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DTIC QUALITY INSPECTED 4



Introduction

The purpose of this checklist is to provide Army leaders a ready safety reference that addresses functions and tasks that are common to most Army units. Although the checklist is primarily directed to tactical organizations, it can also be applied to any organization performing similar tasks. Feel free to add additional checklist items that cover your particular mission needs.

Your recommendations for changes or additions to this checklist are encouraged. Submit DA Form 2028: Recommended Changes to Publications and Blank Forms to Commander, U.S. Army Safety Center, ATTN: CSSC-PMG, Bldg. 4905, 1209 5th Ave., Fort Rucker, AL 36362-5363. Direct communication is authorized by AR 10-29.

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Accident Prevention Awards Program

AR 672-74 and AR 385-95 provide guidance on accident prevention awards programs. Commanders are responsible for ensuring that such programs are instituted at unit level.

Army accident prevention awards will be approved and presented to individuals or groups in accordance with the criteria established in chapters 2 and 3 of AR 672-74. DA policy prohibits approval of duplicate awards for the same event. Therefore, the nominator must determine whether a safety award or some other form of recognition would be more prestigious.

- Use the following checklist to evaluate your program.
- ____1. Is there an effective safety awards program?
- ____2. Does the unit SOP contain procedures for awarding individual accident prevention awards?
- ____ 3. Does the unit safety officer monitor the unit's Accident Prevention Awards Program?

Ammunition Storage, Handling, and Transportation

AR 385-64 and TM 9-1300-206 specify how ammunition items must be stored, including separation requirements (QD) and storage compatibility. FM 9-13 provides basic information on ammunition separation and storage in a field environment. This manual also addresses forward area rearm/refuel point (FARP) operations and requisitioning/turn-in of ammunition. In addition, use the checklist below to manage the risks associated with ammunition.

_____1. Is there adequate separation distance between ammunition storage sites (e.g., ammunition in buildings, on pads, or on vehicles/aircraft) and work areas, buildings, and public traffic routes? (Required separation distances are contained in chapters 9 and 10 of AR 385-64 and chapters 4 and 5 of TM 9-1300-206.)

_____2. Are items of ammunition that may not be stored or transported together IAW compatibility requirements? Examples are prohibitions against storing/transporting blasting caps with plastic explosives or high explosive (HE) projectiles and transporting or storing incendiary grenades with any Class A or B explosive, such as an HE projectile or propellent. (Basic load storage/holding areas (BLSA/BLHA) with a net explosive weight of 4,000 kgs (8,800 lbs.) or less are exempt from storage compatibility requirements; however, units should still separate items within a BLSA/BLHA to the extent possible.)

____3. Whenever possible, are ammunition storage/holding areas barricaded to reduce fragmentation and blast hazards in the event of an explosion? (Units may use natural land features such as holes, depressions, or sandbags as a barricade and may even park armored vehicles in such a manner as to provide a barricade effect. When selecting/constructing a barricade, units need to ensure that they do not use materials that will create a secondary fragmentation hazard in the event of an explosion. Barricades should not be built of materials such as rocks or loose wood.)

<u>4</u>. Are gloves and eye protection available to personnel who cut banding and lift wooden ammunition boxes? Are these items worn? (TM 9-1300-206)

___ 5. Do ammunition handlers wear steel-toed shoes when performing operations involving artillery, tank, or boxed/palletized ammunition? (TM 9-1300-206)

____ 6. Do unit policies and procedures ensure that no smoking and no operating of spark- or flame-producing items are permitted within 50 feet of ammunition and explosives?

___7. Are incendiary, smoke, and pyrotechnic items stored or transported separately and

not mixed with other items?

<u>8</u>. Are munitions filled with riot-control agents stored and transported separately from all other items? (An exception allows storage of these items with compatibility group C items under certain circumstances.)

___9. Is white phosphorous/plasticized white phosphorous (WP/PWP) stored base-down at all times? (TM 9-1300-206)

____10. Are water-filled barrels or tubs available at all pads/sites used to store WP- and PWP-filled munitions?

____11. Have unit procedures been published for marking and segregating suspended ammunition? (Suspended lots must be visibly marked using DD Form 1575

(Suspension-Tag-Material) and DA Form 3872 (Suspension Notice) or, as a minimum, be marked by placing a sign on the stack indicating the lot is suspended or restricted. Unserviceable and potentially hazardous ammunition should be stored in a separate area away from work areas and other areas containing serviceable ammunition.)

