directly to the range OIC/RSO, or a predetermined signal.

(10) Determine through visual inspection that the danger area is clear of all personnel, equipment, and wildlife.

(11) Determine all weapons provided for use in any exercise employing overhead or flanking fire have been inspected per AR 385-63 and have been declared safe for their intended use.

(12) Ensure communications are established with Range Control and are operative at all times.

(13) Ensure the unit provides a detail to remove ice and snow from the protective covers of the electronic-target devices. Range Control will provide equipment for snow and ice removal. Target devices cannot be activated until the covers are cleaned and removed from the target coffins.

(14) Exercises using live ammunition and blank ammunition will normally not be conducted concurrently. If this becomes necessary, the live-fire portion will be conducted as the final phase of the exercise. The range OIC is responsible for taking positive control measures to ensure there is no mixing of blank and live ammunition.

(15) Obtain clearance to fire from Range Control.

b. When the range OIC is ready to commence firing, he/she will complete a memorandum as shown in figure 6-1 and call range operations (FM 38.30). The Range Control Fire Desk Operator will request information from the memorandum, record the range in hot status, issue an opening time, and give his/her initials as authentication. During firing, the range OIC and RSO both must be on site and control operations, personnel, and property. The RSO must be on duty and monitor all activity on firing lines. While operating a range, the range OIC/RSO will have no other duties. During firing, the range OIC will:

(1) Ensure that all personnel are in the correct uniform and properly use protective headgear and hearing protection.

(2) Ensure that personnel do not remove material from the firing lines on small-arms ranges or crew-served-weapons ranges without permission from the range OIC or RSO.

(3) Ensure that the surface danger zone remains clear and that all impacts are observed to verify that all projectiles land within the impact area.

(4) Ensure that misfired projectiles are removed from the weapon on the range OIC's command, per established procedures for the weapon.

(5) Ensure that all weapons are cleared and checked during temporary suspensions of firing.

(6) Ensure that records are maintained on the type of ammunition fired, the number of rounds fired, and when required, the number of duds, with their approximate impact locations, are annotated on USARAK Form 8-E.

(7) Ensure that firing is promptly stopped when an unsafe act is observed or reported. Any person observing an unsafe act will immediately issue the command —cease fire," however, only the range OIC/RSO can give the command to resume firing (after investigating the situation and taking necessary actions).

(8) Respond to required communication checks with Range Control. Constant radio watch is required per the range firing SOP. A designated, radio-telephone operator will monitor and respond to range operations radio checks. Repeated failure to answer may cause relief of the range OIC or RSO or closure of the range.

(9) Use of fire barrels must be approved by range operations. Scrap wood may be available from Range Control. Barrels may be receipted from Range Control but must be transported and returned by the using unit and must be at least 50 meters downwind from ammunition.

(10) Range inspectors will visit ranges to check safety, compliance with regulations, and provide assistance as needed. Range inspectors are authorized to check fire ranges if safety violations are noted.

(11) Live-fire exercises requiring the activation of special-use or restricted airspace (Monday through Friday) that cannot be completed before the scheduled closing time require a 3-hour notification for Range Control to grant additional firing time. This is the time required by the Federal Aviation Administration (FAA) to reroute air traffic. Weekends and holidays require 24-hour notification for changes or extensions.

c. When firing is completed, the range OIC will:

(1) Ensure all weapons are cleared.

(2) Report the number of duds and their approximate locations to Range Control. The range OIC will also complete a USARAK Form 8-E.

(3) Ensure a memorandum (as shown in fig 6-1) is completed to include the number and type of rounds fired, the number of personnel trained, and receive a closing time from Range Control.

(4) Range inspectors will check the police, general range condition, and removal of ammunition residue before the unit is cleared from the range. The range OIC should call the Range Control Fire Desk Operator one hour before planned closure to schedule checkout. Night fire ranges will be cleared the next morning before 1000 hours.

(5) Final clearance from a range requires the return of all range support materials issued by range operations. An account becomes delinquent on the day training is complete. Delinquent accounts prohibit issue of additional range equipment to unit personnel.

(6) Trash must be taken to dumpsters or the landfill. All ammunition residues must be removed from the range and turned in to the ammunition supply point.

d. Before firing, the RSO will ensure that:

(1) All participants in live-fire exercises receive a safety briefing.

(2) Road guards and the aircraft spotter are briefed and safety barriers, as required, are posted.

(3) Weapons are properly positioned, and only authorized ammunition, including proper charges, fuzes, and fuze settings, are used.

(4) Range flag or lights are properly displayed.

(5) Clearance to fire has been obtained from Range Control Fire Desk Operator.

(6) The surface danger zone is clear of personnel, equipment, and wildlife.

e. During firing, the RSO will:

(1) Ensure that all personnel are wearing proper hearing protection.

(2) Ensure that weapons are cleared onto and off of the firing line.

(3) Be on the firing line and monitor activity when range or firing point is in a ~~h~~ot" status.

(4) Order an immediate ~~c~~heck fire" or ~~c~~ease fire" when any unsafe act or condition is observed.

(5) Investigate and report all incidents and accidents to Range Control immediately.

(6) Remove misfired projectiles from the weapon on the command of the range OIC.

(7) Ensure weapon or munition malfunctions and misfires are reported to Range Control immediately.

f. After firing, the RSO will:

(1) Verify to the range OIC that weapons are clear.

(2) Relieve road guards and the aircraft spotter and remove barriers.

(3) Ensure that the number and approximate location of all duds are recorded on the USARAK Form 8-E and provide copies to Range Control.

(4) Ensure that the range is properly closed with Range Control.

g. The range OIC, RSO, and other designated range-safety personnel will be assigned no other duties.

Note: If the OIC or RSO must fire on a range or become participants in a live-fire exercise, they must be replaced by other range OIC- or RSO-qualified personnel and must notify Range Control before the changeover.

6-7. Minimum Visibility Requirements

The range OIC must cease firing if the most distant downrange target to be used is obscured by fog or smoke and/or the vertical and horizontal visibility requirements are not met. See table 6-1. The Range Facility Manager will explain this requirement.

a. These minimum visibility distances are necessary to open a range in CFAs, which include all small-arms complexes, Tanana Flats (at FWA), Davis Range (at FRA), and training areas east of the Delta River (at DTA).

Table 6-1
Controlled firing area parameters

Ammunition	Horizontal Distance in Miles	Vertical Ceiling in Feet Above Ground Level
.22 caliber	5.9	1804
9 mm	6.1	1831
.45 caliber	6.1	1611
5.56mm	7.1	2165
7.62mm	8.3	3468
.50 caliber	9.0	3966

(Sources DA PAM 385-63, Appendix B, Table B-1 SDZs for direct-fire weapons without explosive projectiles and FAA 7400.2E, Procedures for Handling Airspace Matters)

b. Aircraft spotters are required for all ranges in the controlled firing area.

IMPC-FWA-PLI (Date)

MEMORANDUM FOR OIC, Range/Firing Point

SUBJECT: Range/Firing Point/Facility Opening and Closing Procedures

1. To open the range/firing point/facility, complete 1a and 1b below and call Range Control Fire Desk Operator, FM 38.30.

a. Items (1) through (16) below must be verified and initiated before requesting permission to open the range:

(1) Risk Assessment completed and signed. _____

(2) Range flag/light is displayed. _____

(3) OIC is present on the range._____

(4) RSO is present on the range. _____

(5) USAG FWA Regulation 350-2 is present on the range. _____

(6) Appropriate TMs/FMs are present on the range. _____

(7) Range firing orders are present on the range. _____

(8) All personnel have received the safety briefing. _____

(9) Personnel are using hearing-protection devices. _____

(10) Qualified medic with an aid bag is present (when required). _____

(11) Designated vehicle/ambulance is present (when required)._____

(12) Backup communication system tested on the range (when required)._____

(13) Road guards and/or barriers emplaced (when required). _____

(14) Approved overlay is present (when required) and range limits have been identified by azimuth and terrain features, or by Range Control limit marker. _____

(15) A dedicated radio operator is present (when required). _____

(16) Fire-fighting equipment is present (when required). _____

(17) A dedicated air guard spotter is present. _____

b. Items (1) through (8) below must be completed and passed to Range Control Fire Desk Operator during the range opening radio call.

(1) Grade/last name or OIC._____

(2) Grade/last name of RSO. _____

(3) Grade/last name of radio-telephone operator. _____

(4) Type of weapons to be fired. _____

(5) Number of personnel on the range. _____

(6) Type of ammunition to be fired. _____

(7) Maximum ordnance weapons (Mortar/FA only). _____

(8) Number of tubes (Mortar/FA only). _____

c. The following information will be recorded when given to you by Range Control Fire Desk Operator during the range opening radio call:

(1) Time range opened. _____

(2) Range Control Fire Desk Operator initials. _____

Note: All firing ranges and some non-firing facilities must maintain radio communication with Range Operations Control Fire Desk Operator AT ALL TIMES. Range Control Fire Desk Operator will make radio checks with the user at random times. A dedicated radio-telephone operator is required. See the range SOP and USAG FWA Regulation 350-2.

2. To close the range/firing point, complete 2a through 2g below and call Range Control Fire Desk Operator at FM 38.30. (OIC must give Range Control Fire Desk Operator one hour notice before calling for range closure, to ensure availability of a range inspector.)

a. Time range closed. _____

b. Grade/last name of person closing range. _____

c. Total number of personnel trained. _____

d. Total number of each type round fired. _____

e. Location (by range lane or grid square) and type of dud rounds noted. _____

f. Troops have been inspected for ammunition. _____

g. All ammunition and residue have been removed. _____

h. Ensure the following areas have been policed of trash, brass, cigarette butts, and broken sandbags:

(1) Firing lines, foxholes, machine gun bunkers and trenches.

(2) Buildings (including towers, ammunition shelters, latrines, box cars, target sheds, bleachers, etc.).

(3) Road edge (including ditch).

(4) Place intact sandbags neatly in front of foxholes or on top of covered foxholes.

(5) Check the facilities below that need repair and describe the problem. This information will help the near- and long-term range repair program.

[ ] (a) Towers. _____

[ ] (b) Target sheds. _____

[ ] (c) Range sheds. _____

[ ] (d) Bleachers and shelters. _____

[ ] (e) Latrines. _____

[ ] (f) Flag poles. _____

[ ] (g) Firing lines. _____

[ ] (h) Targets (nonelectrical ranges). _____

[ ] (i) Land and boundary markers. _____

3. After receiving closing time and range clearance, return this memorandum to Range Control Fire Desk Operator along with all materials issued.

Signature Block

Figure 6-1. Memorandum for Range Opening and Closing Procedures

6-8. Wildlife on the Range

Units encountering wildlife during training will make all attempts to avoid that portion of the training area and report the location and number of animals to Range Control Fire Desk Operator. If units observe wildlife in the firing fan on a range or in a training area during live fire exercises immediately cease firing and report the location and number of animals to Range Control Fire Desk Operator.

a. Extreme care must be taken to prevent the harassment of wildlife. Range Control Fire Desk Operator will request the Post Conservation Officer be dispatched to the area for assistance.

b. If any animal is wounded during firing, the range OIC will immediately cease fire and notify range operations. Range Control Fire Desk Operator will contact the Post Conservation Officer be dispatched to the area for assistance.

c. Aircraft, including helicopters, may not be used to herd/chase wildlife off the ranges or training areas.

d. After the area is clear and permission is granted from the Range Control Fire Desk Operator, firing may resume.

6-9. Range Police and Maintenance

a. Ranges are policed by using units. Trash accumulation or damage found on a range/training area or training facility will be reported by the range OIC to Range Control Fire Desk Operator upon occupation. Failure to report any discrepancies to Range Control Fire Desk Operator will result in the unit assuming responsibility for policing the entire area. The range inspector will be dispatched to determine responsibility for cleanup or repair.

b. The range and training area maintenance program is described in appendix C.

6-10. Government Law Enforcement Agency Range Usage

a. Government law enforcement agencies are authorized use of military ranges and training facilities. The agency must apply through the Public Affairs Office for a license, which may be approved by the garrison commander.

b. Upon receipt of the license, the government agency must meet the following requirements:

(1) Provide Range Control with a listing of candidates for range OIC and RSO. These individuals must have completed a National Rifle Association-approved rifle and/or pistol instructor course or installation equivalent. They must also attend a range safety briefing and receive a passing score on the range safety certification test.

(2) Schedule ranges and training facilities with Range Control. Requests will be submitted to Range Control using the agency's stationary. A copy of the approved license will be attached to the request for ranges and training facilities. Military training has priority and may require the rescheduling of ranges or facilities to eliminate scheduling conflicts.

c. Range safety certification is valid for the duration of the approved license.

d. Required medical support may be substituted with qualified, emergency-medical, technician personnel.

6-11. Civilian Organization Range Usage

a. Civilian rifle and pistol clubs are authorized use of range facilities when available. The organization must apply through the Public Affairs Office for a license. The license will be approved by the garrison commander.

b. Upon receipt of the approved license, the organization must ensure the following requirements are met:

(1) Provide Range Control with a list of candidates for range OIC and RSO. These individuals must have completed a pistol and/or rifle instructor course that is approved by the National Rifle Association or installation equivalent. The candidates must attend the range safety certification briefing and receive a passing score on the range safety certification test.

(2) Civilian organizations may schedule ranges as they are available. Military training has priority and may require the rescheduling of ranges for civilian use.

(3) A nonfiring range OIC and RSO will be in charge of the range.

(4) Range safety certification is valid for the duration of the approved license or one year, whichever occurs first.

(5) Required medical support may be substituted with qualified, emergency-medical, technician personnel.

6-12. Control of Military Family Members and Spectators on Firing Ranges and Training Facilities

a. Requests to have military family members or spectators on ranges or training facilities to view or participate in unit training activities or demonstrations must be submitted to Range Control a minimum of 12 working days before the event.

b. The requester should identify any special equipment or features being added to the range or training facility to accommodate the spectators or military family members, such as bleachers, parking areas, aid station, portable toilets, etc.

c. The only time a military family member under age 18 will be permitted on the firing line is under competent adult supervision and when engaged in an approved course of marksmanship training such as Junior Reserve Officer Training Corps. These military family members must obey all firing and safety regulations, including the wearing of personal-protective-hearing devices. Failure to comply with these rules will result in immediate removal from the firing line and a denial of the privilege to participate in weapons firing. All other military family members not actually engaged in firing or coaching must remain behind the firing lines.

Chapter 7
Indirect Fire Ranges

7-1. General

a. This chapter discusses the live fire of mortars and field artillery. For firing hours, see Environmental Considerations in Chapter 2, paragraph 2-9. Units must request activation of special-use or restricted airspace for firing (see chapter 10).

b. Mortars and field artillery range OICs and RSOs must be familiar with AR 385-63 and DA PAM 385-63.

c. Range OICs will ensure that safe range-to-canister impact is computed before firing illumination. If firing illumination is approved during seasonal fire weather index restrictions, flares must impact in the open impact area, not in the trees. If this cannot be done due to wind or other factors, illumination may not be fired.

d. Artillery firing points and observation posts are located throughout training areas and are scheduled separately. Therefore, when a training area is assigned it does not include the artillery points or observation posts. When these positions are scheduled to be occupied, units utilizing the training areas must remain well clear of the firing points and observation posts. Direct coordination between both units will be conducted so that training will not be interrupted or delayed.

e. The range OIC/RSO will conduct a safety briefing for all live-fire participants. The briefing will include that anyone observing an unsafe act will issue the command —check fire, check fire, check fire" all firing will stop, and the range OIC or RSO will investigate the situation.

f. The scheduling criteria for mortar points differ from the scheduling of artillery firing points and observation posts. When mortar points are scheduled, the training area and downrange danger zones (training area) must be scheduled as part of the mortar point to prevent the firing of mortars over troops.

g. Indirect fired weapons will not be fired across the Alaska Pipeline, state roads, and built-up areas. Pieces can be fired from within controlled firing areas depending on the ordinate of the round.

h. See Chapter 1 for medical/MEDEVAC support.

i. Before firing, the scarlet streamer will be displayed on the appropriate flagpole for daylight firing and replaced with a red, blinking light during period of darkness or limited visibility.

7-2. Command Safety Certification Program

a. Units firing field artillery and mortars must establish and maintain a command safety certification program at battalion level, per AR 385-63 and DA PAM 385-63, for personnel controlling indirect-fire exercises. Command safety certification is required for firing personnel serving as artillery or mortar range OICs/RSOs, firing battery commanders, executive officer or platoon leader, fire direction officer, chief of firing battery or artillery/mortar platoon sergeant, gunnery sergeant, chief fire direction center computer, artillery/mortar platoon leader, howitzer or launcher chief of the section and mortar squad leader. A mortar squad leader record of certification for all but range OICs/RSOs will be maintained at the unit.

b. Certification of mortar and artillery OICs/RSOs will be consolidated on a memorandum to the local Range Manager per the example of figure 7-1 and signed by the battalion or separate battery/company commander. The certificate is valid for one year from date of issue unless superseded by the unit. Single-entry additions and deletions will not be accepted. Certification of personnel involved in firing incidents will be suspended during subsequent investigations.

c. A command safety certification roster must be updated annually and filed at Range Control. UNITS WITHOUT AN APPROVED ROSTER/CERTIFICATE SIGNED BY THE BATTALION COMMANDER OR EQUIVALENT LEVEL COMMANDER ON FILE AT RANGE CONTROL WILL NOT FIRE.

7-3. Firing Points

a. Artillery pieces can be located anywhere within the training area, providing a range fan is pre-approved by Range Control (see Paragraph 7-8). Mortars will be fired from surveyed firing points unless position and azimuth determining system location equipment is used.

b. Mortar range OICs or RSOs must sign for the point and support equipment, and must be present on site throughout use. Artillery range OICs or RSOs (usually the battalion operations and training officer or fire-direction officer and RSO) must sign for and open firing points used by the battalion and must be in the field throughout firing. However this does not relieve the firing unit from their OIC/RSO responsibilities at each firing point. If the OIC or RSO is replaced during a multi-day exercise, the unit must coordinate with the Range Control Fire Desk Operator for field transfer of responsibility and property. Otherwise, range OICs must transfer receipts at Range Control.

c. Live-fire exercises affecting the use of restricted airspace that cannot be completed before the scheduled closing time (Monday through Friday) require a 3-hour notification for Range Control to grant additional firing time. This is the time required by the FAA to reroute air traffic. Weekends and holidays require 24-hour notifications for changes or extensions.

7-4. Mortar Firing

a. Firing over the heads of troops is prohibited. Range OICs and RSOs must know the authorized target area as described in the mortar-point SOP, and must ensure no personnel are under the trajectory. The target area overlay on the plotting board must also be drawn on mortar forward observers' maps.

b. The range OIC will ensure unit safety and that chain of command personnel have completed the command safety certification program.

c. An M2 aiming circle or the M2 compass must be used to lay 81mm mortars. However, the lay must always be checked by an independent aiming circle. The requirement for an aiming circle as a check instrument will not be waived.

d. Unless aiming circles are not authorized by the table of organization and equipment at the battalion level, 60mm mortars must be laid per Paragraph 7-4.c. above. In this case, 60mm mortars may be laid and checked with two M2 compasses. Readings must be verified between mortar and compass sight and between lay and check compass and must agree within 10 mils. An independent check instrument must be present and in use. There are no exceptions.

e. Locations for 60mm and 81mm direct lay, direct alignment, and 60mm hand-held firing will be authorized on a case-by-case basis and will be done as follows:

(1) The range OIC must confirm with an M2 compass that the azimuth of fire is within safe limits.

(2) For direct lay and hand-held firing, the gunner must be able to see the target.

(3) The RSO must choose downrange reference points as visual firing limit markers and station himself/herself to ensure the weapon is within these limits at all times.

(4) For 60mm, hand-held firing is limited to charge 1 and below. Cartridges M720, M721, and M722 may only be fired at charge 1 and below.

(5) For 60mm, direct lay and direct alignment is limited to charge 2 and below. Cartridges M720, M721, and M722 may only be fired at charge 2 and below in the M19 mortar.

f. Range OICs will ensure mortars are separated by the distance stated in the weapon FM. The bursting radius of the ammunition being fired will be used to set the minimum safe distance from each tube, inside which nonessential personnel are excluded. All personnel within the minimum safe distance must wear helmets.

7-5. Field Artillery Firing

a. At least one commissioned officer must be present on each hot firing point. This officer is the position commander and may also be range OIC. The position commander performs those duties listed in DA PAM 385-63, Chapter 1. The position RSO must be an E6 or above and can have no other duties during firing.

b. Artillery surface danger zones are established by DA PAM 385-63. Hazard Areas A through E vary dependent on the weapon and ammunition fired. Personnel access to Hazard Areas A, B, and C is prohibited without permission from range operations and use of appropriately constructed bunkers per DA PAM 385-63. During indirect fire, personnel not involved may occupy Hazard Area D and that portion of Hazard Area E greater than 350 meters from the weapon, when lots of artillery ammunition are cleared and approved for overhead firing. Personnel involved in the firing may be closer than 350 meters to the weapon. Position commanders must keep the 350 meter hazard area clear. This may require placing guards on range roads in front of the battery with radio communication to the fire direction center.

