

Range Safety

Accidents and injuries tend to increase during field training exercises (FTXs) if safety is not an integral part of the exercise. Lack of safety planning and failure to adequately prepare all individuals involved are primary causative factors. Inappropriate procedures, ignorance of proper procedures, and disregarding procedures characterize many accidents during FTXs. Requirements of this chapter apply in both the field and garrison environment.

Safety Management and Organization

- a. The exercise commander will appoint an assistant safety officer to serve as the overall exercise safety director; and a sufficient number of assistant unit safety officers will be appointed to ensure adequate hazard control and safety guidance at all levels.
- b. A safety "stand-down" will be held before deployment to ensure all participants are properly indoctrinated.
- c. All participating personnel will be briefed on exercise hazards and countermeasures, both before and subsequent to arrival at the training site.
- d. Vehicles and equipment will be thoroughly inspected and safety deficiencies corrected before deployment. Vehicle and equipment operators will be trained and licensed before the exercise. At no time will untrained, unlicensed personnel operate vehicles or equipment.
- e. Commanders will establish sleep plans before the exercise. Sleep plans will take into account tactical situations and risk factors involved in determining sleeping locations.
- f. Risk management procedures will be formally included in all phases of the exercise. The purpose is to identify potential safety risks and prescribe precautions to reduce or eliminate hazards, which might cause an accident. Risk assessments prepared for FTXs will be coordinated with the Garrison Safety Office - Fort Knox. Daily risk assessments will be conducted on all range and training area activities and a signed, dated Fort Knox Form 5008-E will be on site at the training event.
- g. A plan will be developed to ensure that all personnel know what to do in the event of severe weather, (tornado, lightning, etc.)

Vehicle Movement

The requirements in chapter 4 of Fort Knox Regulation 385-10, Fort Knox Regulation 385-22, Range Regulation apply during all field training.

Training Areas

- a. Personnel will not erect tents or sleep in the open near roads, trails, or other areas where vehicles might travel.
- b. Flammable materials will be stored and used properly. Gasoline will not be stored inside buildings or tents, nor will it be used as a cleaning agent or solvent. Flammable liquids will be stored a minimum of 50 feet from tents and vehicles.
- c. Generators, refueling vehicles, and electrical equipment will be properly bonded and grounded.
- d. Operation of kitchen equipment, M2 burners, generator equipment, lanterns, and related equipment will be restricted to trained and licensed personnel. The area around the equipment will be cleared of flammable and combustible materials to prevent ignition.
- e. Firearms and ammunition will be strictly controlled. All ammunition residue will be turned into Muldraugh Ammunition Storage Area (MASA).
- f. Vehicles and trailers will be parked in such a way as to prevent their rolling into the bivouac area.
- g. Vertical antennas will be located a distance of at least twice the antenna's height from power lines to preclude contact during assembly or disassembly.
- h. Open fires are not allowed in the training complex.
- i. Range roads are controlled access roads, and are restricted to authorized personnel only. Traffic is limited access to "Required Personnel Only" east of Baum range, the only other traffic to this point is limited to occasional persons who fish at the DMWR maintained Lake Douglas, south of the range road (7th Armor Division). Signs are posted west of Baum Range.

Heaters

- a. The use of personally owned, electrical, or non-vented combustion type heaters is prohibited. Only approved heaters will be used. Approval will be obtained from the Fort Knox Fire Department; user will maintain a copy.

- b. Electric or other domestic type space heaters will not be used or installed without specific written approval. Government Issue tent stoves will not be used in buildings. These stoves may be used in tents if properly installed.
- c. Before use of any portable heater, commanders/directors will ensure that the following is accomplished:
 - 1. A written Standing Operating Procedure that embodies the principles of this regulation is present.
 - 2. Heaters are set up by competent personnel familiar with leak test procedures. Only personnel trained, tested, and licensed per AR 600-55 will operate heaters.
 - 3. Each heater is inspected by the responsible unit fire or safety representative.
 - 4. Each heater is setup, fueled, used, and maintained per applicable TM. Only fuels approved for use and specified in the applicable TM will be used. Different types of fuel will not be mixed.
 - 5. Heaters are vented to the outside of the tent, structure, or shelter using the vent pipes provided with the heater.
 - 6. All heaters are equipped with an emergency fuel shut-off.
 - 7. Heaters are set up on a firm and level fireproof base located in a marked area free of clothing or combustible material. A 4-foot area around the heater and vent pipe will be maintained clear of combustible material.
 - 8. A fire watch is on duty anytime solid or liquid fueled heaters are in use. The fire watch will be briefed on procedures for fire fighting with appropriate extinguishing agent and early recognition of signs of carbon monoxide poisoning.
 - 9. Heaters are not operated while unattended.
 - 10. If the fuel tank is a separate component of the space heater, it will be located on the outside of the tent or shelter and marked with type of fuel it contains. Fuel lines will be protected from damage; under no circumstances will heaters be operated with fuel line leaks.
- d. Adequate ventilation will be provided for all types of fuel-powered equipment to prevent accumulation of carbon monoxide. Carbon monoxide (CO) detectors are