____12. Do drivers and/or supervisors of vehicles selected to transport ammunition inspect the vehicle, using DD Form 626, before dispatching it to pick up the ammunition or explosives?

_____13. If ammunition or explosives are stored on vehicles or trailers, even temporarily, are these vehicles separated from each other?

_____14. Are vehicles and trailers loaded with explosives separated from inhabited buildings and public traffic routes? (In most cases, this will not apply to vehicles parked on ranges.)

____15. Is ammunition stored on vehicles or trailers palletized? (If the ammunition is not palletized, a minimum of 3 inches of dunnage should be between the ammunition and the bed of the vehicle.)

____16. Are parking brakes set, wheels chocked, and tarpaulins, bows, and end curtains installed on all parked vehicles and trailers loaded with ammunition or explosives?

Arms Room

AR 385-64, with DOD 6055.9-STD, and TMs 9-1300-200 and -206 provide guidance for operating arms rooms. In addition, use the checklist below to manage the hazards associated with arms rooms.

____1. Are Hazard Classes (HC) 1.1 and 1.2 (high explosives) ammunition prohibited from being stored in the arms room? (HC 1.1 and 1.2 may include simulators and practice devices.)

____2. Does the total amount of small-arms ammunition (HC 1.4, 50-cal. or less) exceed 5,000 rounds? (If so, written authorization by the first lieutenant colonel in the chain of command with concurrence by the MACOM safety office may be required.)

____3. Is the correct fire symbol posted at arms-room entrance? (Fire symbol #4 for HC 1.4, fire symbol #2 for HC 1.3.)

_____4. Is the arms room free of flame-producing items, flammable items, and combustible liquids?

- _____ 5. Is a copy of the security construction statement (DA Form 4604-R) on hand?
- _____ 6. Is a serviceable and appropriate fire extinguisher available?
- ____7. Are ammunition containers properly marked?
- ____8. Is a complete inventory of stored items on hand?

____9. Is Class 1.3 (signaling devices and riot control munitions) itemized by DODAC, quantity, limited to mission essential, and specifically authorized by battalion commander?

____10. Are appropriate chemical-hazard symbols posted, if required?

Army Combat Vehicles

FM 21-306 provides guidance for operating combat vehicles. In addition, use the checklist below to manage the risks associated with combat-vehicle operations.

General

___1. Do drivers perform PMCS daily?

____2. Have safe speed limits for various road and environmental conditions been established? Do drivers know them? Are they *enforced*?

____ 3. Do drivers and crewmembers use safety belts when they are provided?

____4. Are soldiers prohibited from riding on outside of vehicles?

____5. Are soldiers trained in how to use and how to act as ground guides?

____6. Are soldiers instructed to get help to mount and load heavy objects?

____7. Are soldiers required to use personal protective equipment (e.g., CVC or kevlar helmet) in and around vehicles?

____ 8. Are soldiers aware of hazards of slippery footgear and slippery vehicle surfaces?

___9. Are soldiers trained to maintain three points of contact while moving about the vehicle?

____ 10. Are soldiers prohibited from jumping from vehicles?

_____11. Is smoking prohibited on and near vehicles?

____12. Are soldiers instructed not to wear jewelry such as rings when working or climbing on vehicles?

____13. Are soldiers trained to ride no higher than name-tag defilade when traveling in tracked vehicles?

Rollovers

____1. Are drivers trained to recognize conditions that lead to rollovers (approaching curves too fast and driving too fast on wet or icy roads)?

____ 2. Are crew rollover drills conducted?

____ 3. Is equipment secured inside vehicles to prevent injury from falling objects?

_____4. Are drivers trained to slow down for rough terrain, limited visibility, and inclement weather?

_____5. Are vehicle moves planned to avoid steep slopes and narrow roads and trails?

____ 6. Are drivers required to give special care to operators-manual tire, track, and suspension checks?

____7. Are drivers trained to make wide turns at slow speeds to maintain vehicle control?

Crew coordination

____1. Is crew trained on importance of crew communication?

____ 2. Do drivers warn crew and passengers when they are about to cross a ditch, climb an obstacle, or take any other action likely to catch crew or passengers off balance?