Note: Personnel from Range Control are allowed within this restricted portion of Hazard Area E. Visitors sponsored by the unit are admitted by the unit chain of command. Weapon crews and personnel involved in firing must wear Kevlar helmets or equivalent.

c. Artillery units must have an internal range safety and firing SOP. Use of the SOP is mandatory for artillery units.

7-6. Limited Visibility

Mortars and artillery may not fire when targets are masked by fog, smoke, or other obscurants without using an impact locating radar.

7-7. Observation

a. All impacts must be observed visually or by radar. The range OIC must not repeat for rounds sensed as unobserved until firing data, weapon lay, and increments are thoroughly checked and the unobserved round is located. Any round fired and not observed will be immediately reported to range operations.

b. Range OICs and RSOs will be alert to the presence of aircraft in the area and will not fire if the aircraft:

(1) Has not been previously coordinated as part of the exercise.

(2) May be struck by debris or fragments.

7-8. Firing Point Development and Overwatch

a. Firing point survey data is in the Artillery Trig List noted and preserved. A copy of the Artillery Trig List is maintained at battalion operations and training officer and Range Control. The operations and training officer will ensure all changes to the Artillery Trig List are posted to the Installation Range Office copy.

b. If new artillery points are needed, the requesting unit and Range Control will coordinate environmental clearance, site preparation, and survey. The unit will prepare new safety data and amend the Artillery Trig List. New mortar point development follows the same procedure, except the firing unit is the lead agency with Range Control alternate surveying procedures:

(1) Unit survey personnel and the RSO will decide on a suitable location for the orienting station.

(2) Survey personnel will use conventional survey techniques and/or position and azimuth determining systems to determine an end of orienting line for each position.

(3) The RSO will verify the surveyed location of the orienting station.

(4) The RSO will use graphic resection, global positioning system, or a map spot to verify that the orienting station is within 100 meters of the surveyed location.

c. Hip shoots.

(1) Dry shoots may be conducted anywhere the unit has scheduled to operate and require no overlays.

(2) All live-fire hip shoots must be coordinated/approved by Range Control. Live shoots will be from surveyed or position and azimuth determining system-located points and have approved safety data.

(3) Approved overlays will have a firing name or number assigned that must be given as part of the request to go hot by the range OIC.

7-9. Mortar and Artillery Firing Incidents

a. A firing incident occurs when a round lands outside of the unit's prescribed safety limits, which are developed from the safety card data for a firing point. The degree of severity of any given incident is classified into one of the following categories:

(1) Round impacting in Areas A, B, or C. Notify Range Control and the major subordinate command. The incident is to be investigated by the major subordinate command assisted by Range Control, with a final report submitted from the major subordinate command to Range Control.

(2) Rounds impacting outside the surface danger zone (Areas A, B, or C). Notify Range Control and the major subordinate command. The incident is to be investigated by Range Control with the major subordinate command assisting with a final report submitted from the major subordinate command. Range Control will render a verbal report to the US Army Garrison Alaska Safety Office, and the command operations center/emergency operations center on the nature and suspected cause of the incident.

b. The following information will be reported to Range Control when a firing incident occurs:

(1) Name, unit, and location of person reporting.

(2) Date, time, and location of impact.

(3) Any injury to personnel. See chapter 1 for MEDEVAC procedures.

(4) Number of rounds.

(5) If an airburst, estimated height.

(6) If a ground burst, location of the crater. (If a crater is available, the reporting unit will ensure it is not disturbed until a Range Control investigator arrives.)

(7) Equipment damage, if any.

c. Range Control will:

(1) Order check firing of all ranges and firing points by broadcasting the command "Check Fire, Freeze" on the Range Control nets (FM 38.30). This command is used only for firing incidents.

(2) Dispatch the Range Control firing incident investigation team and if an artillery unit is firing, notify the unit operations and training officer that assistance is needed.

(3) Notify the following (in order):

(a) The command operations center/emergency operations center and the RPTM-R during duty hours or the staff duty officer after-duty hours.

(b) The ammunition supply point (as needed).

(c) Explosive ordnance disposal (as needed).

(d) Installation safety.

(4) Monitor MEDEVAC and the investigation and return units to hot status as the incident is isolated in the field. Return to hot status is allowed by the Range Facility Manager or the RPTM-R, after consultation with the investigators.

(5) Direct inquiries to the command operations center, the emergency operations center, or the staff duty officer.

d. Units on ranges and firing points, regardless of location, impact area, or weapons, will cease firing at the command of "Check Fire, Freeze" from range operations. Mortar and artillery range OICs or position commanders will:

(1) Issue the command —Rear to piece, face the piece, fall in."

(2) Preserve firing data on weapons and aiming circles.

(3) Prevent movement of ammunition components and tools.

(4) Prepare to receive investigators.

(5) Preserve firing data within the fire direction center.

(6) Ensure that fire direction officers report initial target location and location of any subsequent rounds.

Note: Only investigators may check data, propellant, fire-control instruments, craters, or other aspects of firing or impact points. Unit personnel must secure and wait.

e. Investigators from Range Control and the major subordinate command will isolate the responsible unit or develop a list of candidates, while ensuring no items of evidence are lost or overlooked. If the incident caused fatal injury or damage in excess of $200,000.00 investigators will brief the unit on preserving sites pending arrival of an Army Safety Center team from Fort Rucker.

f. The investigation team will make an initial report of findings to the RPTM-R and will inform the unit's major subordinate command (United States Army Advisory Group-Alaska, Senior Army Advisor for reserve component firing) that a formal investigation is required. If multiple units are involved and the investigation team cannot determine which unit is responsible, all major subordinate commands involved must investigate. The investigating officer(s) must be on site within 1 hour of notification and will be briefed by the team and unit personnel. A report must be forwarded to the RPTM-R within 10 calendar days of the incident, with an information copy to Installation Safety.

g. In any category, when a suspected malfunction of munitions or equipment occurs, notify Range Control and carry out firing-incident procedures.

7-10. Excess Propellant Charge Increments

a. Excess propellant charge increments will be placed in a metal or wooden, covered container at least 25 meters behind each weapon. There will be one powder pit per weapon.

b. Excess increments will be burned at the end of each day's firing. In view of the potential health hazard associated with solid residue produced from burning of M-6 and M-1 propellants, burn pans will be used for burning propellants.

c. An NCO, SSG or above, will sign for the facility and supervise the use of the burn pan. It is recommended that fire-fighting equipment be on site during the powder burning.

d. Burn pans are located at:

(1) FRA—Firing Point 1.

(2) FWA—Intersection of Brigadier and entrance to Firing Point 9.

(3) DTA—Observation Post (OP) 7A.

e. In an effort to minimize exposure, all activities burning M-6 or M-1 propellant will take the following actions:

(1) Inform all potentially exposed personnel participating in the burning of these propellants that direct skin contact with the solid residue or inhalation of the smoke may be a health hazard. Prohibit smoking, eating, or drinking in areas where propellant is being burned.

(2) The solid residue from burning will be treated as potential toxic waste. It will be collected and placed in a plastic or metal overpack of appropriate size and turned in by the using unit as hazardous waste to the DPW Environmental Division, and Natural Resources Branch.

(3) Precautions must be taken to prevent unprotected personnel from making contact with the smoke or residue from propellant burning. In some cases, this may require road guards to prevent entry into the area during propellant burning.

(4) In cases where direct contact with the solid residue or smoke cannot be avoided, ensure that all personnel take protective measures, including the appropriate use of gloves, coveralls, and respirators. Require thorough hand washing before eating, smoking, or using toilet facilities.

f. For procedures on how to burn propellant refer to FM 6-50, page 10-5.

7-11. Declination Station/Survey Information Center

a. The artillery battalion survey section maintains declination stations and the battalion operations and training officer maintains the Artillery Trig List.

b. Diagrams of declination stations are available at Range Control or from the survey section NCOIC.

7-12. Safety Data

a. Units will compute safety data for all live-fire exercises per FM 6-40, appendix B. A second, safety-certified person must verify all computations before firing.

b. Fire direction centers must plot the position's safety diagram, target area, and current fire support coordination measures and no-fire areas on a 1:25,000 firing chart.

c. Fire direction centers will display the position's Safety T in the fire direction centers in a prominent location.

d. Fire direction centers will distribute current Safety Ts to each gun section, battery commander, executive office, chief of firing battery, and gunnery sergeant. Safety Ts will be collected from each gun section and accounted for at the completion of each firing session.

DEPARTMENT OF THE ARMY
(Unit Address)

(OFFICE SYMBOL) (Date)

MEMORANDUM FOR Range Control

SUBJECT: Indirect Fire Command Safety Certificate for _____(unit)_____

1. References:

   a. DA PAM 385-63.

   b. USAG FWA Regulation 350-2.

2. The following personnel have been trained and tested per the references and are certified to perform the duties shown:

Name	Rank	Unit	Duty
Doe. C. E., Jr.	CPT	C Battery, 4/11th FA	Firing OIC, Firing Point Safety Officer
Doe, Mike C.	1LT	C Battery, 4/11th FA	Firing Point Safety Officer
Doe, Rodney	SFC	C Battery, 4/11th FA	Firing Point Safety Officer
Doe, Jeffery	1LT	C Battery, 4/11th FA	Mortar Firing Point OIC
Doe, John D.	SFC	C Battery, 4/11th FA	Infantry Mortar RSO

3. This certificate is effective for 1 year from date or until superseded.

ROCK
LTC, FA
Commanding

Figure 7-1. Indirect Fire Command Safety Certificate Memorandum

Chapter 8
Combined Arms Live-Fire Exercises (CALFEX)/Live-Fire Maneuver Exercises

8-1. General

A special firing course, also known as a nonstandard activity, is any live-fire event that deviates from the designed purpose of a given range or that is outside an established range. Because of the limitations of the Army's permanent range system, most live-fire training activities beyond individual weapons qualification must be done on special firing courses. Trainers are encouraged to propose such courses and will receive full support from Range Control in development. Guidance is contained in this chapter and in DA PAM 385-63.

8-2. Requirements

Special firing courses must meet two requirements:

a. There must be a valid, unit, training need for the skills developed by the course. This may be drawn from a Soldier's manual, mission training plan, or a unit mission.

b. There must be adequate time before the firing date to adapt the maneuver to the available terrain, develop firing limits and overlays, schedule the required area, and publish hazards.

8-3. Certification Process

a. The certification process ensures that individuals are trained and certified by senior commanders for conducting CALFEXs and live-fire maneuver exercises.

(1) Battalion commanders or equivalent level commanders will certify all company commanders, first sergeants, platoon leaders, platoon sergeants, and others involved in the planning and conducting CALFEXs and live-fire maneuver exercises.

(2) This certification requirement is in addition to the general range certification course that battalions conduct for the range OIC and RSO.

(3) Battalion Commanders or equivalent level commanders will document all personnel that they certify and provide a list of individuals certified to the appropriate Range Control.

b. Live-fire maneuver exercises, including CALFEXs, will not be conducted until the live-fire certification process is completed and the memorandum has been submitted to Range Control.

8-4. Live-Fire Exercise Development Cycle

a. The range OIC must meet with the Range Facility Specialist a minimum of six weeks in advance of a live-fire exercise to discuss feasibility, location(s), environmental restrictions, and other general requirements. During this session, necessary terrain, airspace and personnel should be reserved and scheduled to support the exercise.

Note: Failure to follow the established time lines or meet special requirements listed below could result in rescheduling/canceling the event.

b. The range OIC will provide Range Control with a detailed written plan of the live-fire exercise or CALFEX, with surface danger zone overlays, four weeks before the exercise start date. Submission of formal risk management analysis is required before conducting the live-fire maneuver exercise/CALFEX.

c. The range OIC and RSO will conduct a range walk with representatives from Range Control to confirm limits, surface danger zones, and other constraints.

d. In addition to the scenario and overlays, the range OIC may be required to prepare an environmental assessment or record of environmental consideration. Assistance may be obtained from DPW Environmental Branch. If an environmental assessment is required, processing as required by AR 200-2 may take up to five weeks. Use of powered equipment in wetlands requires a permit. Applications must be submitted to DPW Environmental Branch 180 days before the exercise/training effective date.

e. No later than ten working days before the exercise start date, the range OIC and RSO will make final coordination with Range Control to schedule a range walk to verify complete range set up.

f. Commanders ensure that all range OICs and RSOs to be used during the live-fire exercise or CALFEX are identified and present throughout all phases of the exercise development cycle.

g. Scheduling must include time for set up and clean up if special preparations are required. These preparations (trenches, bunkers, wire obstacles, targets, and so on) must be included in the initial proposal, scenario, terrain sketches, and environmental considerations.

h. Before live fire, the exercise range OIC must ensure that all required road guards and barriers are positioned. Also, all special requirements (e.g., over flight or surface sweep of the hazard area) are completed and continued for the exercise's duration.

i. During course setup, the range OIC must test road guard communications and the course safety and control systems. All road guards must have communications with the unit exercise command post and the command post must have reliable radio communications with range operations throughout the firing period.

j. The firing unit commander will determine and enforce hearing protection requirements, the use of flak vests, and eye-protection devices.

k. Positive clearance from a range inspector must be received before a unit may close out any special firing course. Prepared positions, barriers, and ammunition residue must be removed. Missile wire must be recovered.

8-5. Live-Fire Safety Requirements

a. Range SOPs (post specific) are required for each range. SOPs will include a requirement that range users (commanders, range OICs, or RSOs) conduct a safety briefing for all personnel participating in a CALFEX or live-fire exercise. The safety briefing will include accident lessons learned from previous accidents and also emphasize that anyone observing an unsafe act will immediately issue the command ~~-c~~ease fire," all firing will stop, and the situation will be investigated by the range OIC or RSO.

(1) Commanders must ensure that all individuals who will take part in live-fire training/exercises have fired/used and passed a qualification course for the weapon or system they will use in the training/ exercise.

(2) Rehearsals (dry runs) must be conducted before live fire. Rehearsals will be conducted under the same conditions with the same people as the live fire (e.g., night rehearsal for night live fire).

(3) During CALFEX, all participants must be oriented on the capabilities of the weapons used by other components in the exercise.

(4) During live-fire exercises, commanders must designate individuals (e.g., observer-controllers) who are not part of the tactical or administrative scheme to monitor safety. These individuals will maintain visual contact with maneuvering elements and must have some means of signaling a cease fire to the OIC/RSO. Communication with the OIC/RSO is mandatory.

(5) For battalion or larger CALFEXs, a field grade officer will be appointed as the exercise OIC.

b. Unauthorized personnel are prohibited from handling unexploded ordnance/munitions or removing them from the range/training area(s).

8-6. Bunker Construction for High-Explosives Grenade Training

a. Every precaution will be taken when using fragmentation grenades to prevent injury from flying fragments or debris. This includes the construction of bunkers that will provide maximum protection to the Soldiers throwing the grenades.

b. The following USAG FWA requirements are in addition to the requirements specified in DA PAM 385-63 (Chapter 7) and FM 7-8 will be followed when conducting ~~k~~knock out a bunker exercises."

(1) Construction of the bunker(s) will be done using the plans and materials listed below. See figures 8-1 and 8-2. Commanders must ensure that the materials are not dry rotted, decayed, or deteriorated to a state that they may disintegrate from the explosion of a grenade or multiple grenades.

(2) Materials needed are:

(a) Railroad ties or equivalent.

(b) 3/4-inch plywood.

(c) 3-inch galvanized screws or nails.

(d) Filled sandbags.

(e) Sand.

(3) The bunker design has been reviewed and accepted as the USAG FWA standard—no exceptions. When constructed, the bunkers will be inspected by Range Control before live, hand grenade use to ensure compliance with the plan. The bunker must conform to the following:

(a) Floor of bunker must be 24 inches below the ground surface.

(b) Minimum, inside, bunker measurement is four feet high by six feet long by four feet wide.

(c) Maximum door opening is two feet by two feet.

c. The bunker will be constructed using a single layer of railroad ties. Interior and exterior walls will be encased in 3/4-inch plywood (this will keep the ties from shifting). Plywood will be replaced on the interior walls as needed.

d. Explosive-ordnance-disposal personnel will inspect the completed bunker(s) to determine if they can safely access the interior to destroy a dud grenade.

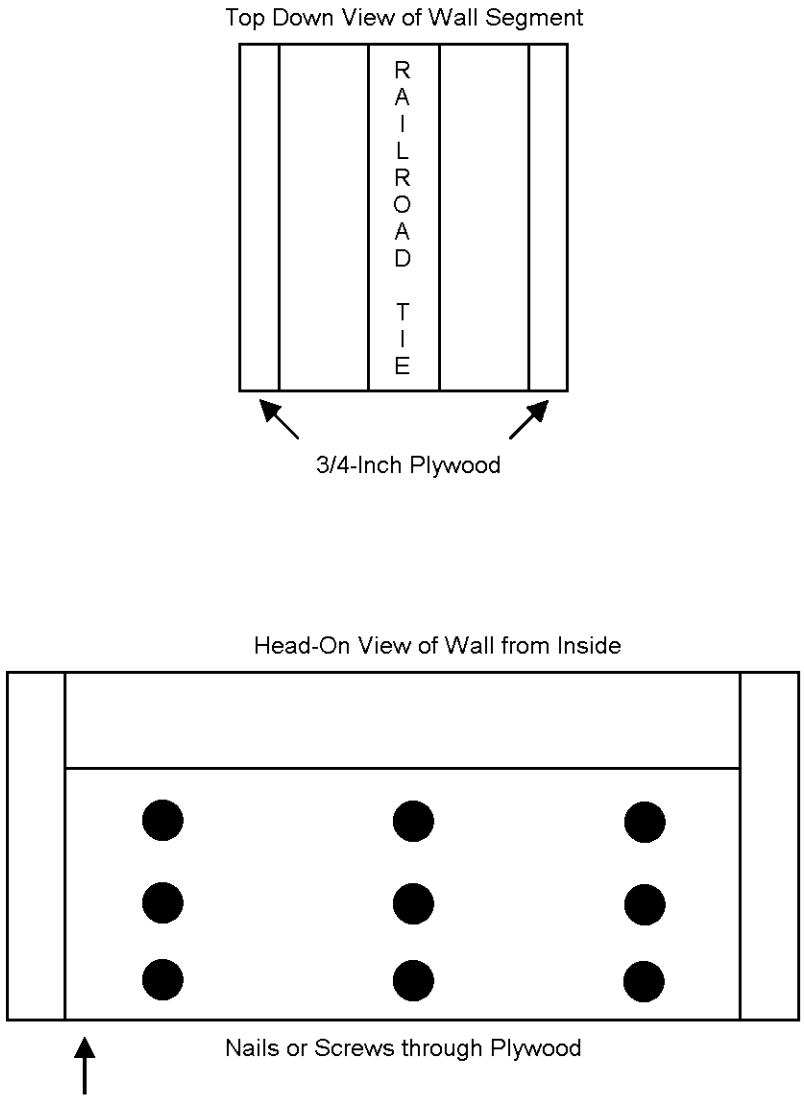
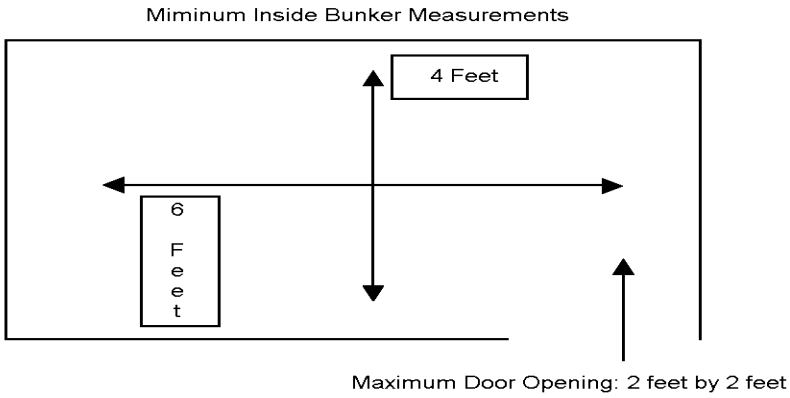
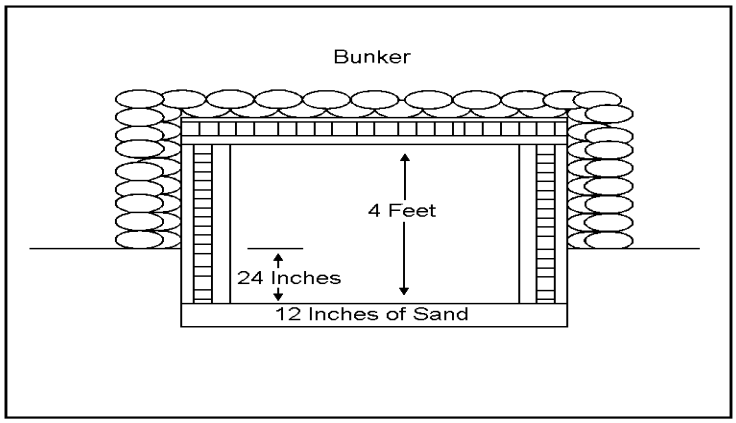


Figure 8-1. Bunker Walls



A pit will be dug into which the bunker will be set or built. The pit will be 3 inches deep and back filled with 12 inches of sand. See the example below. If mechanical means are to be used to dig the pit, the OIC must consult with the Environmental Division to ensure digging does not take place in wetlands, for which a permit is required.