not to be used in a field environment. CO detectors are not designed or proven for outdoor use and do not have a means for calibration. CO detectors used in an outdoor environment provide a false sense of safety and early warning.

Convoy Operations

The planning and coordination involved in convoy operations require aggressive staff action. Convoy operations are planned according to Fort Knox Regulation 350-7, and FM 55-30. Joint Service regulations AR 55-80, and AR 55-162 provide guidance on oversize/overweight vehicles and convoy moves. A single HET, or other heavy equipment transport vehicle, carrying a load constitutes a convoy. In addition, four or more wheeled vehicles, two or more tracked vehicles, or a combination of three or more wheeled and tracked vehicles in joint movement within a 60-minute period, constitute a convoy for the Fort Knox training area. Civil highway authorities set limits on vehicle weight, length, width, and height on off post movement to ensure the safety of the highway user and to preclude damage to the infrastructure. DOD policy states that no vehicle movement that exceeds legal limitations or regulations, or that subjects highway users to unusual hazards, will be made without permission from state, local, and/or toll authorities.

Vehicle operators will:

1. Not drive an Army motor vehicle for more than 10 continuous hours, nor will the combined duty period exceed 12 hours in any 24-hour period without at least 8 consecutive hours of rest.
2. Complete PMCS before, during, and after operations.
3. Ensure personnel are in a safe position, seated, and with safety restraints worn.
4. Ensure all hatches are locked and secured.

Convoy Control Factors

- a. Convoys will be escorted by lead and trail vehicles equipped with rotating amber warning lights (RAWL) and two-way radios to maintain contact with each other, under no circumstances will privately owned vehicles be used as lead or trail vehicles. Personnel will not be transported in the trail vehicle, nor will the trail vehicle tow a trailer.
- b. The convoy commander will designate the staging area and starting points with the help of movement control center personnel.

- c. Vehicles with headlights, taillights, brake lights or turn signals not operational will be considered non-mission capable.
- d. Vehicles not meeting safety requirements will not be allowed to move. Failure to follow instructions, or any unsafe conditions, will cause the shut down of the operation until corrective actions are taken.
- e. Track vehicles will be positioned at the rear of wheeled vehicles in a convoy. Tracked vehicles will not be used as the trail vehicle.

NOTE: Every effort will be made to convoy wheeled and tracked vehicles separately.

- f. Vehicle drivers will maintain a minimum interval of 6 meters between vehicles when at the halt or when engines are idling. In designated training areas, tracked vehicles will halt in a herringbone or staggered formation if the terrain permits. For administrative parking, i.e., in a holding area, vehicles will be parked side by side or in a herringbone or staggered formation, but not bumper to bumper.
- g. During daytime operations, a minimum interval of 5 meters will be maintained between vehicles in a convoy. Night convoy operations requiring blackout marker lights will maintain vehicle intervals as outlined in FM 21-305 and TC 21-306.
- h. Vehicles do not have the right of way at road or rail crossings.
- i. Oversized or overweight vehicles will be equipped with RAWLs visible to approaching and passing vehicles.
- j. A senior occupant (at least SGT or higher) will ride in the lead and trail vehicles of a convoy.
- k. Speed will be adjusted to the environmental and weather conditions.
- l. All vehicles will remain in single file throughout the movement. Passing while in a convoy is strictly prohibited unless passing a disabled vehicle. Pass a disabled vehicle with caution and at a reduced speed.
- m. Disabled vehicles must be moved completely off the road. Warning triangles and flashers will be used to warn other traffic of a hazardous condition. Triangles will be a minimum of 100 meters to the front and rear of the disabled vehicle and highly visible to oncoming traffic.

References

- AR 385-63
 - http://www.army.mil/usapa/epubs/pdf/r385_63.pdf
- DA Pam 385-63
 - http://www.army.mil/usapa/epubs/pdf/p385_63.pdf
- TRADOC 385-2
 - <http://www-tradoc.army.mil/tpubs/regs/r385-2.htm>