Hatches and latches

____1. Is daily PMCS required to ensure hatches and doors are functioning correctly?

- ____ 2. Are safety pins present, operational, and used?
- _____3. Are bad latches and pins replaced immediately?
- ____4. Do crews check hatch, latch, and pin function throughout the mission?

_____ 5. Do crewmembers notify each other of unserviceable hatches and doors and also mark improperly working hatches and doors with chalk or some other marker to warn others?

Turrets

____1. Are crewmembers and passengers trained and briefed on turret hazards?

____2. Do crewmembers stress the importance of announcing "power" before traversing the turret?

____3. Do crews turn turret power off before leaving turret station?

____4. Is horseplay and unnecessary access to the turret from the interior of the vehicle prohibited?

_____5. Are crew and passengers advised on the tactical situation so they can anticipate turret movements?

Fires

___1. Do crews perform emergency fire-escape drills?

____ 2. Are complete electrical and fuel system inspections (no loose connections, no frayed or worn wires or lines, and no wires or lines that run over hot or sharp objects) required and conducted?
____ 3. Are crews trained to standard and supervised on activities involving ammunition care and handling?

____4. Are crews trained on "caseless" cartridge peculiarities?

_____5. Are fire extinguisher bottles inspected to ensure they have been tested, weighed, and properly connected to discharge lines and external pull handles?

_____6. Is refresher instruction in proper extinguishing techniques required for crewmembers?

_____7. Are fire detectors cleaned as often as dictated by environmental conditions?

_____8. Are portable fire extinguishers all present, inspected, and filled? Are all soldiers trained in their use?

Battery-Charging Operations

29 CFR 1910 provides guidance for battery-charging operations. In addition, use the checklist below to manage the risks associated with these operations.

____1. Does battery-charging area provide general ventilation of 2 cubic feet per minute (cfm) per square foot of room space to control hydrogen gases emitted by lead-acid and nickel-cadmium batteries?

____ 2. Is ventilation system interlocked with battery charger to ensure that ventilation system is operating when batteries are on charge?

_____ 3. When local exhaust ventilation is used in the form of a hood at the charging rack, is a control velocity of at least 50 feet per minute provided?

_____4. Are protective gloves, apron, and face shields (or chemical goggles) provided for all battery-handling operations?

_____ 5. Are eye lavages and deluge showers provided and collocated in the immediate work area to provide an abundance of water for flushing eyes or skin when splashes, spills, or electrolytes have come in contact with the body?

_____6. Are periodic tests conducted to ensure that eye lavage and deluge shower is operational?

____7. Is area under deluge shower and around eye lavage clear and free of clutter and storage of equipment?

____8. Has explosion-proof lighting been installed in battery-charging areas where general ventilation is below 2 cfm per square foot of floor area?

Bivouac and Assembly Areas

FM 90-14 cites base defense operations in chapter 4. ARTEP manuals list tasks to be performed. In addition, use the checklist below to manage the risks associated with setting up bivouac and assembly areas.

Site

____1. Are bivouac areas free of such hazards as debris, large or sharp rocks, poisonous plants, and reptiles?

____2. Was a survey of the area conducted to locate high-voltage lines and water or gas pipes before erecting antennas or bridges, digging fighting positions, or laying wire?

____3. Does a natural or manmade barrier exist or was one constructed between the parking area and tent areas?

____4. Are vehicles placed to prevent rolling into sleeping or mess facilities?

____ 5. Are vehicle parking areas located away from sleeping quarters to prevent carbon monoxide poisoning?

_____6. Are POL storage areas located behind troop billet areas?

____7. Are explosives and ammunition storage areas surrounded by natural barricades and located away from POL storage areas?

Sleeping areas

____1. Are sleeping areas marked with white engineer tape or chem lights and located away from roads and vehicle trails?

____ 2. Do all personnel know that sleeping in any vehicle while the engine is running is prohibited? (AR 385-55) Are all soldiers sleeping in a safe place?

____3. Are guards posted with flashlights and briefed on their duties and responsibilities?

_____4. Is the use of ground guides enforced when moving vehicles into or through an assembly area?

Camouflage

FM 5-20 provides a comprehensive reference and guide in all aspects of camouflage. TM 5-1080-200-10 is for using and maintaining the lightweight camouflage screening system. In addition, use the checklist below to manage the risks associated with using the camouflage screening system.