Sand displaced by exploding grenades will be replaced to eliminate depressions that could hide a dud grenade.

Figure 8-2. Bunker Inside Construction

e. Requirements for personal protective clothing and equipment will be strictly enforced (hearing protection, flak jackets, helmets, etc.).

(1) Construct a throwers' pit or a separate barrier, 4 to 6 feet from the bunker, that the thrower(s) can seek cover in or behind after the grenade is thrown. The barrier will be equivalent to a screen of sandbags 20-inches (0.5-meters) thick and 6-feet high. The pit or barrier will be designed to provide additional protection for the thrower(s).

(2) A dud will result in an immediate cease fire and notification to Range Control. Unauthorized personnel will not approach, move, touch, or handle a dud grenade. Only EOD personnel will be used to destroy dud grenades.

(3) Resumption of firing will not occur when a dud has been destroyed in a bunker until:

(a) The explosive ordnance disposal unit contacts Range Control and verifies that the dud was destroyed.

(b) A thorough inspection of the bunker is conducted by the unit range OIC to ensure the bunker is intact and safe for continued use.

(c) Range Control grants permission to resume operations.

8-7. Risk Management

a. Units identify operational hazards and implement appropriate controls to minimize training mission risks. Formal risk management documentation is required for live-fire exercises/training.

b. During live-fire planning, the risk-management plan must address possible fratricide hazards and specific control measures to eliminate, minimize, or control the possibility of fratricide.

c. Detailed written plans will be developed between Range Control and the unit range OIC. It will require submission of formal, risk-management documentation before execution. This entails much more than completion of a risk-assessment card. It requires written explanation or rationale for risk-assessment codes for every phase of the training/exercise. For live-fire exercises, the formal, risk-management plan and the exercise document (operation plan, SOP, etc.) must be reviewed by the local Range Manager for approval by the IRO Safety Officer. The plan will include:

(1) A detailed plan of maneuver and fire support.

(2) A list of weapons, ammunition, pyrotechnic or smokes, and chemicals to be used.

(3) Unit control measures, including means of communication.

(4) Terrain features and facilities required.

d. All residual risks (risks that remain after controls have been developed and carried out) must be accepted at the appropriate level of authority. The level of the decision maker should correspond to the level of the risk. The greater the risk, the more senior the final decision maker should be. Within USARAK and USAG FWA, risk-acceptance, decision levels are established as follows (other units, battalion, company, etc., will establish and publish similar policy):

(1) High risks must be accepted and approved by brigade commanders (Colonel) or higher. Moderate risks are approved at the Battalion Commander level.

(2) Extremely high risks must be accepted and approved through the USARAK G3 in coordination with the USAG FWA Commander to the USARAK Commander.

(3) When maneuver is scheduled in temporary or dedicated impact areas and residual risks are extremely high, major command commander-approval is required.

8-8. Medical Support/Medical Evacuation

See chapter 1, paragraph 1-7 for information on medical/MEDEVAC support.

Chapter 9
Demolitions

9-1. General

a. Demolitions firing on the range complex includes activities involving explosive charges, detonating cords, mines, shaped charges, cratering charges, bangalore torpedoes, field expedient munitions, and other exploding devices not fired from weapons. Demolition firing must be conducted per FM 3-34.214, DA PAM 385-63, and appropriate Soldier's manuals and training guides. Active demolition areas are announced in the weekly bulletin.

b. Range OICs and RSOs must be familiar with and have on hand appropriate weapon and ammunition publications governing handling and firing of demolitions and indirect-fire ordnance. These references include:

(1) DA PAM 385-63, Range Safety.

(2) AR 385-63, Range Safety.

(3) AR 385-64, U.S. Army Explosives Safety Program.

(4) FM 3-34.214, Explosives and Demolitions.

(5) FM 20-32, Mine/Countermine Operations.

(6) This regulation.

c. If a unit requires demolition safety certification, they will coordinate with the G37 Training for certified demolitions instruction.

(1) The 716th Explosive Ordnance Detachment commander may certify explosive-ordnance-disposal personnel.

(2) The Cold Region Test Center commander may certify Cold-Region-Test-Center personnel.

(3) If a unit within 1/25 SBCT requires demolition safety certification, they will coordinate for support through the 73rd Engineer Company. Other units will coordinate for demolition certification support through the Special Troops Battalion. Certification will be conducted on an as-needed basis.

d. The following individuals must be command safety certified per the USARAK demolitions safety certification program. Certification is valid for one year. Battalion commanders or equivalent level commanders will provide a list of certified personnel to Range Control.

(1) Range OIC.

(2) RSO.

(3) Personnel instructing or supervising demolitions preparation and firing.

(4) Personnel preparing or firing demolitions.

e. Students or Soldiers receiving training on demolition procedures are not required to be safety certified to prepare or fire demolitions, but must be directly supervised by an instructor or trainer who is certified per the USARAK demolitions safety certification program.

f. A demolition plan is required before training. The plan will consist of two parts: 1) a written description, shot-by-shot, of the demolitions training to be conducted; and 2) DA Form 2203-R (Demolition Reconnaissance Record) will be prepared by each unit when explosives used in demolitions (for example: C-4, dynamite, Trinitrotoluene (TNT), bulk explosives, and firing systems). A demolition plan is not required for Category 1 items, grenades, and mines.

(1) A copy of the training unit's DA Form 2203-R will be given to range scheduling four weeks before the unit requests use of the range for training purposes.

(2) The training unit's DA Form 2203-R must be approved one level above the unit requesting explosives, but at least at battalion level or equivalent for separate units.

g. General safety.

(1) The safety and precautionary information, including the operating procedures contained in DA PAM 385-63, AR 385-64, and FM 3-34.214, will be strictly adhered to when handling explosive and electric blasting caps. Two general rules relative to all explosive materials and situations are emphasized:

(a) Never handle explosives carelessly.

(b) The responsibility of preparation, placement, and firing of charges will not be divided. One person will be responsible for the supervision of all phases.

(2) FM 3-34.214 will be used as a guide to usage, handling, storing, transportation, and safety precautions for explosives and demolition equipment. The appropriate formulas are described and illustrated in FM 3-34.214.

(3) Report any unsafe act or damaged items to the range OIC/RSO.

h. Before explosive detonation:

(1) The person in charge of blasting operations will ensure the danger area is clear and guards are posted to prevent personnel from entering the area. The person in charge will personally make a last-minute check of the danger area before the first charge is detonated.

(2) All equipment that might be damaged by the explosion will be moved a safe distance away. Minimum safe distances at which personnel in the open are relatively safe from missiles created by bare charges placed on the ground are specified in DA PAM 385-63 and FM 3-34.214, table 6-2. Increased minimum safe distances for charges fixed to targets are specified in FM 3-34.214, table 6-3 (also see tables 9-1 and 9-2 of this regulation). In all cases, the greater distance in FM 3-34.214 will be used instead of the distances in DA PAM 385-63.

(3) The range OIC/RSO will ensure that the range is set up properly before training, i.e., the range flag is displayed at designated location, road guards or barriers are in position, visual reconnaissance of the area is conducted, and communications are established with Range Control.

(4) A briefing by the range OIC or RSO will be presented to the unit's chain of command and Range Control before conducting explosive operations. This briefing will include the information contained in the specific operation SOP and a detailed range safety briefing. The plan presented to Range Control is assumed to be approved by the range OIC/RSO's commander. Units should be prepared to adjust their plan with the advice of Range Control.

(5) Before use of any demolition range, preliminary demolition instruction must be given to ALL individuals participating in the training. Proper demolition techniques and safety will be emphasized.

i. During detonation of explosives.

(1) Uniform requirements are:

(a) All personnel will wear the Kevlar or the Military Advanced Combat helmet and hearing protection on the range.

(b) It is recommended that all personnel involved with explosive training be equipped with body armor and safety goggles.

(2) Procedures for firing systems and caps are:

(a) Always consider the sensitivity of electrical firing systems to static electricity. This is especially hazardous during dry, dusty weather. Personnel should periodically ground themselves to remove static charge. This can be done by placing a hand on the ground before grasping bare, electric, firing wire or cap wires.

Note: The hand that is grounded should not be the hand used to grasp the wires.

(b) Lightning is a hazard to both electric and nonelectric blasting caps. A strike or a nearby miss is almost certain to initiate either type of system. If lightning strikes, even when far away from the blasting site, it may cause high, local, earth currents and shock waves that may initiate electrical firing circuits. Therefore, all demolition training operations must cease during or on approach of an electrical storm or severe dust storm. Caps must be moved away from personnel and other demolitions.

(c) Premature detonation of electric blasting caps by induced current from radio frequency signals is possible. Radio transmission is prohibited within 110 meters of any electric blasting cap or electrical firing system.

(3) General procedures are:

(a) Make visual checks. The firing wire will not be hooked up to the blasting machine or power source nor will the safety be removed from the fuze igniter until the range OIC or RSO have visually checked each shot and ensured that all personnel, except those involved in the operation, are in a safe area.

(b) An audible warning will be given before initiation of the charges. This should consist of giving the verbal warning, "Fire in the Hole," three times.

(c) When the range OIC has requested and received permission from Range Control to go hot, the range OIC will control and log every shot fired on the demolition range. A copy of the log will be provided to Range Control at training completion.

(d) Roads and trails will not be cratered or blown unless approved in advance by Range Control.

(e) Range Control will be notified of the size and type of shot ten minutes before any detonation.

(f) When the shot is complete, the RSO will go downrange to ensure all charges detonated. All other personnel will remain in the safe area until given an "All Clear" by the RSO.

(4) Misfires are the responsibility of the using unit. Follow standard procedures and this additional guidance:

(a) Notify Range Control of the misfire.

(b) Never abandon misfired explosives—they are the unit's responsibility.

(c) Never attempt to move or disarm a misfire.

(d) Only one person should approach a misfire charge and then only after an appropriate "cook off" time has elapsed (a minimum of 30 minutes for all nonelectrically primed charges).

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

(5) Above ground misfires—take appropriate action to blow it in place.

(6) Below ground misfires—these will be cleared by explosive ordnance disposal units only. Misfires requiring explosive ordnance disposal will be reported to range operations immediately.

j. After detonation of explosives:

(1) Provide a copy of the shot-by-shot log to Range Control.

(2) Return any equipment receipted from Range Control.

(3) The unit conducting training will give Range Control the following information:

(a) Times the range was opened and closed.

(b) Type of training.

(c) Firing system types and amount consumed.

(d) Type and amount of explosives consumed.

9-2. Demolitions Limits

a. Demolitions fired on the range complex must be within the charge weight or item limits listed in the range SOP. Exceptions are considered on a case-by-case basis and must be applied for no later than four weeks before the scheduled training. Requests for exception should be sent through the major subordinate command chain of command through the USARAK G-3 to the USAG FWA Commander.

b. Maximum charge is defined as the total of any single, multiple, 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 15-minute interval is required.

c. The maximum charge listed for each demolition site will be strictly adhered to unless previously approved by the range facility manager. Limits listed are in pounds TNT.

d. The preferred method of employing steel cutting charges is in a bunker designed for that purpose. Steel cutting charges (amount of explosives and placement) will be calculated based on appropriate formulas and tables in FM 3-34.214. If a steel cutting bunker is not available, charges will be fired in an excavated pit that is at least 1 meter deep, and a mat made of hemp type material must cover the charge. Steel-cutting charges fired outside a steel-cutting bunker will not exceed 0.9 kg. Refer to chapter 17, FM 3-34.214 for information concerning charges placed on concrete.

e. For demolition charges (C-4 and TNT), for purpose of this regulation, separate detonations must occur less than 30 seconds apart to be considered simultaneous. Demolition charges above the weight

of individual blocks as issued (1/4 pound, 1 pound) will be assembled only for a specific training requirement, such as timber cutting. See paragraph 9-3.

f. Claymore mines are limited to ten in any simultaneous detonation (see FM 23-23). No other live, antipersonnel mines may be used in training. M15, M19, and M21 antitank mines will be armed and disarmed by combat engineer Soldiers and destroyed with one block of C4 after 25 cycles of being armed and disarmed. The mines will be armed and disarmed by one Soldier, supervised by one demolition-certified NCO, with all other Soldiers and range personnel outside of the minimum safe distance as specified in the table 9-2 or in a missile-proof shelter. Tilt rods will not be used with the M21 antitank mine.

g. Demolition exercises affecting special-use or restricted airspace that cannot be completed before the scheduled closing time (Monday through Friday) require a 3-hour notification for Range Control to grant additional firing time. This is the time required by the FAA to reroute air traffic. Weekends and holidays require a 24-hour notification for changes or extensions.

9-3. Special Demolitions Exercises

a. Any demolitions firing outside of an established demolition range or exceeding limits for a demolition range will be considered a special firing course and must be coordinated through the chain of command to Range Control. Requests received less than six weeks before planned firing will not be approved. If a special firing requires an environmental assessment, five weeks are required for processing per AR 200-2 and chapter 2 of this regulation.

b. Hearing-protection requirements for special demolitions exercises are per DA PAM 385-63.

9-4. Improvised Explosive Devices

Any Improvised Explosive Devise (IED) or unusual use of explosive/components will be fully described on the shot-by-shot description. The description will include a picture or sketch of the device and requires range-control approval.

9-5. Minimum Missile-Hazard Distances

Minimum safe distances for personnel in the open are specified in tables 9-1 and 9-2. When charges are fixed to targets and not simply placed on the ground, use the farthest, safe distance specified. Note that the distances in table 9-2 are depend on target configuration, not quantity of explosives.

9-6. Search After Detonations

After each detonation, a search shall be made of the surrounding area for unexploded explosives. Items of material, such as lumps of explosives, may be picked up and prepared for the next detonation. This search will be conducted by the range OIC or RSO.

9-7. Fill in Shot Holes

All shot holes will be filled in at the end of each day. All material such as fuze igniters, burnt-time fuzes, etc., will be removed from the demolitions area before explosive operations continue.

9-8. Class V Accountability

The range OIC or RSO will ensure strict accountability of all Class V items.

Table 9-1
Safe distances for personnel in the open (near bare charges)

Explosive Weight (pounds)	Safe Distance	
	Feet	Meters
27 or less	985	300
30	1,021	311
35	1,073	327
40	1,123	342
45	1,168	356
50	1,211	369
60	1,287	392
70	1,355	413
80	1,415	431
90	1,474	449
100	1,526	465
125	1,641	500
150	1,752	534
175	1,838	560
200	1,920	585
225	1,999	609
250	2,067	630
275	2,136	651
300	2,199	670
325	2,258	688
350	2,313	705
375	2,369	722
400	2,418	737
425	2,461	750
500	2,625	800

Source: FM 3-34.214, Table 6-17.Table 9-2
Safe distance for personnel (charges on target)

Serial	Charge Type	Target	Charge Size	Radius of Danger Area (m)	Remarks
A	**B**	**C**	**D**	**E**	**F**
1	Blasting caps, Primers, Detonating cord (in the open)	—	—	20	For service personnel under supervision. Applicable to all serials.
2	Cutting	*a.* Trees *b.* Concrete columns and beams *c.* Metal girders and plates, guns and so forth	*a.* Any *b.* Any *c.* Any	*a.* 300 *b.* 500 *c.* 1,000	*a.* — *b.* — *c.* Fragments may fly up to 1,000 meters in all directions.
3	Concussion		Any	1,000	If personnel are wearing helmets, the safe distance may be reduced to 500 meters. Consider the strong blast effect when considering buildings as potential blast shelters.
4	Cratering	Roads and airfields	*a.* Up to 2 kg *b.* Up to 30 kg *c.* Over 30 kg	*a.* 100 *b.* 300 *c.* 500	—
5	Mines	Piers, abutments, retaining walls	Any	500	—
6	Borehole	Rock, masonry, concrete, brick	Any	300	—
7	Breaching	Reinforced-concrete beams and slabs, mass-concrete walls and obstacles	Any	1,000	If personnel are wearing helmets, reduce the safe distance to 500 meters. Consider the strong blast effect when considering buildings as potential blast shelters.

Serial	Charge Type	Target	Charge Size	Radius of Danger Area (m)	Remarks
A	B	C	D	E	F
8	Shaped	Concrete, steel	Any	1,000	When those charges are fired into the ground vertically, you may reduce the safe distance to 300 meters.
9	Bangalore torpedo	Wire obstacles	*a.* — *b.* —	*a.* All right angles to axis 1,000 meters. *b.* In the line of the axis, 200 meters for standing personnel and 100 meters for prone personnel.	
10	M180	Roads and airfields	1-15 kits	1,200	Fragments may fly up to 1,000 meters in all directions

Legend: kg—kilograms
Notes: 1. The air clearance required is the ground safety distance plus 500 meters above the explosive area.
2. The ship clearance is the same distance as for the ground safety distance.
3. Source for Serials 2, 7, 8, and 9 is FM 3-34.214.

Chapter 10
Airspace

10-1. General

Special use airspace is a resource managed in coordination with ranges, training facilities, and land.

10-2. Airspace Use and Facilities

Airspace use governed by this regulation encompasses range-control-managed sites and activities that require activation of the restricted airspace, or are of scope requiring publishing of a Notice to Airmen. These activities may include, but are not limited to the following:

a. Artillery and mortar firing.

b. Close-air support, joint-air-attack training, or aircraft reconnaissance.

c. Parachute drops (personnel and equipment or cargo).

d. Field-airstrip operations.

e. Assault airstrips and the adjoining, low-altitude parachute-extraction system strips.

f. Aerial and Helicopter-door-gunnery training.

g. Aviation unit field exercises from a ground base in a training area.

h. Radio-controlled munitions, aerial-target operations.

i. Small-arms and subcaliber-device ranges.

j. Aerial delivery of live or simulated ordnance.

k. Surface-to-surface and surface-to-air firing.

l. Laser weaponry and targeting devices.

m. Aircraft lights-out operations between sunset and sunrise.

n. Demolitions.

o. Unmanned Aerial Systems (UAS).

10-3. Notice to Airmen

a. FAA regulations require Notices to Airmen when a hazard exists to the safe flow of air traffic.

b. Range Control at each post is responsible for scheduling and activating restricted airspace through the FAA, military airfields, and flight service stations.

c. Range Control will advise Terminal Radar Approach Control and the military airfields when the reservation's restricted airspace is to be closed (hot) or open (cold). This is done on a daily basis with Range Control providing these agencies with the proposed schedule of airborne operations and range firing for the following 7-day period.

d. Changes to daily-restricted airspace requirements can be made with Terminal Radar Approach Control with a minimum notification of 3 hours, Monday through Friday. Changes for weekends and holidays require 24-hour notification.

e. Units canceling or delaying activities published by Notices to Airmen will inform Range Scheduler immediately.

10-4. Restricted Airspace Usage

a. "Controller" and "user" are special terms in the context of FAA restricted airspace. The controller of restricted airspace is the FAA. The user is USAG FWA, with day-to-day management by Range Control.

b. The restricted airspace is composed of subunits with a vertical limit established by the FAA for each subunit. The restricted airspace at FRA is identified as R-2203 with Subunits A, B, and C. The vertical limits for R-2203A is surface to but not including 11,000 feet mean sea level (MSL), R-2203B is surface to but not including 11,000 feet MSL, and R-2203C is surface to but not including 5,000 feet MSL. At FWA, R-2205 is surface to but not including 20,000 feet MSL. DTA is R-2202A and R-2202B surface to but not including 10,000 feet MSL, R-2202C is 10,000 feet MSL to and including FL310 (31,000 feet) and R-2202D is above FL 310 to unlimited.

c. When the restricted airspace is active, access for aircraft not involved in the training event will be controlled in the following manner:

(1) Due to weather or air-traffic congestion, it is sometimes necessary that military airfields, Air Force bases, or Terminal Radar Approach Control utilize the restricted airspace for air traffic control. When this occurs, RCFDO is contacted by those agencies requiring a stop fire for the above conditions. Upon notification, RCFDO will contact the firing unit(s) and attempt to arrange for a stop fire of all live fires in the restricted area. The duration of the stop fire under normal conditions is will not exceed 15 minutes.