____1. Are radar-scattering screens placed away from whip antennas used on the AN/GRC-16-6 radio sets or similar sets with whip antennas when the radio is transmitting? (The screen will ignite and burn if it comes near or touches the antenna.)

____ 2. Is caution used when multi-module configuration is used for 8 feet or more? (Winds of more than 20 mph can blow down the system, causing damage and injury.)

____3. Is caution used when personnel climb on and around vehicles when erecting systems? Is special attention paid to foot placement?

____4. Are systems put into transport cases and secured when transported?

Carbon Monoxide Overexposure

TB Meds 269 and 81 provide guidance in dealing with carbon monoxide overexposure. In addition, use the checklist below to manage the risks associated with carbon monoxide.

____1. Are soldiers trained in the hazards of carbon monoxide?

____2. Do soldiers know that the most common source of carbon monoxide is the exhaust from internal combustion engines and field heaters in confined spaces without adequate ventilation (e.g., tanks, APCs, communications vans, and other enclosed areas where portable internal combustion engines and heaters are used)?

____ 3. Are soldiers prohibited from sleeping in, on, or near fuel-powered vehicles while the engines (or heaters) are running?

_____4. Is adequate ventilation provided when engines, generators, battery chargers, and space heaters are operated?

_____5. Are personnel trained to recognize the warning signs and symptoms of carbon monoxide overexposure and to perform emergency first-aid treatment?

Cold-Injury Prevention

All too often, we focus on recognizing and treating cold weather injuries; however, the more important issue is prevention. FM 21-11, FM 21-76, and TB Med 81 provide guidance in cold-weather operations. In addition, use the checklist below to manage the risks of operating in cold weather.

____1. Is safety included in planning?

_____2. Are all leaders trained in cold-injury prevention procedures, proper cold-weather operational procedures, and carbon monoxide hazards?

_____3. Are all soldiers trained in cold-injury-prevention procedures, proper cold-weather operational procedures, and carbon monoxide hazards?

____4. Are current conditions and weather forecasts monitored for changes?

____5. Do soldiers use the buddy system?

_____ 6. Is suitable cold-weather gear available and serviceable for all troops? Are soldiers dressed properly for cold weather (gloves; loose, layered clothing; head protection; socks)?

____7. Is proper hygiene practiced?

8. Are soldiers not allowed to wear wet clothing unnecessarily?

___9. Do soldiers change socks regularly?

_____10. Are personnel who have previously suffered cold-weather injuries identified and closely monitored? (They are more susceptible to injury.)

_____11. Are all soldiers trained to recognize the early warning signs of cold-weather injuries and to perform emergency first-aid treatment? (TB Med 81, paras 7 and 8)

_____12. Are soldiers aware that alcohol consumption increases the risk of cold injury?

Compressed Gas Cylinders

29 CFR 1910 provides guidance for working with compressed gas cylinders. In addition, use the checklist below to manage the risks associated with these operations.

____1. Are full cylinders protected against excessive rises in temperature from direct rays of the sun or from other sources of heat?

____2. Is smoking prohibited within 50 feet of compressed gas storage areas, and are "No Smoking" signs posted?

_____3. When cylinders are stored inside buildings, are they stored in a well-protected, well-ventilated, dry location and at least 20 feet from highly combustible material such as oil or excelsior?

_____4. Are stored oxygen cylinders separated from combustible materials (especially oil or grease) a minimum distance of 20 feet or by a noncombustible barrier at least 5 feet high and having a fire-resistance rating of at least ¹/₂ hour?

 $_$ 5. Are acetylene and oxygen cylinders stored 100 feet apart or separated by an approved firewall having a fire-resistance rating of at least $\frac{1}{2}$ hour?

____6. When cylinders are not in use, are valves closed tightly and the valve-protector caps installed?

____7. When cylinders are standing upright during use or storage, have precautions been taken to prevent accidental upsetting or falling (cylinders chained or strapped to a structure)?

Confined Spaces

EM 385-1-1 (Corps of Engineers Safety and Health Requirements Manual) provides a comprehensive reference and guide in all aspects of confined-space operations. In addition, use the checklist below to manage the risks associated with operating in confined spaces.

____1. Have all confined-space operations been identified (e.g., storage tanks, bins, boilers, ventilation or exhaust ducts, sewers, underground utility vaults, tunnels, pipelines, and open-top spaces more than 4 feet in depth such as pits, tubs, vaults, and vessels and areas in and under vehicles or equipment)?