(2) All activity in the restricted or controlled firing areas will be placed into an immediate "cease fire" for lifesaver missions and will not be resumed until clearance is given by RCFDO.

(3) Aircraft will contact RCFDO (FM 38.30) before entering the restricted airspace or other training lands to receive flight advisory or clearance. Range Control is the only agency to grant clearance into the restricted airspace when it is active. Eielson Air Force Base is the contact point when restricted areas R2202, R2205, or R2211 are scheduled by Range Control for use by United States Air Force. When this occurs, the airspace is under the control of the United States Air Force.

(4) Aircraft will maintain constant radio communications with RCFDO when operating in and around the restricted airspace.

(5) Aircraft will cease operations and depart the restricted airspace immediately upon the request of the RCFDO.

(6) Aircraft will report to the RCFDO when the mission is completed and it has departed the restricted area.

10-5. Unmanned Aerial System (UAS) Operations in Approved COAs.

USARAK Regulation 95-23 governs UAS operations, (referred to by the Federal Aviation Administration as Remotely Operated Aircraft (ROA), air vehicle operator/crewmember (AVO) training and currency requirements, and flight rules for United States Army Alaska UAS systems.

a. UAS operations. UASs will only be operated in active Restricted Airspace except as provided in the current Certificate of Authorization (COA). Requests for UAS operations outside of Restricted Airspace and current COA parameters will be processed through the appropriate Department of the Army Representative (DAR) for the specific FAA region.

b. Notices to Airman (NOTAMS). UAS operations will be reported to the controlling Flight Service Station, prior to UAV operations in order to facilitate the posting of NOTAMS.

c. Land and airspace coordination. UAS land and/or airspace requirements will be coordinated with the appropriate Range Control scheduling office at least 30 days prior to any UAS operations.

d. Mission briefing and risk assessment. A mission briefing and risk assessment will be completed prior to each UAS mission. A copy of the briefing and risk assessment will be provided to range control.

e. UAS lighting requirements. UASs will have appropriate lighting as per AR 95-23. Blackout operations may be conducted in Restricted Airspace after proper coordination with the appropriate airspace managers and Army Range Control, as available, and the UAV has entered its mission profile. The UAV will have appropriate lighting for all take-offs, landings, and when not in a mission profile.

f. Transponder requirements. Each UAS will have an operational transponder with altitude encoding capability. If Air Traffic Control (ATC) is unable to receive the UASs transponder, the mission will be canceled and the UAS returned for landing as soon as practicable.

g. Communication requirements. Voice communication will be established with ATC and Army Range Control (as available) prior to and during all UAS operations. Once flight operations have commenced, a voice communication check will be made every hour to verify the communication link. If the voice communication link with ATC and Army Range Control, fails after flight operations have been established, every effort will be made to re-establish the link. If all efforts fail, the UAS will continue on the established flight plan and land per the flight plan schedule.

h. Multiple UAS operations. When operating two UASs at a time, only one will be in the corridor specified in the current COA at any given time.

i. Chase aircraft operations. Chase aircraft support for the RQ-7 model design series Shadow 200 UAS may be necessary when operating in certain corridors. Chase aircraft will not be used for night operations. The purpose of the chase aircraft is to increase see-and-avoid safety criteria. Prior to any chase aircraft support of UAS operations, coordination will be made with the AVOs and the pilots flying the chase aircraft to conduct an aircrew briefing. As a minimum, the aircrew briefing will cover the following:

(1) Mission overview.

(2) Takeoff time and location.

(3) Flight route (corridor).

(4) Weather.

(5) Communication procedures and frequencies, to include lost communication procedures.

(6) Airspeeds and altitudes.

(7) Separation criteria.

(8) Break-off procedures.

(9) Inadvertent Instrument Meteorological Condition (IIMC) procedures.

(10) Actions to be taken in the event visual contact is lost with the UAS.

(11) Return time.

(12) UAS/aircraft link up location and procedures.

j. UAS weather requirements are as follows:

(1) UASs will not be flown into known or forecasted conditions that are prohibited by the UAS operator's manual.

(2) Minimum departure, enroute, and arrival weather is 1000 foot ceiling and 3 miles visibility.

(3) Minimum operating distance from clouds is 500 below, 1000 feet above, and 2,000 feet horizontal when conducting flights at 10,000 feet mean sea level (MSL) and below.

(4) UASs will maintain Visual Meteorological Conditions (VMC) and visual contact with the ground at all times.

(5) Notices to Airman (NOTAMS). NOTAMS will be checked by the AVO prior to flight to verify there is no conflict with the planned mission and to ensure their UAS mission has been placed in the NOTAMS.

(6) Publications. The appropriate flight publications will be available and current for the area of operations. Restricted Airspace vertical and lateral boundaries will be verified with the appropriate flight publications prior to conducting flight operations.

(7) Flight plans. A formal DD Form 175 flight plan is not required. However, the appropriate Flight Service Station will be notified with pertinent flight plan information prior to any UAS operation. Any delays, corridor changes, or extensions to UAS flights will be coordinated through the appropriate FSS, ATC, and Range Control office. The unit SOP will specify the requirements for a flight operation's log.

(8) Takeoff. Five minutes prior to takeoff, FSS, ATC and Army Range Control, will be notified of the impending UAV departure.

k. After takeoff. Immediately after takeoff, ATC and Army Range Control, and will be called to verify a functional voice communication link and functional transponder link. FSS will be notified with actual takeoff time.

l. Altitude restrictions. The following restrictions apply:

(1) Minimum altitude for UAS operations, except for takeoff and landing, is 1,000 feet above ground level (AGL), parachute minimum deployment altitude, or minimum altitude for line of sight with ground data terminal (GDT), whichever is higher.

(2) Maximum altitude for UAV operations is 10,000 feet MSL. Operations above 10,000 feet MSL but below 14,000 feet MSL may be conducted if the weather visibility is forecast to be greater than 5 miles, the UAS is able to maintain a distance from clouds of 1,000 feet below, 1,000 feet above, and 1 mile horizontal and the mission has been approved by the first lieutenant colonel or above in the chain of command.

(3) Deviations from altitude restrictions are authorized for safety at the AVO's discretion.

m. Landing. Fifteen minutes prior to departing the operational area, ATC and Range Control will be notified of intent to return for landing. The AVO will immediately notify ATC, FSS, and Range Control when the UAS is safely on the ground and mission complete. If necessary, a post flight critique will be conducted when ATC and Range Control, or any other appropriate agencies when problems are encountered.

10-6. Coordination Areas, Military Training Routes, and Military Operations Areas

a. Military Operating Areas (MOAs) and Military Training Routes are airspaces that are activated for the use of high-speed (excess of 250 knots), low-altitude aircraft. Coordination areas are the portions of MOAs and military training routes that overlay selected USAG FWA training lands. Each Range Facility Manager will identify these areas when scheduling training lands and advise the using unit of use priorities.

b. Coordination Areas are scheduled like restricted areas and serve the purpose of separating low and high performance aircraft and training activities.

10-7. Violations

Aircraft that violate the restricted airspace will be reported to the Range Control Fire Desk Operator (RCFDO) immediately. Units that observe the violation will make every attempt to get the identification (tail) number of the aircraft, color, markings, and the direction it was flying.

10-8. Hazard Reports

a. An Operational Hazard Report (DA Form 2696) will be submitted per appropriate ARs and Air Force protocol. The aviation safety officer and the Range Manager are service points of contact for hazard reports.

b. Army ground personnel observing a hazard may submit a DA Form 2696 directly to the aviation safety officer or may report details of the incident to Range Control.

c. Air Force units will submit Air Force Form 651 (Hazardous Air Traffic Report (HATR)) per instructions.

d. Provide the appropriate Range Control a copy of any DA Form 2696 or Air Force Form 651 that involved Army airspace.

10-9. High Performance Aircraft Operations and Ordnance

a. United States Air Force high performance aircraft are routinely scheduled, per chapter 3, into restricted airspace for unit training, close-air support, joint-air-attack training, and reconnaissance flights. These activities are scheduled by block times allowing reasonable periods for the training events.

b. Check fires imposed for high-performance aircraft activities will be lifted when the aircraft clears the restricted area.

c. Block times must be observed. If other scheduled training prevents time extensions, mission aircraft must be turned away.

(1) Close-air-support activities must be controlled by a terminal-attack or a forward-air controller. The terminal-attack controller will establish contact with the RCFDO (FM 38.30) at least one hour before the scheduled time on target and must monitor range operations continuously until the mission is complete. The RCFDO will call the terminal-attack controller for unscheduled periodic radio checks.

(2) Exercises involving aircraft and indirect fire must be coordinated beforehand and controlled by the ground safety officer located at the controlling, tactical operations center throughout the duration of the exercise.

10-10. Drop-Zone Operations

a. Scheduling. Drop Zones (DZs) are training facilities scheduled separately from the surrounding training areas. Airdrops are scheduled by block times allowing a reasonable period for events, plus time for equipment and personnel recovery.

b. Medical support. Personnel parachute drops are a level 4 activity. Refer to chapter 1, paragraph 1-7 medical support and MEDEVAC requirements.

c. A standby helicopter must be scheduled to provide additional medical support for all Army personnel drops on remote DZs. The helicopter will standby as close to the DZ as practical for jumps at remote DZs (Husky DZ at FWA is considered a local DZ and aero-medical support can be accomplished from Ladd Army Airfield or Eielson Air Force Base). The unit scheduled for training will ensure the helicopter support is available and pilots are updated on all time-on-target changes. Range Control will not grant waivers to the helicopter support requirement. Unit failure to coordinate for this additional medical support will result in a delayed or a no-drop situation. Ground-evacuation vehicles may be used when helicopter support is not available to DZs located close to the containment area. (Malemute DZ at FRA is considered local DZ and ground-evacuation vehicles can be used in lieu of standby helicopter support.) All DZs at DTA when used for personnel drops are considered remote DZs.

d. Drop zone survey. A current, approved DZ survey must be on file at Range Control before any DZ can be used for personnel drops.

e. Providing time on target. Units provide time on targets to RCFDO 72 hours before the date scheduled for use of a DZ.

f. Hazards. The restricted airspace will be activated for night jumps by unlit paratroopers.

g. Procedures.

(1) DZs will be manned and operated per current regulations and doctrinal publications of the service conducting the jump. Army personnel involved in multi-service jumps will comply with Army Regulations. Nonmilitary jumps will be conducted per United States Parachute Association guidelines and rules. DZs must be signed for 24 hours before scheduled training by the DZSO/DZ safety NCO or combat control team. During night personnel drops, a member of the DZSO party must use night vision goggles to track jumpers.

(2) DZs will be opened and closed on the Range Control net (FM 38.30) only by the unit or agency scheduled. Back-up communications are required. When an Army DZSO is present, he/she will request opening; during United States Air Force-only drops, the combat control team will open. Once a DZ is opened, the Range Control net must be monitored at all times by the DZSO or the combat control team.

(3) DZSO and DZSTL qualification and certification is covered in FM 3-21. 220.

(4) The RCFDO may grant additional time on a case-by-case basis, but if other scheduled training prevents an extension, mission aircraft will be turned away.

(5) The DZSO or the Special Tactics Team (STT) will give the RCFDO 30-minute and 10-minute warnings. At the 30-minute warning, range operations will alert the firing units of the upcoming check fire. The use of a DZ may require check fires of all indirect firing points. At the 10-minute warning, the RCFDO will initiate and confirm the required check fires.

(6) RCFDO will not relay drop information between the ground party and aircraft conducting airdrop operations. Units controlling DZ operations must ensure that they have on-site, reliable, communication equipment for contacting and passing DZ information to participating aircraft.

(7) Lift check fires when the DZSO or STT informs the RCFDO that mission aircraft have departed the restricted area and all jumpers who left the aircraft are accounted for on the ground.

g. Shared use by ground and air units.

(1) DZs are not part of the training areas in which they are located and are off limits to ground units and their vehicles unless scheduled for ground training. Hot DZs are off limits to all personnel and vehicles not authorized by the DZSO or the combat control team. Construction of tactical emplacements and barriers on DZs must be approved by Range Control and cleared from DZs immediately after training is completed.

(2) When the DZs and surrounding training areas are scheduled for simultaneous air and ground use by different units during airdrop operations, the ground unit will not bivouac or conduct operations within the established buffer zones for the DZ.

h. Malfunction-noncommissioned officer.

(1) Must be a qualified parachute rigger from the unit normally providing air items.

(2) For specialized operations using multiple DZs where it is impractical to have a parachute rigger on each DZ, the DZSO or assistant DZSO may perform the malfunction-NCO duties, provided they have received training from a qualified, current parachute rigger on malfunction duties. This will only be done as a last resort, after every effort has been made to obtain a parachute rigger.

(3) There must be a parachute rigger present for personnel parachute operations and aerial-delivery exercises. During night personnel drops, night vision goggles will be used to track jumpers.

10-11. Pilot Notification Requirements during Airdrop Operations

Pilots of aircraft for airdrop operations in controlled airspace must establish communications by radio with the nearest FAA air traffic control facility or FAA flight service station a minimum of 5 minutes before an airdrop operation to:

a. Receive information in the aircraft about air traffic in the vicinity of the airdrop activity.

b. Notify air traffic control of the type of drop (personnel or cargo) and the drop altitude.

c. Notify air traffic control when the airdrop operation begins (first chute deployed) and when it is completed (last chute on the ground).

d. When airdrop operations are conducted in a restricted area that has been designated as ~~"h~~hot," the above requirements do not apply.

10-12. Night Vision Goggle (NVG) Training

DZs and Flight Landing Zones (FLZs) scheduled for NVG or other aviation, night operations training. Ground unit commanders not scheduled for DZ or FLZ training must keep clear of DZs and FLZs at night and will not interfere with aviation operations, especially pyrotechnics or vehicle light.

a. Restricted airspace must be activated to 1,500 feet above ground level for lights out (black out), NVG training.

b. Units requesting to conduct NVG training must ensure the type of training (i.e., lighted/ lights out) is reflected on the reservation contract.

Chapter 11
Laser Training

11-1. General

Routine laser operations can be conducted at FWA and DTA and are confined to the firing points and target areas listed in paragraph 11-3. Request for lasing in other modes or from other locations must be processed as a special firing course per chapter 8. Because of the limited, down-range distance and backstops, routine laser operations cannot be conducted at FRA.

11-2. Scheduling

Laser firing points must be scheduled per chapter 3.

11-3. Laser Range Areas

Laser training is directed into the designated impact areas. At FWA, Stuart Creek Impact Area, in R-2205, is the only impact area that can be used for routine laser training. At DTA, the individual laser range SOP procedures list limits and device-control requirements. Lasing is authorized per the range SOP for systems authorized in Military Handbook 828A or as authorized by other official messages. Other laser devices may be used only after coordination with range operations. Laser training with any device inside the cantonment area is forbidden. Observation posts and ranges used for laser training must be signed for at Range Control.

11-4. Warning Signs

Warning signs will be posted for laser activity.

11-5. Laser Operations

a. All laser training operations must be under the direction of a command, safety-certified laser range OIC and RSO. (See sample memorandum at fig 7-1.) Both must be familiar with the operational and safety features of the equipment in use, as well as with DA PAM 385-63, and must be on site at all times during laser operations. The unit will provide Range Control with a list of individuals certified to perform as range OIC/RSO for laser operations.

b. The range OIC and RSO must:

(1) Sign for the observation post or range and the laser firing point SOP packet from range operations.

(2) Conduct a safety briefing. A laser safety orientation will be given to all personnel who use or work with laser devices to include an explanation of hazards and safety requirements before they commence laser operations (Refer to: Chapter 18, DA PAM 385-63, paragraph 18-1.d.). Laser devices must be treated as loaded weapons.

(3) Ensure that the personnel to be trained have positive identification of the laser-range limits, both horizontal and vertical, and that lasing remains within those limits.

(4) Ensure that at least one member of the party watches downrange for vehicles or aircraft beyond the target area. WARNING: BINOCULARS MUST NOT BE USED FOR THIS SURVEILLANCE AND THE LOOKOUT MUST NOT LOOK DIRECTLY AT THE TARGET DURING LASING.

(5) Ensure laser devices are activated only at the firing point after being properly mounted. In event of loss of control of the laser, such as an activated device being dropped or knocked over, the RSO will call an immediate check fire and inform RCFDO. Personnel who may have been exposed to a laser beam require medical examination.

(6) Eye safe laser training does not require protective eye wear. Ensure protective eye wear is available for use by the range OIC, RSO, downrange observer, and visitors if required by a special operating condition.

11-6. Restrictions

a. Laser-device batteries or other power sources will not be connected until the range OIC and RSO are ready to commence training. Powered lasers must be directed into the authorized impact area.

b. Unless the range OIC has coordinated with Range Control to conduct designating, the AN/TVQ-1, ground-laser location designator will be used in the range finding mode only. To ensure the ground laser location designator is not inadvertently switched to "Designate" and to limit the downrange hazard, any ground laser location designator used must always have the attenuator filter assembly (glass filter and switch cover) installed during training.

c. The AN/PAQ-1 laser target designator will be used on laser ranges only when tactical aircraft are available for concurrent, ground-air, target designation training.

Chapter 12
Training Areas

12-1. General

a. Lands available for tactical exercises and field training outside the cantonment areas are divided into training areas and are identified by numbers. Access for any purpose must be scheduled and approved by Range Control.

b. Scheduled training areas are announced in the Post Weekly Bulletin based on information provided by Range Control.

c. For information on medical support of field exercises and communication requirements in training areas, see chapter 1, paragraph 1-7 and paragraph 1-8.

d. Post perimeter fences and gates will not be cut or breached by units in training.

12-2. Cantonment Areas

Cantonment areas are under the control of the Garrison Commander who may assign assembly areas to units. Use of the parade fields is controlled by Garrison Operations.

12-3. Scheduling

a. Training area scheduling is conducted per chapter 3. An approved copy of the RFMSS request summary must be on site.

b. Units need not schedule a training area for the purpose of passing through an established range road enroute to another assigned training area or facility.

c. Occupation of an impact area is prohibited. Personnel desiring access to an impact area for emplacement of targets or other activities will request permission through the Range Facility Manager from the IRO.

d. Upon completion of an exercise requiring the use of training areas, the unit commander or his/her designated representative will advise the RCFDO of the number of personnel trained and any expenditures by DODIC.

12-4. Training Facilities in Training Areas

a. Many training areas contain training facilities, such as DZs, artillery firing points, and hardened bivouac sites as listed in appendix B. The scheduling of a training area never automatically includes the training facilities therein, and a unit that is granted access to a training area must consider all training facilities off limits unless they are scheduled in conjunction with the training area. Certain training facilities, such as DZs, firing points, landing zones, and ranges constitute a hazard when in use and must be avoided. Units using training areas must check the weekly range bulletin, daily range schedule, or call the RCFDO to determine what training is being conducted on a given day. Road guard requirements are mandatory. Ground units will not interfere with night aviation operations. Coordination is required for concurrent ground and air use of training areas, landing zones, or DZs.

b. Procedures for requesting off-post training areas are in USARAK Regulation 405-2 and this regulation.

(1) Requests for maneuver permits must be submitted a minimum of 110 days before the date of the training event.

(2) IAW USARAK Regulation 400-5 requests to use Knik and Spencer glaciers will be forwarded by memorandum through the USAG FWA Installation Range Office to the USAG FWA Commander.

(3) Request for use of Black Rapids training site should be forwarded by memorandum to the commandant of the Northern Warfare Training Center.

c. Training activities on nonmilitary lands will utilize applicable provisions in this regulation as guidelines for conduct. Off-post land use requires a permit as described in this regulation, including the routinely used areas described in USARAK Regulation 405-2. The requirements are normally more stringent than the requirements for conduct of military activities on military land.

d. Range Control has the authority and responsibility to inspect off-post, training activities. Units will coordinate with Range Control for inspections. An after-action report may be required by Range Control or the USAG FWA Commander.

12-5. Foot Marches

a. Foot marches are conducted routinely on all posts and must be scheduled with Range Control. Units will submit an overlay reflecting a route of march with the request. Foot marches will be confined to road shoulders. Lead and trail personnel must wear reflective vests. All vehicles must slow to 10 miles per hour or less when meeting or passing foot marches.

b. Night foot marches require lead and trail personnel with flashlights and reflective vests to warn oncoming or overtaking traffic. Oncoming vehicles will slow to 10 miles per hour or less and switch to blackout, marker, parking lights, or will pull off the road at the nearest safe exit, extinguish all but marker or parking lights and await clearance from the trail personnel.

c. The OIC/NCOIC will contact the RCFDO at the start and end of the road march.