____ 2. Prior to entry----

____ a. Has the atmosphere inside the confined space been surveyed for oxygen content and presence of contaminants?

_____b. Have personnel been thoroughly briefed on the hazards associated with confined-space entry?

_____ c. Are concise work procedures/SOPs and Material Safety Data Sheets available for review at the worksite for all hazardous chemicals used?

____d. Has the concurrence of supporting safety and health personnel been obtained?

_____e. Are appropriate protective clothing and equipment for the operation in good working order and used? (As a minimum, this will include an airline respirator and safety harness with lanyard (for personnel entering the confined space) and a self-contained breathing apparatus for individual stationed immediately outside the confined space.)

____f. Have all personnel been medically certified to wear respiratory protection and trained in its use, care, and maintenance?

____ g. Have personnel who are assigned as topside watch been trained in emergency response/rescue procedures?

____h. Have supervisors completed a confined-space entry permit?

____ 3. Is periodic atmospheric monitoring conducted for all operations in which hazardous materials are introduced into the confined space?

Convoys

ARs 55-29, 385-55, and 600-55 and FMs 21-305, 21-306, and 55-30 provide guidance in convoy operations. In addition, use the checklist below to manage the risks associated with convoy operations.

____1. Do tactical vehicle drivers have a valid Government Motor Vehicle Operator's Identification Card, Optional Form (OF) 346?

____2. Have drivers been trained to drive in adverse weather (ice, snow, fog, rain) and difficult terrain? Blackout drive? NVGs?

____ 3. Are convoy drivers provided 8 hours rest for each 10 hours of driving a tactical vehicle within a 24-hour time period?

_____4. Do convoy commanders brief all drivers, assistant drivers, and senior occupants prior to the march on hazardous areas or conditions to be encountered (e.g., safe following distances, proper speed, route, rest periods, and signals)?

_ 5. Do drivers keep proper distances between vehicles?

_____6. Do drivers reduce speed during conditions of reduced visibility and adverse weather?

____7. Do drivers perform before-, during-, and after-operation preventive maintenance?

____ 8. Do drivers know the meaning of traffic-control signs, signals, devices, and markings used by civilian and military police?

____9. Do all drivers know route?

____10. Are vehicle basic-issue items, pioneer tools, highway warning devices, and fire extinguishers present on every wheeled convoy vehicle?

____11. Are drivers of bulk-fuel transporters instructed on emergency procedures for fuel leaks?

____12. Are vehicles that transport hazardous materials or dangerous cargo (e.g., ammunition, gasoline, flammable liquids)—

____a. Appropriately posted with placards and loaded to meet hazard classification and compatibility requirements?

____b. Inspected using DA Form 626: Motor Vehicle Inspection?

_____ c. Equipped with two fire extinguishers appropriate for the cargo?

_____13. Are ammunition and POL cargos transported separately?

_____14. Do vehicles carrying hazardous cargo have assistant drivers?

____ 15. When operating on paved roads, are radio whip antennas tied down to not less than 7 feet from the ground and antenna tips covered with protective balls?

_____16. Are service drive lights used at all times on paved public roads (blackout drive prohibited)?

_____17. When transporting personnel, do drivers—

____a. Walk to rear of the vehicle before starting to secure the tailgate and safety strap and ensure all passengers are seated?

_____b. Adjust the tarpaulin to ensure proper ventilation (i.e., lash down the tarpaulin and front curtain in adverse weather, roll tarpaulin and secure at bar top in good weather)?

_____ c. Secure baggage and other loads safely and not in the way of passengers?

_____d. Prohibit personnel from riding on outside of wheeled and tracked vehicles?

____e. Ensure that all occupants use restraint systems when available?

_____18. Is the rear vehicle the largest and a nonpassenger-carrying vehicle?

____ 19. Are ground guides used when backing vehicles?

_____ 20. Are rotating and flashing amber lights and convoy flags used on the first and last vehicles in the convoy?

____21. Are vehicles marked in accordance with FM 55-312?

Driver Training and Licensing

AR 600-55, AR 385-55, FM 55-30, and FM 21-17 provide guidance in driver training and licensing procedures. In addition, use the checklist below to manage the risks associated with training and licensing Army drivers.