12-6. Vehicle Marches and Convoys

a. Vehicular operations and marches are routinely conducted to gain access to scheduled ranges, training areas, or training facilities. Units are not required to schedule training areas to transit on established range roads enroute to a training facility or another training area. However, units conducting vehicular convoy or march training must schedule the event through Range Control per chapter 3 and provide an overlay reflecting the route of march.

b. Commanders are responsible for ensuring vehicle and equipment operators are properly trained in the use of night-vision devices and operation of vehicles under blackout driving conditions, to include sustainment training per AR 600-55. When night-vision devices are used, the training in AR 600-55, chapter 8 and appendix I is the standard.

c. Individual vehicles and convoys meeting or passing Soldiers on the road must slow to 10 miles per hour or less.

d. Night vehicular marches are conducted as follows:

(1) Blackout road marches will not be conducted in cantonment areas or on public routes.

(2) During blackout road marches, a pilot vehicle and trail vehicle will be designated. The pilot vehicle will flash its headlights to warn oncoming NVG or service-drive vehicles. Oncoming vehicles will slow to 10 miles per hour or less and switch to blackout, marker, or parking lights or will pull off the road at the nearest safe exit, extinguish all but marker or parking lights and await clearance from the trail vehicle. Trail vehicles must be illuminated with hazard flashers or a rotating, amber light.

(3) Trainers conducting NV marches must ensure that safety briefings include a review of NV limitations (especially the restriction of peripheral vision), limits in seeing through obscurants (smoke, fog, dust), the need for preventive maintenance and careful handling, the risk of overdriving field of view, and temporary loss of night vision.

e. Wheeled vehicle convoys, day or night, must perform the following actions at road crossings:

(1) Stop and dismount guards and ground guides as indicated below.

(a) Place guards not less than 100 meters to either side of the crossing site on the paved road to warn oncoming traffic. Guards must wear reflective vests and, if after the hours of darkness or under conditions of reduced visibility, have military flashlights with white cones.

(b) Place a ground guide at the crossing site with clear view in both directions to act as convoy traffic controller. This guide will slow or stop the crossing military vehicles to cause them to yield right-of-way to oncoming traffic.

(2) Use service drive lights if crossing under conditions of reduced visibility, during hours of darkness, or after dusk.

(3) Cross vehicles, one by one, under the direction of the convoy traffic controller.

(4) After road crossing is completed, turn off headlights (if appropriate), recover guards, and continue the march.

12-7. Speed Limits

a. The vehicle speed limit on all paved or unpaved range roads is 25 miles per hour unless otherwise posted. Many roads are heavily rutted and potholed and may require very slow driving to ensure safety. Vehicles overtaking or meeting marching troops will slow to 10 miles per hour. Motorized units conducting high speed training must do a slow drive through of their training areas to check for and warn other authorized users, military or civilian, before going full speed.

b. When operating under blackout-drive conditions, all vehicles will maintain a speed limit of five to ten miles per hour (8 to 16 kilometers per hour). These speed limits are mandatory for all road types and conditions, including both convoy or single-vehicle operations.

12-8. Railroad-Crossing Sites

Only approved railroad-crossing sites will be used to gain access to a training site or facility. See paragraph 12-1e.

a. The railroad right-of-way on FRA extends 100 feet from centerline to either side of the tracks. This right-of-way is off limits to all personnel (except for the two authorized crossing sites at Loop Road (UC547976) and Artillery Road (UD602013)) unless cleared through the Alaska Railroad by Range Control.

(1) The railroad tracks and right-of-way are not to be considered a part of the surrounding training areas and commanders will plan their training to avoid encroachment in this area. Commanders will include a warning about staying clear of the railroad right-of-way in the safety portion of all operation orders before training in the vicinity of the railroad tracks.

(2) Commanders may request permission from Range Control to cross the tracks on foot at other than the designated crossings. Commanders requesting such permission will submit a memorandum. Commanders will specify the intended crossing site, the number of personnel, and the crossing date and

time. Range Control will then inform the Alaska Railroad dispatcher of the intended crossing. These procedures do not apply to vehicles, which are only authorized to cross at the sites specified in paragraph e above. Leaders responsible for dismounted, railroad-track crossings must remember that approaching trains are often not seen or heard until they are too close to avoid.

(3) Road guards will be used for convoys at crossing sites. The road guards will watch for approaching trains and stop convoy vehicles, not trains, when a train is approaching. Road guards will be briefed on the importance of stopping vehicles at least 20 feet from the tracks. They, themselves, will not get within 20 feet of the tracks when a train is passing because of the possibility of flying rocks or shifted loads causing a hazard out to 20 feet.

(4) If an emergency situation arises concerning the Alaska Railroad, initiate the following action:

(a) Contact Range Control, give a brief description of the incident and location. Range Control will also notify the command operations center and Installation Safety.

(b) Send a person 1 and 1/2 miles in each direction from the incident on the tracks and direct those persons to signal any vehicle (i.e., engine, high rail, gas car, etc) to stop. The daylight signal for stopping railroad vehicles is to wave the arm at waist level. The night signal is a red-light half circle.

(5) The minimum clearance for personnel walking near the railroad is 20 feet in each direction from center line and that is only with flagging protection provided by Alaska-Railroad personnel.

(a) Permission from the Alaska Railroad, through Range Control, is required for personnel or vehicles to enter the 100-foot right-of-way anywhere along the track at other than the authorized crossing sites.

(b) Permission to enter the right-of-way may be granted up to the minimum clearance distance of 20 feet. If there is a requirement to use the tracks or trestle due to a training scenario, special permission must be granted, which will include flagging protection, provided at a cost, from Alaska-Railroad personnel.

12-9. Light Line

a. Blackout-drive roads are closed to traffic other than those using blackout drive from 21 June through 21 September (2000 to 0600) and from 22 September through 20 June (from 1 hour after sunset to 1 hour before sunrise). This is effective Monday through Thursday, except holidays. On Friday, and the day preceding a holiday, the use of blackout drive will end at 2400.

b. Blackout-drive marches on holidays or weekends must be scheduled with Range Control at least six weeks in advance. The request will include the submission of an overlay outlining the route of march, start point, release point, and inclusive march times.

c. Those units requiring blackout-drive training must also ensure appropriate intersections are manned by road guards equipped with flashlights or lanterns. Road guards will detour traffic not in blackout drive. Units wishing to conduct blackout-drive training not in conjunction with regularly scheduled training must schedule this as they would any other use of a training area.

(1) On FRA, all roads south of Ship Creek and north of grid line 98, except for Poleline Road and the road to Otter Lake Lodge, are blackout-drive areas. Poleline Road intersects with Artillery Road at UC613016. As vehicles enter Artillery Road, they must switch to blackout drive.

(2) On FWA, all roads in the YTA and all areas south of the Tanana River are blackout-drive areas.

(3) On DTA, all blackout-drive marches must be approved by Range Control 48 hours before the activity.

(4) The lead and trail vehicle will have communications capability with each other in case of emergency.

(5) Vehicles will not move in any bivouac area without dismounted guides.

(6) Blackout drive is not required when responding to an emergency situation.

12-10. Roads

Numbered, lettered, and improved roads will not be cratered, trenched, or booby trapped. Units may use secondary roads and trails to train up for this requirement and simulate on major road with removable barricades. These secondary roads may not be restricted from public use without prior notice given in the newspaper or radio. An overlay will be submitted to Range Control to show the secondary roads and trails that will be used to do the training.

12-11. Corridor between FWA and DTA

a. Units can conduct overland travel between FWA and DTA. Trail use can be scheduled any time between 1 November and 1 April. The end points are in the vicinity of grid 9734 on FWA and grid 1114 on DTA. There is no established trail. The first unit to use the overland route will establish a trail and subsequent units are expected to follow it. The adjacent areas are private land and must be avoided.

b. Compliance with the stipulations listed below is mandatory:

(1) Units using the trail will schedule travel with either FWA or DTA Range Control. Report the number of troops, type of vehicles, time on the trail, and incidents to the scheduling Range Control as soon as contact can be established.

(2) No bivouacs or tactical maneuvers are permitted between FWA and DTA.

(3) Avoid tree and brush cutting, especially within 300 feet of a stream. If minor leveling of the route your unit selects is required, use ice and snow. Do not bulldoze or use the frozen soil or tundra vegetation for leveling.

(4) No trash disposal or campfires are permitted.

(5) Contain any petroleum, oil, and lubricant spills and report them to the RCFDO immediately.

(6) A detailed, expanded list of permit provisions can be obtained from Range Control.

12-12. Construction

Units wishing to build permanent or semi-permanent barriers, emplacements, or facilities in training areas must have clearance from Range Control. Long-term maintenance must be addressed in the requesting memorandum.

12-13. Pyrotechnics and Fires

a. Training OICs must be alert to forest or range fire hazards associated with burning-type pyrotechnics. Fire hazard levels and restrictions are in paragraph 4-2.

b. Forest or range fires will be reported to the RCFDO immediately (FM 38.30). Troops on the scene will attempt to control fires which are less than 100 square feet as long as personnel are not endangered.

12-14. Trespassers

Commanders and trainers must notify the RCFDO of any observed unlawful or suspect act, such as unauthorized personnel, poaching, wood cutting, dumping, dirt bike, 4-wheel drive vehicles, off-road-vehicles personnel discharging firearms, abandoned vehicles, remains of vehicles. The RCFDO will inform the Military Police Desk Sergeant and the Conservation Officer.

12-15. Policing of Training Areas

Commanders scheduling training areas for field training exercises must also schedule clean-up time to ensure that holes are filled, obstacles removed, and trash policed.

a. Policing of training areas, firing points, observation posts, and facilities will be accomplished per the following guidelines:

(1) Police training areas or facilities during and after use.

(2) All cartridges, tubes, containers, packing material, and all other material introduced into the environment in conjunction with training activities will be removed to the maximum practical extent.

(3) Remove all barbed, commo, concertina, and trip wire and properly dispose of it according to post procedures.

b. Garbage and trash accumulated by units occupying ranges/training areas will not be buried at the site, but will be disposed of in the following manner:

(1) On-post units will utilize their normal on post facilities for waste disposal.

(2) Off-post units will contact the DPW for information on trash disposal.

c. Upon training completion, the OIC/NCOIC will coordinate with the RCFDO for a clearance inspection. It is advised that a standby detail be available to make on-the-spot corrections for deficiencies noted during inspection.

12-16. Use Reporting

Units or installation agencies authorized the use of a training area must report use to the RCFDO as follows:

a. The training OIC/NCOIC must check in with the RCFDO before occupancy of the training areas. For battalion or higher level units, this may be a representative of the operations and training officer.

b. Units utilizing training areas must maintain constant communication and check in with the RCFDO every 4 hours. Areas requiring medical support will maintain constant communication with the RCFDO.

c. The RCFDO will note the time of check in or subsequent call, the name of unit representative, and the number of personnel. The RCFDO will pass on information on fire hazards or weather warnings to the unit. The RCFDO will not pass routine administrative messages from garrison to units in the field.

d. Upon training completion, the OIC/NCOIC will coordinate with the RCFDO for a clearance inspection. It is advised that a standby detail be available to make on-the-spot corrections for deficiencies noted during the inspection.

TIMOTHY A. JONES
COL, AV
Commanding

OFFICIAL:

CHARLES R. CARR
Director, Human Resources

Appendix A
References

AR 75-1…….. Malfunctions Involving Ammunitions and Explosives

AR 95-2 ..... Air Traffic Control, Airspace, Airfields, Flight Activities and Navigational Aids

AR 200-1 ..... Environmental Protection and Enhancement

AR 200-2 ..... Environmental Effects of Army Actions

AR 200-3 ..... National Resources – Land, Forest, and Wildlife Management

AR 200-4 ..... Cultural Resources Management

AR 200-5 ..... Pest Management

AR 210-20 ..... Master Planning for Army Installations

AR 350-19 ..... Sustainable Range Program

AR 385-63 ..... Range Safety
Practice and Combat.

AR 385-64 ..... U.S. Army Explosives Safety Program

AR 420-49 ..... Utility Services

AR 600-55 ..... The Army Driver and Operator Standardization Program

DA PAM 385-63 ..... Range Safety

FM 3-21.220 ..... Static Line Parachute Operations

FM 3-50 ..... Smoke Operations

FM 3-34.214 ..... Explosives and Demolitions

FM 6-50 ..... Tactics, Techniques and Procedures for the Field Artillery Cannon Battery

FM 20-32 ..... Mine/Countermine Operations

FM 23-23 ..... Antipersonnel Mine M18A1 and M18 (Claymore)

FM 3-22.90 ..... Mortars

FM 3-23.30 ..... Grenades and Pyrotechnic Signals

FM 3-100.12 ..... Risk Management

Public Law 87-327 ..... Public Lands withdrawn for Military Use

TM 9-1370-207-10 ..... Operator's Manual for Pyrotechnic Simulators

TM 43-0001-28 ..... Army Ammunition Data Sheets for Artillery Ammunition: Guns, Howitzers, Mortars, Recoilless Rifles, Grenade Launchers and Artillery Fuzes

USARAK Pamphlet 200-1 ..... Environmental Management Plan

USARAK Regulation 200-4 ..... Hazardous Waste, Used Oil, and Hazardous Materials Management

USARAK Regulation 350-1 ..... United States Army Alaska Training Directive

USARAK Regulation 405-2 ..... Off-Post Maneuver Permits

USARAK Regulation 95-23 ..... Unmanned Aerial System (UAS)

USARAK-MOA-029 ..... Memorandum of Agreement between the City of Delta Junction

Section II
Referenced Publications

AR 40-5 ..... Preventive Medicine

AR 95-1 ..... Flight Regulations

AR 190-11 ..... Physical Security of Arms, Ammunition, and Explosives

AR 200-4 ..... Cultural Resources Management

AR 200-5 ..... Pest Management

AR 385-10 ..... The Army Safety Program

AR 385-16 ..... System Safety Engineering and Management

AR 385-40 ..... Accident Reporting and Records

AR 385-61 ..... The Army Chemical Agent Safety Program

AR 420-49 ..... Utility Services

DOD Directive 4700.1 ..... Natural Resources Conservation and Management

FM 3-22.37 ..... Javelin Medium Antiarmor Weapon System

FM 3-23.25 ..... Light Antiarmor Weapons

FM 4-30.13 ..... Ammunition Handbook: Tactics, Techniques, and Procedures for Munitions Handlers

FM 6-20 ..... Fire Support in the Airland Battle

FM 6-40 ..... Tactics, Techniques, and Procedures for Field Artillery Manual Cannon Gunnery

FM 9-15 ..... Explosive Ordnance Disposal Service and Unit Operations

FM 21-20 ..... Physical Fitness Training

FM 3-22.9 ..... Rifle Marksmanship M16A1, M16A2/3, M16A4 and M4 Carbine

FM 23-11 ..... 90mm Recoilless Rifle, M67

FM 3-23.35 ..... Combat Training with Pistols, M9 and M11

FM 23-65 ..... Browning, Machinegun, Caliber. 50 HB, M2.

FM 3-22.68 ..... Crew-Served Machineguns, 5.56mm and 7.62mm

FM 23-91 ..... Mortar Gunnery

Folio of Standard Drawings, Appendix E of file no. 750-90-1, Planning and Design of Indoor and Outdoor Sports Facilities

TC 23-2 ..... 66mm Rocket Launcher M202A1

TC 24-20 ..... Tactical Wire and Cable Techniques

TC 25-8 ..... Training Ranges

TM 9-1300-200 ..... Ammunition, General

USARAK Regulation 190-1 ..... Physical Security

USARAK Regulation 190-13 ..... Enforcement of Hunting, Trapping, and Fishing on Army Lands in Alaska

USARAK Regulation 385-1 ..... United States Army Alaska Safety Program

USARAK Regulation 420-11 ..... Fire and Emergency Services

Section III
Prescribed Forms

USARAK Form 8-E ..... Range Firing Record

Section IV
Referenced Forms

Air Force Form 651 ..... Hazardous Air Traffic Report (HATR)

DA Form 2028 ..... Recommended Changes to Publications and Blank Forms

DA Form 2203-R ..... Demolition Reconnaissance Record

DA Form 2696 ..... Operational Hazard Report, Appendix B

Appendix B
Range and Training Facilities

B-1. Fort Richardson Range and Training Facilities

Table B-1: Fort Richardson (FRA) ranges and training facilities. Refer to range and training area SOPs for detailed descriptions and procedures.

Facility Name	Location	Description
Building 59000		Range Control
40mm Range	UN52709945	The 40mm Grenade Range consists of four lanes with a stationary target array. Tower and latrine on site; no power
5 Mile Trail		Downhill cross-country ski trail located in Arctic Valley.
Arctic NBC Chamber	UN57959750	The Arctic NBC facility consists of eight (8) stations including a CS chamber, warm-up building, and a latrine.
Firing Point Malemute	UP58350425	Artillery and mortar firing point
Firing Point Neibar	UP59520155	Artillery and mortar firing point
Firing Point 1	UP58450240	Artillery and mortar firing point
Firing Point 2	UP57190360	Artillery and mortar firing point
Firing Point 3	UP57380485	Artillery and mortar firing point
Firing Point 4	UP57180545	Artillery and mortar firing point
Firing Point 5	UP57000560	Artillery and mortar firing point
Firing Point 6	UP57240650	Artillery and mortar firing point
Firing Point 7	UP57660755	Artillery and mortar firing point
Firing Point 8	UP57680762	Artillery and mortar firing point
Firing Point 9	UP57740774	Artillery and mortar firing point
Firing Point 10	UP61000855	Artillery and mortar firing point
Firing Point 11	UN59149787	Artillery and mortar firing point

Table B-1: Fort Richardson (FRA) ranges and training facilities. Refer to range and training area SOPs for detailed descriptions and procedures.		
Facility Name	**Location**	**Description**
Firing Point 16	UP59280827	Artillery and mortar firing point
Firing Point 22	UP59100611	Artillery and mortar firing point
Firing Point 23	UP59790569	Artillery and mortar firing point
Firing Point 31	UP60100192	Artillery and mortar firing point
Firing Point 33	UP60450295	Artillery and mortar firing point
Airborne Sustainment Training Area	UN54909406	1-C-17 and 1-C-130 Mock up, 4-PLF Platforms. Latrines on site.
AT-4	UN52689950	The LAW/AT4 Range is collocated with the 40mm Grenade Range and has four firing lanes, with armored vehicle hulks. Weapons fired are LAW, LAW Sub-caliber, AT4, and AT4 Sub-caliber. Tower and latrine on site; no power
Baumeister Village (MOUT)	UN54709945	Assorted cinder block and plywood buildings, non-live fire facility Simunitions and blank ammunition only.
Biathlon Range	UN59459140	Biathlon Range (ski and shoot) is a 10-point, firing range with stationary targets 50 to 100 meters. Weapons fired are 22 caliber and 5.56mm. Tower, warm-up building and latrine on site.
Bivouac Shoothouse 1	UN58409365	Cleared area adjacent to Shoothouse. Latrine on site.
Bivouac 1B	UP58820550	Improved gravel pads and dirt roads. Latrines on site.
Bivouac 6B	UP58210230	Improved gravel pads and dirt roads.
Bivouac 9B	UN56659920	Improved gravel pads and roads. Latrines on site.
Bivouac FP 1	UP58800260	Improved sites, dirt roads.

Table B-1: Fort Richardson (FRA) ranges and training facilities. Refer to range and training area SOPs for detailed descriptions and procedures.		
Facility Name	**Location**	**Description**
Bivouac Record Fire Range	UN58759469	Wooded with some cleared sites. Latrine and warm-up building at Record Range.
Bivouac Zero Range	UN59009500	Wooded with some cleared sites. Latrine and warm-up building at Zero Range.
Bivouac Main (SMA)	UN59059535	Cleared open area. Latrine and warm-up building at Sports Fire Range.
Bowling Alley Drop Zone	UP56980514	400yard radius, day time, CDS only.
Breach Facility	UN55199058	Door, window and wall breaching structures.
Bulldog Trail	UN54609145	Convoy Live Fire Course, IED Defeat Lane, Live Fire Villages.
Davis Range	UN55868990	Modern MOUT Range Complex (Shoot House, Breach Facility, UAC, ISBC).
Demo II	UP55060657	Explosives Range, 300 by 600 meters, Maximum 10 lbs above ground, 40 lbs below.
Demo III	UP55700625	Explosives Range, 300 by 600 meters, Maximum 40 lbs above ground, 150 lbs below ground.
Expert Field Medical Badge Training Area	UN57799680	EFMB Site is a litter obstacle course training facility used to rehearse evacuation procedures for sick and wounded personnel.
EOD PAD	UP55900118	Staging area for Eagle River Flats Restoration activities.
Eagle River Flats	UP53850140	Indirect and direct fire, dud impact area.