____1. Are correct procedures used when selecting drivers?

_____2. Do personnel required to drive wheeled and tracked AMVs attend accident-avoidance training upon being issued a Government Motor Vehicle Operator's Identification Card, OF 346, and every 4 years thereafter?

____3. Do vehicle operators receive specialized training on the operational peculiarities of each vehicle they will be required to operate?

____4. Are all vehicle operators examined and certified?

___ 5. Do all military-vehicle operators possess a valid OF 346?

____ 6. Do drivers of buses, military police vehicles, ambulances, firetrucks, crash-rescue vehicles, or other emergency vehicles complete additional training that includes—

____a. Applicable laws and regulations?

____b. Safe operating practices under normal and emergency conditions?

_____ c. Driver inspection and primary preventive maintenance?

____7. Do vehicle operators perform preventive maintenance inspections?

____ 8. Are vehicle operators prohibited from driving AMVs when their state or host-nation drivers license has been suspended by a court of law?

___9. Is a 40-hour driver-training course conducted at battalion level?

____10. Do vehicle operators ensure that all occupants are wearing installed safety belts?

____ 11. Do vehicle operators who have been convicted of moving traffic violations or at-fault traffic accidents attend a remedial driver-training course?

____ 12. Is the Physical Evaluation Measures test given prior to issuing or renewing an OF 346?

____ 13. Are operators' DA Forms 348 reviewed annually for-____

____a. Safety awards?

____ b. Expiration of permits?

_____ c. Accidents and moving violations?

_____d. Remedial, required, or refresher training?

____e. Reexamination?

___ f. License suspension?

_____14. Is sustainment training conducted at least annually for any driver with a valid OF 346 (every 2 years for USAR/ARNG)?

_____15. Is a checkride conducted annually by the first-line leader (every 2 years for USAR/ARNG)?

____16. Are qualified assistant drivers assigned to vehicles with missions requiring more than 10 hours to complete?

Ergonomics

Job-related injuries occur every day in the workplace. Often these injuries occur because the individuals are not trained to standard. One way to prevent workplace injuries is to establish job standards and train all individuals to perform to those standards. In addition, use the following checklist to manage the risks of the everyday workplace.

____1. Is the individual wearing the personal protective clothing and equipment (PPCE) for the job?

____2. Is the individual required to make repetitive movements that could cause hand or foot injuries or strain from lifting?

_____3. Can the hazard be eliminated through the use of PPCE?

____4. Can the hazard be eliminated by changing the work station?

____5. Are procedures or administrative precautions needed to reduce the observed hazards?

_____6. Do supervisors ensure that employees lift, carry, or lower no more than 10 kg? Is lift performed properly?

____7. Are employees trained to never lift an item with only one hand? (A smooth, two-handed motion should always be used.)

____8. Are employees trained to get help with bulky or heavy objects or objects that have to be removed from a cramped storage position?

___9. Are walkways clear of obstructions, well lighted, dry, and wide enough for the load?

Explosives and Unexploded Ordnance

FM 9-16 provides guidance in working with explosives and unexploded ordnance (UXO). Supervisors must ensure their personnel are trained to standard according to the regulations. In addition, use the checklist below to manage the risks associated with explosives and unexploded ordnance.

___1. Has a risk assessment been performed?

____ 2. Before deploying to any area where UXO may be encountered, including ranges and training areas, are all personnel instructed—

_____a. Not to touch anything that might be UXO?

_____b. Not to attempt to identify an item believed to be UXO? (Instruct soldiers to stay clear of it, place a marker to help explosive ordnance disposal (EOD) personnel locate the site, and report it to a supervisor, range control, local military police, or the nearest EOD detachment. Marker should not move, cover, or disturb UXO.)

____3. When pyrotechnics are used, are the following cautions observed?

_____a. Are all pyrotechnic items (flares, signals, and simulators) kept away from excessive heat and open flames?

____b. Do personnel using pyrotechnics wear gloves and helmet?

_____ c. Are personnel required to read instructions in the appropriate technical manual before using a pyrotechnic item? (TM 9-1370-206-10 covers pyrotechnic signals; TM 9-1370-207-10 covers pyrotechnic simulators; and TM 9-1370-208-10 covers photoflash cartridges, surface flares, and miscellaneous pyrotechnic items.)