Table B-1: Fort Richardson (FRA) ranges and training facilities. Refer to range and training area SOPs for detailed descriptions and procedures.

Facility Name	Location	Description
FOB Sparta	UP56039820	1000m square gravel surfaced area able to accommodate a company sized element for sustained field training activities. Guard tower, barricades, power and latrines on site.
FOB Grizzly	UP60510183	3 plywood buildings, covered mess area, storage shed. Supports Warrior Leader Course.
Geronimo Drop Zone	UN60688644	Mountainous, Rotary wing and C-23 only, 990 m x 450m.
Grezelka 10m	UN60189704	10 Meter Machine Gun Range with 6 firing positions. Latrine on site.
Grezelka Multipurpose Machine Gun Range (Transition)	UN60289694	Grezelka Range is a six-lane multipurpose, machine-gun transition and field-fire range consisting of computer-scored Enhanced Remote Target System targets. The target array for Lanes 4, 5, and 6 is from 100 to 900 meters. In Lanes 1 and 2, the target array is from 100 to 1,000 meters. This range has a warm-up building, public address system, latrine, and control tower.
Grezelka Sniper Field Fire Range	UN60289694	In Lanes 1-4, the target array is from 100 to 1,000 meters for Light Sniper fire. Control tower, public address system, warm-up building, and latrine on site.
HCTA	UN58809680	Horizontal Construction Training Area is an area located in Training Areas 418, 419 and 411. This area is used to train heavy equipment operator's on earth moving and land clearing techniques.
Hand Grenade Range	UN58489344	Hand Grenade Range has six throwing bays and an OIC (HE familiarization) tower and observation bay for personnel waiting to use the range. The range can be used for live hand-grenade and claymore training. Latrine on site.

Table B-1: Fort Richardson (FRA) ranges and training facilities. Refer to range and training area SOPs for detailed descriptions and procedures.		
Facility Name	**Location**	**Description**
Helicopter Door Gunnery Range	UP53980044	A single-lane range in Eagle River Flats that may be traversed from east to west or west to east while firing.
Infantry Platoon Battle Course	UP56300606	The IPBC consists of six (6) Platoon size objectives with automated stationary and moving computer scored targets in a tactical array with obstacles; a trench line; troops in the open; and counter-attack forces. Latrine, AAR facility, unit command post and enclosed unit mess area.
Infantry Squad Battle Course	UN55858990	Train mounted or dismounted infantry platoons using 6 objectives, with automated stationary and moving computer scored targetry in a tactical array. On site AAR facility.
Jump Tower	UN59389514	34 foot jump tower, pulleys, harnesses, static lines.
Kraft Range	UN58409440	Hand grenade qualification range includes distance, accuracy, assault and qualification courses, Non Live Grenades.
LZ 1	UP61850820	200m in length, 25m wide. Slope- flat, surface- dirt, 6-8ft trees on east side of LZ.
LZ 4	UP60050627	500m in length, 200m wide. Slope- flat, surface- marsh. Recommend winter use only.
LZ 5	UP59860456	80m in length, 25m wide. Slope- flat, surface- dirt, tall trees south end of LZ.
LZ 7	UN54909965	150m in length, 100m wide. Slope- flat, surface- dirt.
LZ 10	UP59650260	300m in length, 200m wide. Slope- flat, surface- grass.

Table B-1: Fort Richardson (FRA) ranges and training facilities. Refer to range and training area SOPs for detailed descriptions and procedures.		
Facility Name	**Location**	**Description**
LZ 11	UP60370276	200m in length, 100m wide. Slope- flat, surface- grass and dirt.
LZ 13	UP58690235	300m in length, 200m wide. Slope- flat, surface- grass, trees and shrubs in southeast and southwest corners of LZ.
LZ 14	UP57280360	300m in length, 50m wide. Slope- flat, surface- dirt.
LZ 15	UP57580144	125m in length, 30m wide. Slope- flat, surface- grass.
LZ 16	UP58980000	175m in length, 50m wide. Slope- flat, surface- grass, tall trees on all sides.
LZ 17	UP59109995	50m in length, 30m wide. Slope- flat.
LZ 18	UP60680594	800m in length, 300m wide. Slope- flat, surface- marsh. Recommend winter use only.
LZ 20	UN55789744	
LZ 22	UP55080752	90m in length, 50m wide. Slope- flat, surface- marsh. Recommend winter use only.
LZ 23	UP55400715	150m in length, 50m wide. Slope- flat, surface- marsh. Recommend winter use only.
LZ 25	UP57720705	200m in length, 75m wide. Slope- flat, surface- grass.
LZ 26	UP57880304	150m in length, 75m wide. Slope- uneven. surface- dirt and gravel (active gravel pit).
LZ 27	UP61600718	500m in length, 120m wide. Slope- flat, surface- grass with scattered 6’ trees.

Table B-1: Fort Richardson (FRA) ranges and training facilities. Refer to range and training area SOPs for detailed descriptions and procedures.

Facility Name	Location	Description
LZ 28	UP611812	300m in length, 80m wide. Slope- flat, surface- swamp/grass. Recommend winter use only.
LZ 29	UP58780434	300m in length, 30m wide. Slope- flat, surface- muskeg. Recommend winter use only.
LZ 51	UN55208963	50m in length, 30m wide. Slope- flat, surface- grass/dirt.
LZ 52	UN55159017	400m in length, 200m wide. Slope- flat, surface- muskeg. Recommend winter use only.
LZ 54	UN58788585	150m in length, 75m wide. Slope- variable, surface- grass.
LZ 56	UN59088884	
LZ 60	UN60708580	
LZ 61	UN65658784	
LZ 64	UN66088424	
LZ 65	UN61498440	
LZ 67	UN63328180	125m in length, 40m wide. Slope- variable (caution advised), surface- rock and gravel.
LZ 68	UN58539430	
LZ 69	UN54909965	300m in length, 75m wide. Slope- flat, surface- swamp (stream in center). Recommend winter use only.
LZ70	UN54408785	150m in length, 75m wide. Slope- flat, surface- swamp. Recommend winter use only.
LZ71	UP54618613	150m in length, 50m wide. Slope- flat, surface- rock.

Table B-1: Fort Richardson (FRA) ranges and training facilities. Refer to range and training area SOPs for detailed descriptions and procedures.		
Facility Name	**Location**	**Description**
LZ Fossil	UN59109815	300m in length, 200m wide. Slope- none, surface- grass/rock (uneven terrain with tall trees on all sides).
LZ Ranger	UN56939635	300m in length, 250m wide. Slope- flat, surface- grass/dirt. Tall trees east, west, north boundaries, wires south boundary.
M16 Record Range	UN58809457	Record Range is a 16-point, modified, record-fire range consisting of an M16 qualification and field-fire range with computer-scored targets at 50, 75, 100, 150, 175, 200, 250, and 300 meters. This range has a night-firing set-up with firing lines at 25 and 50 meters. Tower, public address system, warm-up building, and latrines on site.
M16 Zero Range	UN59109494	Zero Range is a 60-point, firing range with stationary targets at 25 meters from the firing line. Tower, public address system, warm-up building, and latrines on site.
Mahon	UN60109630	Mahon Range is an M31 Artillery sub-caliber trainer, SABOT, and M880 TP round range located in a cleared area approximately 400 meters by 300 meters. The maximum ordinate for any projectile will not exceed 3,000 feet above ground level.
Malamute Drop Zone	UP58100520	Drop Zone for personnel, heavy equipment, CDS, Simulated Airdrop Training Bundle. 2800ydsX1800yds.
Malamute Assault Strip	UP58490519	4,500 foot assault strip located on the east side of the drop zone capable of accepting C130 and UAS aircraft.

Table B-1: Fort Richardson (FRA) ranges and training facilities. Refer to range and training area SOPs for detailed descriptions and procedures.		
Facility Name	**Location**	**Description**
McGee Range	UN59789604	McGee Range is a one-lane, stress, live-fire course with nine target locations. Latrine on site.
McLaughlin Range	UP56800322	McLaughlin Range adapts to tactical exercises, squad to company level. Range fans are designed based on the unit tactical plan. Portable Targets are available at Range Control.
Mine Field Detection Range	UN58209450	Located on North side of Kraft range.
MK-19 Range	UP56600305	MK-19 Range consists of two lanes of stationary targets at distances of 400, 600, 800, 1,100, and 1,500 meters from the firing line. There are two dismounted and one mounted firing positions per lane.
Multipurpose Training Range (MPTR)	UP59480804	1800m range for training and qualification of crews, sections of infantry, cavalry units and, dismounted infantry squad tactical live fire exercises. The range has an array of stationary and moving infantry targets as well as stationary and moving vehicle targets. The range operates with computer driven event specific target scenarios, scored from the MPTR Operations Center, providing immediate feedback to the user. The facilities include latrine, AAR facility, General Instruction Building and enclosed unit mess area.
Mortar FP Eagle	UP56080048	Eagle is an area approximately 100 meters by 50 meters on a knoll overlooking Eagle River Flats. This point is also used as an observation point for the adjustment of mortar and artillery fire.
Mortar FP Joe	UP58190209	Firing Point Joe is an area approximately 100 meters by 50 meters.
Mortar FP John	UP57230208	Firing Point John is an area approximately 100 meters by 50 meters.

Table B-1: Fort Richardson (FRA) ranges and training facilities. Refer to range and training area SOPs for detailed descriptions and procedures.		
Facility Name	**Location**	**Description**
Mortar FP Ken	UP58190202	Firing Point Ken is an area approximately 100 meters by 50 meters.
Mortar FP Lower Cole	UN55109947	Mortar Firing Point.
Mortar FP Lower Fox	UN56399926	Mortar Firing Point approximately 100 meters by 50 meters. The mortar point is located east of Eagle River Flats.
Mortar FP Lightning	UP58280501	Mortar Firing Point.
Mortar FP Moose	UN52619922	Mortar Firing Point.
Mortar FP Perry	UP57080164	Firing Point Perry is an area approximately 100 meters by 50 meters.
Mortar FP Upper Cole	UP54919947	Cole Point is an area approximately 100 meters by 50 meters on a knoll overlooking Eagle River Flats. Although this is primarily an observation post for the adjustment of mortar and artillery fire, the area may be used for demonstration type firing of mortars.
Mortar FP Upper Fox	UN56489940	Upper Fox is an area approximately 100 meters by 50 meters. The mortar point is located east of Eagle River Flats.
Mortar FP Vital	UP54730332	Vital is an area approximately 100 meters by 50 meters overlooking Eagle River Flats. Also used as an observation point for the adjustment of mortar and artillery fire.
Mortar FP Wolf	UN54759945	Mortar Firing Point.
Mortar FP Lower Fox	UN56399926	Lower Fox is an area approximately 100 meters by 50 meters. The mortar point is located east of Eagle River Flats.

Table B-1: Fort Richardson (FRA) ranges and training facilities. Refer to range and training area SOPs for detailed descriptions and procedures.

Facility Name	Location	Description
Neibhur DZ	UP59680164	600 x 600 yard DZ with the center point located at UP 59680164. Neibhur Drop Zone is limited to single-ship, daylight delivery of CDS or Simulated Airdrop Training Bundle. Due to the hazards on and immediately surrounding the area it is not cleared for personnel drops.
Newton Range	UN59609596	Newton Range is a seven-lane, combat-pistol range for all caliber pistols with computer-scored Enhanced Remote Target System targets at 13, 17, 19, 23, 27, and 31 meters. Warm-up building and latrine on site.
Oates Range	UN59789604	Oates Range is a 10-meter, machine-gun range consisting of a firing line with ten firing points with two targets at each point. weapon 5.56mm - .50 cal). Warm-up building and latrine on site.
Obstacle Course	UN56689654	A multi-obstacle facility that varies from fairly easy to difficult, with some areas quite high.
OP Cole	UN54919969	Observation Post for Eagle River Flats.
OP Eagle	UP56080054	Observation Post for Eagle River Flats.
OP Fagan	UP56030130	
OP Survey	UP55649821	Observation Post for Eagle River Flats.
OP Vital	UP54730332	Observation Post for Eagle River Flats.
Pedneau Range	UN59189545	Pedneau Range has 25 firing points with target distances from 100 to 600 yards. Weapons fired are 7.62mm and 5.56mm. Latrine on site.
Rappel Tower	UN56819620	Located on Camp Carroll, a 44-foot tower, incline walls, covered bleachers, and a latrine.

Table B-1: Fort Richardson (FRA) ranges and training facilities. Refer to range and training area SOPs for detailed descriptions and procedures.

Facility Name	Location	Description
Shoothouse SMA	UN58369359	Located in the Small Arms Complex, the Shoot House Range is an advanced, live-fire, training facility for close-quarters room and building clearing operation. Latrine on site.
Shoothouse (ISBC)	UN55759050	The Shoothouse is a 1400 square foot,10 room facility with 2 corridors, 13 human urban targets, 18 target outlets, and 10 camera outlets that operates with computer driven event specific target scenarios, scored from the Shoothouse Operations Center, providing immediate feedback to the user.
Site Summit	UN64459425	Historical Preservation site. Surrounding area open for unit training in mountainous terrain.
Ski and Shoot Trail	UN64459425	
Ski Trail Black	UP60980864	The Black Ski Trail is a 5-mile trail over mostly flat terrain. The trail has five road crossings.
Ski Trail Blue	UN54289644	Blue Ski Trail is a 1.4-mile trail over hilly, wooded terrain. The trail begins along Loop Road past the railroad crossing and winds through the forest. These are not road crossings.
Ski Trail Brown	UP57880294	Brown Ski Trail is a 3-mile trail over hilly terrain. The trail begins in the gravel pit north of Artillery Road and parallels a sector of White Ski Trail.
Ski Trail Orange	UP59480634	The Orange Ski Trail is a 4-mile trail over flat terrain with some gentle slopes. The trail crosses Clunie Lake Road twice.
Ski Trail Red	UN57089434	The Red Ski Trail is a variable distance trail over moderately hilly terrain in the main post area west of Glenn Highway. There are no road crossings.

Table B-1: Fort Richardson (FRA) ranges and training facilities. Refer to range and training area SOPs for detailed descriptions and procedures.		
Facility Name	**Location**	**Description**
Ski Trail White	UN59189544	
Ski Trail Violet	UP58480244	Violet Ski Trail is a 5-mile trail over mostly level terrain with some short hills. The Eklutna water line right-of-way on the north bank of Fossil Creek. The trail crosses Poleline Road.
Sportsfire Range	UN59189589	Sports Fire Range is a 15-point, firing range with distances from 25 to 300 yards. Privately owned weapons, such as pistols, rifles, and shotguns can be used on this range. This range can be used for unit training with prior coordination. Latrine and warm-up building on site.
Statler Range	UN595895	Statler Range is a 30-point, competitive firing range for all caliber pistols with firing lines at 7, 15, 25, and 50 meters. Latrine and warm-up (shared with Newton Range) on site.
Temporary Machine Gun Range	UN58369410	2 lanes. 50 Cal., 7.62, 5.56, targets out to 800 meters.
Training Areas 401 thru 431	Refer to Map	Fort Richardson Special.
Urban Assault Course	UN56349025	This facility has 2 stations. Station #2 is The Squad and Platoon Trainer which consists of building facades forming a T for live fire operations training individual Soldiers, squads and platoons in built-up/urban areas. Station #5 is The Underground Trainer which consists of a tunnel system.
Vehicle Recovery Site	UN55189757	1500m trail through wetlands and heavy vegetation for the purpose of training vehicle recovery from mud and close quarter environments.
Zero Annex	UN59159520	16 point range with target berms at 25 meters.

B-2. Fort Wainwright Range and Training Facilities

Table B-2: Fort Wainwright (FWA) ranges and training facilities. Refer to range and training area SOPs for detailed descriptions and procedures.

Facility Name	Location	Description
AFTAC	WS05008300	Space for round and air combat forces to practice movements and tactics. This facility is on out-grant to the USAF for nuclear monitoring and consists of 2,995 acres of exclusive use area.
Alpha Impact Area	VS00506650	Dudded impact area located south of the Small Arms Complex and within the Tanana Flats Training Area.
Alpha Threat Site	WS39097234	Unmanned search radar site used for electronic warfare. Located on hill 3265.
Arctic Village	VS69378726	Non-standard live-fire facility consisting of six 20x20 single story structures. Located on the Small Arms Complex.
Bravo Battery	WS11887209	Former Nike Battery currently used as a field training site utilizing the existing structures. Company sized Bivouac Area.
Bearbait DZ	WS15677686	400 yard radius DZ used for Container Delivery System (CDS) and Standard Airdrop Bundles.
Birch Hill Biathlon Range	VS 69849368	A 10 lane, stationary target range equipped with a warm-up building. Range has Biathlon style targets for .22 and air rifle shooting. Range has wooden stands for other small arms (5.56 or 9mm).
Birch Hill DZ	VS 71429383	Non-surveyed Alaska Fire Service/BLM smokejumper drop zone.
Blair Lakes DZ	VS82003650	Winter use only DZ located on a Blair Lake when frozen.
Blair Lakes Impact Area	VS68004000	On out-grant to USAF as an aerial bombing range.
Buffalo Trench	VS72938815	Located in training 104. Range is squad level, tactical, non-live fire trench facility.

Table B-2: Fort Wainwright (FWA) ranges and training facilities. Refer to range and training area SOPs for detailed descriptions and procedures.		
Facility Name	**Location**	**Description**
CAM I	WS25757360	EW and target scoring camera site, also used as an OP, located within the Stuart Creek Impact Area.
CAM II	WS22707730	EW and target scoring camera site, also used as an OP, located within the Stuart Creek Impact Area.
Charlie Battery	WS12966243	Former Nike Site, currently used as a field training site using existing structures for company sized bivouac area. Located on the West side of Johnson Road.
Clear Creek Assault Strip	VS72674750	3500x60 foot unpaved tactical assault strip located near Blair Lakes within the Tanana Flats Training Area. Supports insertion/extraction of ground personnel.
Dead Moose DZ	VS 72889199	Non-surveyed Alaska Fire Service/BLM smokejumper drop zone.
Engineer Pit	VS 72519140	Non live-fire training facility used for engineer heavy equipment proficiency training. Located within TA 114.
FAARP	WS15616839	Forward Area Arming and Refueling Point is a non live-fire multipurpose area that can be used as a bivouac site or as an observation point to adjust Field Artillery and Mortar Fire. Located in YTA off Brigadier Road.
Firebird FLS	WS16436585	3500x90 foot multi-purpose assault strip and drop zone for C-130, C-17 and rotary wing aircraft. The facility can be utilized as a bivouac area and artillery firing point with prior coordination. The FLS parallels Johnson Road in YTA 3.

Table B-2: Fort Wainwright (FWA) ranges and training facilities. Refer to range and training area SOPs for detailed descriptions and procedures.

Facility Name	Location	Description
Forget DZ	WS15147292	350 yard radius drop zone used for container delivery systems and standard airdrop training bundles. The DZ is located near FP-20, 50 yards southwest of skyline Road in YTA-3.
Fox Threat Site	WS37307240	Electronic Warfare site located on FP-14.
Firing Point Bravo I	WS12367115	Artillery and Mortar firing point located in YTA-4 off the south side of Quarry Road.
Firing Point Bravo III	WS11257180	Artillery and Mortar firing point located in YTA-4 off the south side of Quarry Road.
Firing Point Charlie	WS11746178	Artillery and Mortar firing point located in YTA-4 off the west side of Johnson Road.
FP 1	WS18258288	Artillery and Mortar firing point located in YTA-3 north of Stuart Creek Impact Area.
FP 2	WS16488235	Artillery and Mortar firing point located in YTA-3 northeast of Stuart Creek Impact Area.
FP 3	WS14908151	Artillery and Mortar firing point located in YTA-3 northwest of Stuart Creek Impact Area.
FP 4	WS13708193	Artillery and Mortar firing point located in YTA-3.
FP 5	WS12217915	Artillery and Mortar firing point located in YTA-3.
FP 6	WS14157779	Artillery and Mortar firing point located in YTA-3.
FP 7	WS15257385	Artillery and Mortar firing point located in YTA-3.
FP 8	WS16897785	Artillery and Mortar firing point located in YTA-3.

Table B-2: Fort Wainwright (FWA) ranges and training facilities. Refer to range and training area SOPs for detailed descriptions and procedures.

Facility Name	Location	Description
FP 9	WS20407205	Artillery and Mortar firing point located on the southern edge of Stuart Creek Impact Area.
FP 11	WS24256707	Artillery and Mortar firing point located in YTA-5, accessible via Brigadier Road.
FP 12	WS28206975	Artillery and Mortar firing point located in YTA-5, accessible via Brigadier Road.
FP 13	WS31307168	Artillery and Mortar firing point located in YTA-6, accessible via Brigadier Road.
FP14	WS37327235	Artillery and Mortar firing point located in YTA-6, east of Stuart Creek, accessible via Brigadier Road.
FP 15	WS29707795	Artillery and Mortar firing point located in YTA-6.
FP 16	WS23408185	Artillery and Mortar firing point located in YTA-6 north of Stuart Creek.
FP 17	WS22737840	Artillery and Mortar firing point located in Stuart Creek north of CAM II.
FP 18	WS20127900	Artillery and Mortar firing point located in Stuart Creek Impact Area.
FP 19	WS20107660	Artillery and Mortar firing point located in Stuart Creek Impact Area.
FP 21	VS63807395	Artillery and Mortar firing point located in the Tanana Flats west of Alpha Impact Area.
FP 22	VS62857392	Artillery and Mortar firing point located in the Tanana Flats west of Alpha Impact Area.
FP 23	VS63357545	Artillery and Mortar firing point located in the Tanana Flats west of Alpha Impact Area.

Table B-2: Fort Wainwright (FWA) ranges and training facilities. Refer to range and training area SOPs for detailed descriptions and procedures.		
Facility Name	**Location**	**Description**
FP 24	VS70178625	Artillery and Mortar firing point located in the Small Arms Complex.
FP 25	VS72206805	Artillery and Mortar firing point located in the Small Arms Complex.
FP 26	VS71928680	Artillery and Mortar firing point located in the Small Arms Complex.
FP 2014	WS18376965	Artillery and Mortar firing point located in YTA-5 off the Russian Trench/CAM I Road
FP Hippie	WS14957185	Artillery and Mortar firing point located off Skyline Road in YTA-3.
FWA 40mm HE	VS70358655	Primarily used for HE familiarization for firing with the M-203 Grenade Launcher utilizing HE ammunition.
FWA Breach Facility	VS71648671	3-Bay facility (door, window and wall stations) used to train Soldiers in the technical aspects of breaching. Range is located at the Small Arms Complex.
FWA Combined Arms Collective Training Facility (CACTF)	VS 71458950	Non live-fire facility with 17 structures, a sports field, and underground trainer, 4 landing/pickup zones and urban clutter. Supports training for up to Company size elements using MILES, blanks, UTM, and pyrotechnics.
FWA Combat Pistol	VS71128765	7 lane range for all caliber pistols with computer scored Enhanced Remote Target System (ERETS) targets at 13, 17, 19, 23, 27 and 31 meters. Located at the Small Arms Complex.
FWA Convoy Lane	VS69308680	4 station live-fire convoy training range.
FWA CQM	VS70708770	25 lane close quarter marksmanship range. Also used for standard live-fire training events with prior range control approval and coordination.

Table B-2: Fort Wainwright (FWA) ranges and training facilities. Refer to range and training area SOPs for detailed descriptions and procedures.

Facility Name	Location	Description
FWA Digital Multi-Purpose Training Range (DMPTR)	WS00507450	2-lane live-fire facility for mounted and dismounted engagement of fully automated, stationary and moving targets. Data is captured for review in an AAR facility. Range also has an operations center, ammunition breakdown facility, and latrines. Range is part of the Moose Creek Range Complex located in the YTA off Manchu Road.
FWA Grizzly Battle Course	WS20386620	Live-fire, automated target, multi-purpose facility designed to enable infantry squads to practice battle drills in multiple live-fire, MILES, or force-on-force scenarios. Range consists of 2 maneuver lanes, each with 2 maneuverable objectives. The 2 lanes share 2 counterattack objectives spread over an 800 meter area. Located in YTA.
FWA HG Familiarization Range	VS61258768	Hand grenade range consists of 3 live throwing bays, a control, and an observation bay. Located at the Small Arms Complex.
FWA HG Qualification Course	VS61258768	Non-live fire hand grenade distance and accuracy course consisting of 7 stations. Located at the Small Arms Complex.
FWA Infantry Squad Battle Course (ISBC)	WS08197322	Live-fire, fully automated target facility designed to assist squad level training on tactical movement techniques, detection, identification and defeat of enemy targets. There are 5 objectives. Range is part of the Moose Creek Range Complex located in the YTA off of Quarry Road.
FWA Known Distance (KD)	VS69648738	Range has 25, 100, 200, 300, 400, 500 and 600 yard firing lines. Fifteen lanes are lifter type targets. Range can be used for various firing events. Range facilities include an ASP building and a latrine. Located at the Small Arms Complex.

Table B-2: Fort Wainwright (FWA) ranges and training facilities. Refer to range and training area SOPs for detailed descriptions and procedures.

Facility Name	Location	Description
FWA M16/M4 Qualification	VS70318779	Record fire range with computer-scored Enhanced Remote Target System targets 50, 100, 150, 200, 250 and 300 meters. Located at the Small Arms Complex.
FWA M203 TP/AT-4	VS70858760	Combined 40mm grenade launcher and AT-4 light armored weapon range. No HE authorized. 40mm TP range (RM203) consists of four firing points on East side of range. AT-4 range (XRANC) consists of two firing points on West side of range.
FWA Machine Gun	VS68758765	Automated multi-purpose machine gun range, Mk-19 and Sniper range. Range has two lanes for MK-19 four lanes for sniper field fire, five lanes for .50 cal and six lanes for 7.62 and below. There is a 10 meter zero range adjacent to the machine gun range. The range also has six roll-in vehicle positions to accommodate vehicle mounted fire.
FWA Mine Training Area	VS 71558940	Training area used for placement, arming, disarming and detection of vehicle and antipersonnel mines using non-explosive training material.
FWA NBC Chamber	VS72639135	Facility is designed for training personnel in the use of protective masks and the effects of chemical warfare. Located in training area 114.
FWA Obstacle Course	VS71788825	Facility consists of 30 obstacles, varying in size from low to high, used to develop Soldiers' confidence and strength. The facility also has a hand-to-hand pit and a latrine.
FWA Rappel Tower	VS72388819	40 foot tower with one flat-faced wall and two open faced walls. There are also two incline-walls. There are no support facilities associated with this facility. Located in TA-104.

Table B-2: Fort Wainwright (FWA) ranges and training facilities. Refer to range and training area SOPs for detailed descriptions and procedures.

Facility Name	Location	Description
FWA Shoothouse	VS71168706	Multi-room live-fire facility designed for close-quarter room and building clearing operations. Breaching access points include two doors, three windows, and mouse-hole. All targets are full automated and engagements can be recorded for review in the AAR facility.
FWA Urban Assault Course (UAC)	VS71198669	Three station urban assault course. Targetry includes automated and stationary targets. There is a latrine on site and the facility shares a general instruction building with the Shoothouse and Breach Facility.
Golf Threat Site	WS21888140	Manned electronic warfare threat site. Beaver Creek Road.
Husky Drop Zone	VS96208235	2000 x 800 yard drop zone. Supports personnel, container delivery system, standard airdrop training bundle, and heavy equipment drops. Also utilized for UAS operations. Located off Transmitter Road in YTA-1.
Kilo Threat Site	WS24418157	EW threat site located of FP-16.
Kritter Drop Zone	VS73404870	2000 x 700 yard personnel and equipment DZ located near Blair Lakes Bombing Range in the Tanana Flats Training Area.
Lantirn Village	WS23527713	EW threat site and observation point located at the termination of Skyline Road inside the Stuart Creek Impact Area.
Lima Threat Site	WS27407369	Manned electronic warfare threat site. Upper South Fork.
Lynn Drop Zone	VS77504900	
Manchu PZ	VS72958835	Hardened training area located in TA 104.
Manchu Range YTA	VS98107515	Multi-use live fire facility consisting of a 25-M multi-purpose range and a 300-M range/maneuver area. Range is part of the Moose Creek Range Complex located in the YTA off Manchu Road.

Table B-2: Fort Wainwright (FWA) ranges and training facilities. Refer to range and training area SOPs for detailed descriptions and procedures.

Facility Name	Location	Description
McMahon Trench	WS20807085	Live-fire trench facility located on the southern edge of Stuart Creek Impact Area designed to train platoon and company sized elements.
Mike Threat Site	WS38927214	Electronic warfare site located on Hill 3265.
November Threat Site	WG22036758	Electronic warfare threat site. Also referred to as Sheet Hill.
On-Time Drop Zone	WS14247758	CDS/SATB drop zone. .7 miles east of Bearbait Drop Zone.
OP Shack	WS16197269	A primary observation point for the Stuart Creek Impact Area. It can also support Mortar firing.
Oscar Threat Site	WG15766825	Manned electronic warfare site. Location is also referred to as Helicopter Hill.
Papa Threat Site	WG23707904	Manned electronic warfare site. Near FP-17.
Pole Hill	WG14086865	Unmanned electronic warfare site and radio communications facility.
R2205		Restricted Airspace. R2205 is now scheduled and accounted for on the airspace scheduling page.
River Road Drop Zone	VS71549203	Non-surveyed Alaska Fire Service/BLM smokejumper drop zone.
Rocky Top	WG192677	Mobile Threat Emitter.
Romeo Threat Site	WG22807712	Electronic warfare threat site located near CAM II.
Salmon Loaf LZ	VS62747156	Remote Helicopter landing zone located in the TFTA.
Salmon Loaf Tower	VS62507145	An observation tower located in the Tanana Flats Training Area for observation of the Alpha Impact Area.

Table B-2: Fort Wainwright (FWA) ranges and training facilities. Refer to range and training area SOPs for detailed descriptions and procedures.		
Facility Name	**Location**	**Description**
Shoothouse Range	VS69608720	Multi-room live-fire facility designed for close-quarter room and building clearing operations.
Side Hill Drop Zone	VS69789235	Non-surveyed Alaska Fire Service/BLM smokejumper drop zone.
Sierra Threat Site	WG16327255	Manned electronic warfare threat site. Located near FP-20.
Small Arms Impact Area	VS70208550	
South Tower		An observation tower located in the Tanana Flats Training Area for observation of the Alpha Impact Area.
Stink Pond Drop Zone	VS71479290	Non-surveyed Alaska Fire Service/BLM smokejumper drop zone.
Stuart Creek Impact Area	WS22007600	Dudded impact area located in the YTA. This is the primary Impact Area for FWA which will support Artillery, Mortar and Aerial Delivery Weapon Systems.
Training Areas thru 114	Refer to Map	
TAC II	WS1510 370	Artillery and Mortar firing point located in YTA-3.
TAC III	WS1360 835	Artillery and Mortar firing point located in YTA-3.
Tall Grass Drop Zone	VS72889199	Non-surveyed Alaska Fire Service/BLM smokejumper drop zone.
Tanana Flats Training Area		
Tango Threat Site	WG39097234	Electronic warfare threat site located near FP-8.

Table B-2: Fort Wainwright (FWA) ranges and training facilities. Refer to range and training area SOPs for detailed descriptions and procedures.

Facility Name	Location	Description
Uniform Threat Site	WG28586944	Electronic warfare threat site located near FP-12.
Victor Threat Site	WG27357388	Electronic warfare threat site located near Lower South Fork.
Vince Drop Zone	VS81153630	Inactive.
Warrior Forward Operating Base (FOB)	VS73209020	A hardened Bivouac area located in TA 114. Area is large enough to support a Company plus sized unit.
White Bear Ski Loop	VS70509340	White Bear Loop ski and snowshoe trails on Birch Hill.
White Drop Zone	WS18476954	SATB Drop Zone.
Winter Camp	VS98507425	A 500' X 500' harden bivouac site with associated wooden tented areas will support a Company plus.
X-Ray Threat Site	WG17217732	Manned electronic warfare threat site. Located near FP-8.
Yankee 1 Threat Site	WG20857767	Electronic warfare threat site. Located near FP-18.
Yankee 2 Threat Site	WG23647704	Unmanned Electronic warfare threat site also referred to as Lantirn Village.
Yankee 4 Threat Site	WG24167123	Electronic warfare threat site. Located on Hill 2510.
Yankee 6 Threat Site	WG13146239	Unmanned Electronic warfare threat site located on C Battery.
Yankee 7 Threat Site	WG92815048	Unmanned Electronic warfare threat site.
Yankee 8 Threat Site	WG24547860	Unmanned Electronic warfare threat site.

Table B-2: Fort Wainwright (FWA) ranges and training facilities. Refer to range and training area SOPs for detailed descriptions and procedures.		
Facility Name	**Location**	**Description**
Yankee 9 Threat Site	WH94090411	Unmanned Electronic warfare threat site.
Yankee 10 Threat Site	WH66231856	Unmanned Electronic warfare threat site.
YTA Training Areas 1 thru 7	Refer to Map	Multi-use training areas located off Fort Wainwright in the Yukon Training Area (YTA).

B-3. Donnelly Training Area Range and Training Facilities

Table B-3: Donnelly Training Area (DTA) ranges and training facilities. Refer to range and training area SOPs for detailed descriptions and procedures.		
Facility Name	**Location**	**Description**
Alabama	WR61209620	Alabama Range is designed as a sports fire range. There are eight firing tables with benches. The range has target frames at 25, 50, 100, 150, 200, 250, and 300 meters. This range is utilized for zeroing privately owned weapons. This range is operated under a CFA; see the range SOP for special instructions.
Arkansas	WR59709560	Arkansas Range is designed as a small arms, direct-fire weapons range. The range setup has a 25-meter berm for M16 alternate ~~C~~" course qualification, a 10 meter qualification for M249 and 240B and six station walk-through lanes for military police/officer pistol qualification. The range is equipped with a tower, PA system, lights, target storage building, warm up building with a phone, electricity, latrine and a helicopter pad. This range is operated under a CFA see the range SOP for special instructions.

Table B-3: Donnelly Training Area (DTA) ranges and training facilities. Refer to range and training area SOPs for detailed descriptions and procedures.

Facility Name	Location	Description
Battle Area Complex (BAX)	WR68649113	This complex provides a collective live fire home station training facility for all elements of the Stryker Brigade Combat Team (SBCT). SBCT crews and dismounted Soldiers train and test their ability to detect, identify, engage and defeat stationary and moving combined arms targets in both open and urban terrain environments. This complex also supports tactical live fire operations as well training with sub-caliber and/ or training devices.
Bondsteel Maneuver Range	WR52558057	Bondsteel is designed for live fire training in urban terrain. This range has 10 buildings (Nonstandard per TC 25-8) adjacent to an impact area. Battery powered remote target system can be used in and outside of the buildings. This range is in restricted air space see the range SOP for special instructions.
CALFEX Bowl	WR54908340	CALFEX Bowl is a small-arms, tactical, live-fire area. Range fan is designed based on the unit tactical plan. This range is in restricted air space. See the range SOP for special instructions.
Collective Training Range (CTR)	WR54648226	CTR consists of a Multipurpose Training Range (MPTR) and Infantry Platoon Battle Course with temporary portable structures that support admin/control. The CTR is approximately 3 kilometer deep and 1.5 kilometers wide and supports up to company level non-live fire and live fire-training for mounted and dismounted crew drills to include tables V, VI, VLL, VIII day and limited visibility. This range is in restricted air space. See the range SOP for special instructions.

Table B-3: Donnelly Training Area (DTA) ranges and training facilities. Refer to range and training area SOPs for detailed descriptions and procedures.

Facility Name	Location	Description
Colorado	WR60409430	Colorado Range is a ten lane Known Distance range with firing berms from 100-1000 meters. it is equipped with a control tower, telephone drop, latrine, and target-storage building. This range is operated under a CFA. See the range SOP for special instructions.
Combined Arms Collective Training Facility	WR67129379	This facility is designed to conduct multi-echelon, full spectrum operations training up to battalion TF level. The CACTF will accommodate Force on Force (FOF) and Force on Targetry (FOT). All targets are fully automated, utilizing event specific, computer-driven target scenarios and scoring.
Georgia	WR59789370	Georgia Range is an air curtain, indoor, heated facility consisting of fifteen lanes designed for multipurpose testing/training and familiarization firing of small-arms, direct-fire weapons. Georgia Range is somewhat narrow; however, it provides approximately 1,200 to 2,000 meters of cleared area that runs east to west, with approximately 400 meters of width north to south. This range is in a CFA. See the range SOP for special instructions.
Lampkin	WR57379068	Lampkin Range is designed for multipurpose testing/training and firing of small-arms direct-fire weapons, direct fire artillery and limited demolitions. Lampkin Range borders the Mississippi Impact Area. Direction of fire is south to southwest. This range is in restricted airspace. See the range SOP for special instructions.

Table B-3: Donnelly Training Area (DTA) ranges and training facilities. Refer to range and training area SOPs for detailed descriptions and procedures.		
Facility Name	**Location**	**Description**
Simpsonville Maneuver Range	WR21009203	Simpsonville is designed for live fire training in urban terrain and combined-arms live fire training this range has 7 buildings (Nonstandard per TC 25-8). Due to the remoteness of this range a medic with an aid bag and a MEDEVAC aircraft is required. This range is in restricted air space. See the range SOP for special instructions.
Texas	WR55307700	Texas Range is designed for multipurpose testing/training. It is capable of supporting firing of all types of large-caliber, direct and indirect weapons as well as defense missile systems. This range is in restricted airspace. See the range SOP for special instructions.
Twin Lakes UAS Facility	WR56088300	Twin Lakes UAS Facility is designed to support UAS operations. This facility consists of a 800 foot land strip and a maintenance facility. **Center of Airstrip: WR56118283**
Washington	WR52817376	Washington Range is designed for multipurpose testing/training. Will accommodate surface-to-air fire for any air-to-air defense missile battery with target drone equipment, surface-to-surface firing of direct- and indirect-fire weapon systems and demolitions. This range is in restricted air space. See the range SOP for special instructions.
Allen Drop Zone	WR62469717	Length: 2,100 yards; Width: 800 yards. Used for personnel, CDS. See the range SOP for special instructions.
Bear Drop Zone	WR62377541	Length: 1,500 yards; Width: 1,000 yards. Used for personnel/equipment. See the range SOP for special instructions.
Bison Drop Zone	WR65379604	Radius: 800 yards. This DZ is located on Buffalo DZ. Used for CSD/SATB DZ. See the range SOP for special instructions.

Table B-3: Donnelly Training Area (DTA) ranges and training facilities. Refer to range and training area SOPs for detailed descriptions and procedures.

Facility Name	Location	Description
Buffalo Drop Zone	WR66019632	Length: 2,000 yards; Width: 1,000 yards. Also surveyed as Buffalo corral DZ. Used for personnel, CDS, and heavy equipment. See the range SOP for special instructions.
Butch Drop Zone	WR66107855	Radius: 500 yards. Also surveyed as Butch Lake DZ. Used for CDS/SATB DZ. See the range SOP for special instructions.
Delta Creek Drop Zone	WS29850908	Length: 1,500 meters; Width: 400 meters. Used for CDS/SATB DZ. See the range SOP for special instructions.
Delta Drop Zone	WS30170960	Length: 1,000 yards; Width: 700 yards. Used for Personnel/CDS. See the range SOP for special instructions.
Donnelly Drop Zone	WR62257800	Length: 4,800 yards; Width: 1,100 yards. This DZ is also surveyed as Donnelly Flats DZ. Used for personnel, heavy equipment, and CDS. See the range SOP for special instructions.
Herc Drop Zone	WR62247740	Length: 700 yards; Width: 600 yards. This DZ is located on Donnelly DZ. Used for CDS/SATB DZ. See the range SOP for special instructions.
Hillbilly Drop Zone	WR20029319	Length: 650 yards; With: 350 yards. Used for Personnel, equipment (day only). See the range SOP for special instructions.
Meat Drop Zone	WR62557539	Radius: 600 yards. This DZ is located on Bear DZ. Used for CDS/SATB. See the range SOP for special instructions.
Mudduck Drop Zone	WR65659508	Radius: 600 yards. This DZ is located on Buffalo DZ. Used for CDS/SATB. See the range SOP for special instructions.
Pump Station 9 Drop Zone	WR64008690	Length: 1,725 yards; Width: 600 yards. For CDS/SATB only. See the range SOP for special instructions.

Table B-3: Donnelly Training Area (DTA) ranges and training facilities. Refer to range and training area SOPs for detailed descriptions and procedures.

Facility Name	Location	Description
Ramp Drop Zone	WR62697772	Length: 660 yards; Width: 580 yards. This DZ is located on Donnelly DZ. For CDS/SATB. See the range SOP for special instructions.
Red Drop Zone	WR06399118	Length: 1,500 meters; Width: 400 meters. For Personnel/equipment. See the range SOP for special instructions.
Sally Drop Zone	WR54907790	Length: 3,075 yards; Width 1,350 yards. Used for personnel and CDS. See the range SOP for special instructions.
Snail Trail Drop Zone	WS19401930	Radius: 250 meters. Used for military free fall only. See the range SOP for special instructions.
Texas Drop Zone	WR53007628	Length: 1,100 yards; Width: 1,000 yards. Used for SATB only. See the range SOP for special instructions.
Texas II Drop Zone	WR53057623	Length: 1,100 yards; Width: 1,000 yards. Used for equipment/CDS. See the range SOP for special instructions.
Twylia Drop Zone	WS30700670	Length: 1,500 yards; Width: 1,000 yards. Used for equipment/CDS. See the range SOP for special instructions.
Warrior Drop Zone	WR15609160	Length: 7,500 meters; Width 2,500 meters. Used for personnel/CDS. See the range SOP for special instructions.
Donnelly Assault Strip	WR62357857	Length: 4,150 feet Width: 90 feet. Assault strip for landing C-130 aircraft. See the range SOP for special instructions.
Delta Creek Assault Strip	WS30010909	Length: 3,500, feet Width: 90 feet. Assault strip for landing C-130 aircraft. See the range SOP for special instructions.

Table B-3: Donnelly Training Area (DTA) ranges and training facilities. Refer to range and training area SOPs for detailed descriptions and procedures.

Facility Name	Location	Description
OP 1	WR59499151	Observation point, laser and mortar-firing point.
OP2	WR59209117	Observation point, laser and mortar-firing point.
OP3	WR58609075	Observation point, laser and mortar-firing point.
OP4	WR58108983	Observation point, laser and mortar-firing point.
OP5	WR56988894	Observation point, laser and mortar-firing point.
OP6	WR55478734	Observation point, laser and mortar-firing point.
OP6	WR55408642	Observation point, laser and mortar-firing point.
OP7	WR55348481	Observation point, laser and mortar-firing point.
OP7A	WR54988354	Observation point, laser and mortar-firing point.
OP 8	WR53838255	Observation point, laser and mortar-firing point.
OP 9	WR52748251	Observation point, laser and mortar-firing point.
OP 10	WR52127546	Observation point, laser and mortar-firing point.
OP 11	WR51647440	Observation point, laser and mortar-firing point.
OP12	WR51767153	Observation point, laser and mortar-firing point.

Table B-3: Donnelly Training Area (DTA) ranges and training facilities. Refer to range and training area SOPs for detailed descriptions and procedures.		
Facility Name	**Location**	**Description**
OP 26	WR36529963	Observation point, laser and mortar-firing point.
OP 27	WS35000049	Observation point, laser and mortar-firing point.
OP 28	WS34160100	Observation point, laser and mortar-firing point.
OP 29	WS33780128	Observation point, laser and mortar-firing point.
OP 30	WS33490156	Observation point, laser and mortar-firing point.
OP31	WS33270217	Observation point, laser and mortar-firing point.
Firing Point Audrey	WR53888096	Established artillery firing points capable of supporting 105mm and 155mm canons.
Firing Point Big Lake	WR54828128	Established artillery firing points capable of supporting 105mm and 155mm canons.
Firing Point Bowhale	WR55838237	Established artillery firing points capable of supporting 105mm and 155mm canons.
Firing Point Mark	WR56438260	Established artillery firing points capable of supporting 105mm and 155mm canons.
Firing Point Mt. Hayes	WR53898053	Established artillery firing points capable of supporting 105mm and 155mm canons.
Firing Point Sally	WR54638203	Established artillery firing points capable of supporting 105mm and 155mm canons.
Black Rapids 25 meter range	WR 58144327	Supports 5.56 and 7.62 firing.

Appendix C
Range and Training Area Maintenance Program

C-1. Purpose

This appendix's purpose is to provide administrative instructions for the execution of the range and training area maintenance program.

C-2. Responsibilities

a. Range Control will:

(1) Schedule ranges.

(2) Issue target materials.

(3) Conduct administrative range procedures as outlined in this regulation.

(4) Inspect all ranges daily for cleanliness and damage. Ranges used during the day will be inspected before units are cleared from the range. A record of inspections will be maintained for 90 days and provided on request.

(5) Provide units with a range inspection and maintenance worksheet for each assigned range. These worksheets will contain a list of repairs that must be completed.

(6) Provide material to accomplish the repairs listed on the worksheet.

(7) Maintain all electrical- and moving-target mechanisms.

(8) Submit work orders to DPW for all work beyond the unit's capability and scope of responsibility.

(9) Coordinate all unexploded-ordnance removal activities with the Explosive Ordnance Detachment before performing maintenance in the impact area of a range employing explosive projectiles.

(10) Provide updated range signs with sponsoring unit's name.

(11) Submit tasking requests through the Installation Range Officer (IMPC-FRA-PLI) and the USAG FWA DPTMS (IMPC-FWA-PL) to the G3 Tasking Office (APVR-RPTM-PO) for unit support of annual range cleanup activities. Requests for support will be submitted to the G3 Tasking Office no later than 7 weeks prior to the planned range and training area clean up event.

(12) Ensure RFMSS entries are made at the beginning of the FY for one week to facilitate an annual Range and Training Area cleanup. The dates will be within the first week of June for five consecutive days for FRA, FWA and DTA. Range Control at each location will schedule ~~"M~~Maintenance" in RFMSS for all Range Facilities and Training Area during these designated times; no training events should be scheduled for this timeframe.

b. Units tasked to support the range and training area maintenance program by the G3, will:

(1) Maintain the general police of assigned ranges and training areas.

(2) Perform all self-help repair (i.e., repair and replace windows, paint structures, cut grass five feet out from fixed objects and areas where tractors cannot be operated for safety reasons, fill and replace sandbags, and replace target-holding frames) as listed on the worksheet provided by Range Control.

(3) Provide Range Control with a list of tasks requiring engineer support, whereby Range Control will prioritize them.

(4) Coordinate responsibilities during times causing the least training distraction.

c. The Director of Public Works will:

(1) Provide self-help material required for repairing structures in response to range-control requests.

(2) Provide mowing equipment to Range Control for grass maintenance.

(3) Provide work requested on maintenance and service work orders submitted by Range Control.

(4) Provide snow removal of range and training-area-access roads and target-access routes.

(5) Operate tractor-driven grass mowers (except on target berms and ditch banks where they cannot be operated for safety reasons).

Appendix D
Implemented Policies that Effect Training

D-1. Purpose

This appendix's purpose is to provide historical information of conditions and situations affecting training that were identified by past commanders as training distracters.

D-2. General

This appendix's intent is to address the situations and/or conditions with the applied solutions and thereby inform commanders/trainers of some unique requirements that must be followed to conduct training or to preserve training assets in Alaska.

D-3. Training Distracters/Solutions

a. Visibility (vertical and horizontal). See DA PAM 385-63, AR 95-2, DA policy, FAA, and this regulation.

(1) All USAG FWA small-arms ranges are within a controlled-firing area. Activation of the controlled-firing area is dependent on both vertical and horizontal ceiling requirements specified in the above mentioned documents. Winter weather conditions (ice fog) in Alaska occasionally prevent using the small-arms complex.

(2) The solution to this problem is to schedule alternate days in an attempt to counter poor-visibility periods.

b. Cold Weather Restrictions on Automated Targetry ranges.

(1) Below zero degrees operation of the Automated Targetry increases the malfunction and breakage rate. The automated targetry mechanisms were designed to operate in above-zero degrees weather and not in the extreme Alaskan temperatures. Heat pads that raise the operational temperature to above minus 20 degrees have been added to the electronics enclosure. However, the rate of breakage continues to increase rapidly below zero degrees. Other components of the system, such as the aluminum hubs and target-carrier frames, cannot be heated and are still subject to breakage.

(2) Automated ranges may be closed if the temperature falls below minus 20 degrees. Units may use the Alternate Course C targets to meet qualification requirements for M16 and M4 rifles and the Alternate Course targets for 9mm pistol qualification.

c. Firing of 40mm, AT4 HE and MK19 HE into four or more inches of snow.

(1) DA PAM 385-63 recommends that 40mm HE ammunition not be fired into snow. USAG FWA Regulation 350-2 restricts the firing of HE munitions into more than four inches of snow. The cushioning of the snow increases the incidence of duds. The 40mm HE ammunition is extremely sensitive and the snow adds to the difficulty of finding duds during clearing procedures and increases the risk to EOD personnel. Units are discouraged against firing the HE munitions into snow. There are no restrictions on TP rounds.

(2) The firing of AT4, 40mm and MK19 HE munitions is not a requirement for qualification, only familiarization. The firing of these munitions will remain restricted during periods when the snow depth is more than four inches. Units can continue to qualify with 40mm TP and AT4 subcaliber munitions.

d. Fire weather index requirements during summer months.

(1) Installation Range Office publishes a fire weather index which indicates the degree of dryness in Alaska. This index is used to determine munitions restrictions. A fire weather index of low or less has no restrictions. A fire weather index of extreme or higher indicates that the likelihood of incendiary munitions and flares causing a fire is extremely high. If a waiver is granted to allow firing when the index is moderate or higher and a fire is started, the military may be liable for the cost of fighting the fire and property damage.

(2) The USAG FWA Commander or designated representative has the authority to waive the requirement. Most small-arms ranges in Alaska are fire safe and normal qualifications can be accomplished. Fire weather index restrictions can be found in this regulation or by contacting your Range Facility Manager.

e. Firing into Eagle River Flats Impact Area.

(1) A large number of waterfowl were dying in the Eagle River Flats Impact Area from causes other than weapons effects. In 1990, firing was suspended until the cause could be determined. Scientists determined that the residue from white-phosphorous rounds resembled natural food and that ingestion poisoned the birds. If undisturbed, the residue settles into the mud and is out of reach of waterfowl. The residue is brought to the surface by the effects of explosives (mortar and artillery rounds) and may again become available to the waterfowl.

(2) Scientists have determined that more than four inches of ice for artillery and more than two inches for mortar rounds will prevent cratering. The thickness of the ice is monitored and units are advised when the thickness will permit winter use, which is usually in November. It may be several years before the Eagle River Flats are available for year-round firing. As stated in DA policy and this regulation, the firing of white-phosphorous rounds into wetlands is prohibited.

Appendix E
SDZ Overlays

E-1. Purpose

An overlay is constructed per DA PAM 385-63 to identify range SDZ and firing limits.

E-2. Preparation

a. Nonstandard ranges and special firing courses require an SDZ overlay. Range OICs will not be granted clearance to fire unless the copies of an approved overlay are on-hand at Range Control and with the range OIC on-site. There is no exception to this requirement. Unit commanders must ensure range OICs completes the live fire exercise development cycle within the established timelines.

b. Overlays are prepared by the unit range OIC in three copies at a scale of 1:50,000 unless otherwise directed by the Range Facility Specialist. The basic reference for ammunition and weapon hazard data is DA PAM 385-63. Claymore overlays are based on FM 23-23, appendix III.

c. Range OICs must consult with the Range Facility Specialist before constructing overlays. SDZ drawings must be precisely prepared; prior coordination will save time in research and will eliminate time consuming redrawing of overlays.

E-3. SDZ Marginal Data

a. A sample surface danger zone overlay is at figure E-1.

b. Marginal data that must be included:

(1) Range or firing event.

(2) Date of firing.

(3) Weapons and ammunition depicted.

(4) Scale.

(5) Name, rank, unit, and telephone number of the preparer (range OIC).

(6) Signature of the preparer and the date.

(7) Minimum of two Universal Transverse Mercator grid reference points.

(8) Road guard/aircraft spotter positions.

c. SDZ overlays must show start fire line, cease-fire line, and azimuths of right and left limits in grid and magnetic.

d. Overlays must also be submitted for exercises/training involving the use of:

(1) Smoke.

(2) CS.

(3) Demolitions (outside of established demolition ranges).

(4) Convoys and road marches (within limits of training areas).

(5) Road blocks on major and secondary roads/trails.

(6) Trenching or cratering of secondary roads/trails.

(7) Establishment of new mortar/artillery firing points.

(8) Establishment of new trail networks in the training areas.

E-4. Overlay Approval

a. Overlays will be submitted to Range Control for approval at least four weeks before the date of firing. All copies of the overlay must be reviewed, approved, and signed by the Range Facility Specialist and approved by the IRO Safety Officer. A copy of the approved SDZ is filed at the IRO Safety Office, at Range Control, and returned to the unit for reference during firing.

b. The importance of timely prior coordination cannot be overemphasized. Units will not be allowed to fire if an overlay has not been staffed and approved.

Appendix F
Targets

F-1. Electrical Targets

a. Target devices installed on hard-wired electrical ranges are managed and maintained by range maintenance. Using units will not attempt downrange repair or adjustment of these devices.

b. The pop-up ability of the targets on electrical ranges is adversely affected by low temperatures and the presence of snow and ice. Before activating the targets, the using unit will open all snow covers and remove any snow that has accumulated on the targets or mechanisms. Failure to do this will cause equipment damage for which the unit will be held responsible.

c. The range OIC and a range-control representative will ensure all targets are functioning properly. If at any time during the course of firing a target fails to operate, the range OIC will determine if training can be conducted using the lanes that are fully operational or request the range be made 100 percent operational for the continuation of training.

d. Radio-controlled and manually operated target devices for use on special firing courses are requested from Range Control. Units must arrange for training, pickup, issue, emplacement, and return of these devices. Range maintenance personnel will provide technical assistance in the setup of radio-controlled target devices on ranges. Units requiring this assistance must submit their requests 12 working days before the scheduled training event.

e. Chemical lights will not be attached to the targets or target mechanisms on automated target ranges or remote-controlled targets.

F-2. Standard Paper Targets

a. Target sheds on established ranges are stocked with paper targets and target frames. The using units will resurface the targets after the completion of firing.

b. Targets required for a special firing course will be requested, in writing, 12 working days before the scheduled training event.

c. Range Control can fabricate silhouette and three-dimensional wood targets, full-size or scaled for live-fire training events. Orders for large targets or large amounts of special targets will not be accepted less than 30 duty days before firing. Unit assistance may be required.

Glossary

Section I
Abbreviations

AR .....Army Regulation

AT4.....M136 Antitank Missile

CACTF .....Combined Arms Collective Training Facility

CALFEX .....Combined arms live fire exercise

CDS.....Container delivery system

CFA .....Controlled firing area

DMPTR.....Digital Multipurpose Training Range

DPW .....Directorate of Public Works

DTA .....Donnelly Training Area, Fort Greely, Alaska

DZ.....Drop zone

DZSO .....Drop zone safety officer

FAA .....Federal Aviation Administration

FM .....Field Manual or, in reference to radios, Frequency Modulation

FRA .....Fort Richardson, Alaska

FWA .....Fort Wainwright, Alaska

FWI.....Fire Weather Index

HATR.....Hazardous Air Traffic Report

HC .....Hexachloroethane

HE .....High explosive

IPBC.....Infantry Platoon Battle Course

IRO .....Installation Range Office

ISBC.....Infantry Squad Battle Course

ITAM.....Integrated Training Area Management

kg.....kilogram

LAW.....Light antitank weapon

MEDEVAC.....Medical evacuation

mm .....millimeter

MOA .....Military operating area

MOS.….....Military occupational specialty

MOU .....Memorandum of Understanding

MOUT.....Military operations in urban terrain

MPTR .....Multipurpose Training Range

NBC.....Nuclear, Biological, and Chemical

NEW .....Net explosive weight

OP .....Observation Post

POL ..... Petroleum, oils, and lubricants

RCFDO.....Range control fire desk operator

RSO.....Range safety officer

SABOT .....Kinetic energy round fired by the Mobile Gun System (MGS)

SARSA .....Small arms range safety area

SDZ .....Surface danger zone

SFC .....Sergeant First Class

SOP.....Standing operating procedure

STS .....Special tactics squadron

TA.....Training area

TM .....Technical Manual

TNT .....Trinitrotoluene (a general purpose explosive)

TP.....Training practice (inert projectile)

UAC.....Urban Assault Course

UAV .....Unmanned aerial vehicle

USARAK.....United States Army Alaska

Section II
Terms

Approved overlay
An overlay (tracing paper/acetate) authenticated by the range utilizations or range facility manager, containing a surface danger zone for weapons firing and other graphical training descriptions as required by this regulation plus marginal information shown in appendix E. All overlays will be 1:50,000 scale and submitted in triplicate to Range Control.

Cease-fire
A command given by anyone observing an unsafe firing condition on any training complex to immediately terminate an active (hot-wet) firing status of a weapon system(s).

Cease-fire line

a. A line identified on the ground and on an approved overlay at which troops involved in a live-fire exercise must cease firing and clear weapons.

b. A line at the down-range end of an aerial gunnery-firing lane, identified on the ground and on an approved overlay, at which aviators cease-fire and disarm weapons. Also known as the disarm line.

Check-fire
A temporary cessation of firing imposed on a unit because of an unsafe condition or to accommodate other activities, or at unit request for meals, changing of the range officer in charge/range safety officer, etc.

Combat control team
United States Air Force personnel trained to identify, mark and control, drop, landing or extraction zones.

Cold status
The condition of that part of the range complex occupied by a unit not conducting training. For example, a unit has completed training and is waiting to be cleared off the range by Range Control inspectors.

Controlled firing area
An area established by the FAA in which ordnance firing is conducted under conditions controlled by the using agency. As part of this responsibility, the using unit must ensure firing will cease before aircraft penetrate the controlled firing area.

Daily range schedule
A list of scheduled ranges, facilities, and training areas for a given day, prepared by Range Control, and published in the weekly bulletin. The daily range schedule meets the AR 385-63 requirement for 24-hour notice of firing.

Drop zone safety officer
The safety certified individual in charge of a drop zone during a personnel drop (DZSO).

Dud
Explosive ordnance which has been armed and fired but does not detonate.

Explosive ordnance disposal
An ordnance unit that identifies, recovers, and disposes of explosive ordnance.

Hang fire
A delay in the functioning of a propelling charge train at the time of firing. A hang fire is not a dud and will be handled by unit personnel on site per the appropriate weapon manuals.

Hot status
The condition of that part of the range complex occupied by a unit conducting training. For example, a drop zone in use by paratroopers is in hot status.

mils
A unit of measure for angles that is based on the angle subtended by 1/6400 of the circumference of a circle.

Misfire
A complete failure of a loaded weapon to fire, due to firing mechanism or propelling charge explosive train fault. A misfire is not a dud and will be handled by unit personnel on site per weapon manuals.

Military operations area
That vertical and lateral airspace allocated by the FAA to segregate military aviation from other instrument flight rule traffic and to identify the visual flight rule traffic where these military activities are occurring. See AR 95-1 and Department of Defense Flight Information Pamphlet, Area Planning 1, and chapter 10 of this regulation.

Priority
An established rank ordering of units, used to schedule the range/training complex.

Range
A dynamic system composed of people, equipment, and land designed to contain the effects of the weapons and ammunition fired therein. Ranges may be permanent facilities or temporary special firing courses. See appendixes B and D.

Range complex
That portion of the military reservation reserved for training, including ranges, training facilities, training areas, FAA restricted airspace, and military operations areas.

Range officer in charge
The safety certified individual in charge of a range or training facility. Indirect-fire range officers in charge must also be command safety certified. To become certified, individuals must attend the Range Control safety briefing and receive a passing score on the range safety certification test.

Range safety certification program
A program consisting of range safety briefing(s), an open-book, range-safety examination, range certification rosters, and a range safety certification card administered by Range Control.

Range safety officer
The safety certified individual in charge of safety on a range or training facility. The range safety officer will have no other duties during firing. Indirect-fire range safety officers must also be command safety certified.

Restricted airspace
That portion of United States airspace allocated for indirect-fire, aerial gunnery, parachute, and aviation training. No aerial gunnery or indirect-fire weapons may shoot from outside the restricted airspace unless specifically approved by the FAA.

Special firing course
Any firing difference from the designated purpose of an established range or not on an established range. See chapter 9 and appendix C.

Surface Danger Area E

a. The danger area located immediately in front of an indirect-fire firing position. The size of Surface Danger Area E will vary according to the caliber of the weapon fired and the ammunition. It is an area of variable danger from overpressure, noise, ground and muzzle debris, or other potential injury related to weapons firing. Since Surface Danger Area E is an area of variable hazards, nonparticipating personnel are prohibited out to a 350-meter distance from an approved firing position. This does not apply to weapon crews firing from an approved tactical configuration and operational personnel involved in the firing exercise with a valid need to enter this area as approved by the garrison commander.

b. During firing, personnel or vehicles will not be permitted inside Surface Danger Area E. Access to roads passing through Surface Danger Area E must be controlled by the firing unit.

Start-fire line

a. A line identified on the ground an on an approved overlay at which troops involved in a live-fire exercise may unlock weapons and commence firing.

b. A line on an aerial gunnery lane, identified on the ground and on an approved overlay, at which aviators may arm weapons circuits and commence firing.

Surface danger zone
An area calculated from data provided in AR 385-63 that will contain the effects of given weapons fire. The surface danger zone consists of several sub-areas, which are defined in the glossary of AR 385-63.

Training area
A numbered subdivision of the range complex used primarily for nonfiring maneuver training.

Training facility
Facilities on, or portions of, the range complex used for training that does not include weapons live fire. See appendix C.