____ d. Are soldiers instructed to never attempt to disassemble any pyrotechnic item, including duds? (These items contain photoflash powder, which is extremely flammable and may cause serious injury.)

_____4. Do unit policies and procedures ensure that smoking and operation of spark- and flame-producing items are not permitted within 50 feet of ammunition and explosives? (TM 9-1300-206)

_____5. Are there at least two operational hand-held fire extinguishers available at all locations where ammunition is kept or stored? (These extinguishers may be either the 2½-gallon-capacity water type or the dry-chemical type with a minimum classification of 3A (TM 9-1300-206).)

Family Safety

The responsibility to guard against physical and health hazards extends beyond the workplace. It also involves personnel and family members in nonwork-related activities. In fact, more accidents occur in and around the home than any other place. Use the checklist below to evaluate unit family-safety programs.

____1. Child care. Are soldiers instructed to---

____ a. Never leave young children unattended?

_____b. Take both first-aid and CPR courses?

____ c. Set up home fire-escape routes?

____ 2. Family safety. Are soldiers instructed to---

_____a. Rid basements, closets, and attics of old rugs, papers, mattresses, broken furniture, and other combustible odds and ends?

_____b. Keep oil mops in a well-ventilated place where they will not catch fire by spontaneous heating?

_____c. Destroy or place oily polishing rags or waste in covered metal cans?

____d. Store paint in tightly closed containers?

____e. Warn family members to never use gasoline, benzine, or other flammable fluids for cleaning purposes (clothes, furnishings, or floors)?

____f. Clear yards of leaves, debris, and combustible rubbish?

____g. Keep stove, including oven, clean of grease?

__h. Keep curtains, beds, and other flammables away from stoves and heating equipment?

____i. Turn off portable oil or gas heaters before going to bed?

___j. Keep a window open in rooms where such heaters are used?

____k. Never use kerosene or other flammable liquids to start a fire in the stove, fireplace, or

furnace? Never use any liquid other than firestarter in a charcoal grill? Never add liquid fuel after attempting to light the fire?

____1. Equip fireplaces with sturdy metal fire screens?

____m. Follow safety precautions when using live Christmas trees and electric decorations?

3. Lawn mowers. Are soldiers instructed to-

____a. Follow manufacturer's recommendations for operation and maintenance?

____b. Check mower for loose, worn, or broken parts?

_____ c. Check oil, fuel, and to ensure guards are in place before starting mower?

_____d. Before mowing, check the area and clear it of all obstacles such as rocks, sticks, stones, glass,

and pieces of wire, and also remove all bystanders (including children) and pets from the immediate area?

_____e. Wear good shoes and close-fitting trousers? (Safety shoes or work boots provide good protection for feet and ankles.)

_____f. Not refuel gasoline mowers while the engine is hot, running, or in a closed area and to not refuel while smoking or if near an open flame?

____g. Keep gasoline in an approved safety container? (Reference local safety and fire regulations as appropriate.)

Field Mess

FM 10-23 provides guidance for field mess operations. Use the checklist below to manage risks involved in field mess operations.

____1. Do food service personnel maintain food at safe temperatures?

____ 2. Are soldiers lifting heavy items properly?

_____3. Is the proper knife used? Is it sharp? Is it used properly? Are knives stored in the proper location?

____4. Are t-ration tray packs and cans opened properly with the right opener? Is caution taken when opening heated swollen trays of cans? Is caution taken when handling trays and cans after they are opened?

____5. Are food-service personnel taught that hurrying causes accidents such as burns, collisions, and falls?

___ 6. Are fire extinguishers handy?

_____7. Are burners and ranges operated according to the instructions in the operators manual?

____ 8. Are hot pads used when handling hot items? Is it known where the hot pot is going before it is picked up?

___9. Is grease prevented from spilling on open flames?

_____10. Are personnel taught not to run or hurry when carrying hot food? Do personnel watch their movements at all times?

_____ 11. Are spills cleaned up immediately?

____ 12. Is food gear kept in good condition?

_____13. Are other personnel warned when someone is passing through with hot items?

____ 14. Are field range doors kept closed?

_____ 15. Do personnel follow established sanitation standards in the areas of dishwashing, waste disposal, inspection, storage and handling, insect and rodent control, water purity, and sanitation in other areas of field operations listed in FM 21-10 and TB Med 530?

____ 16. Do all personnel maintain a high standard of personal hygiene? Do food handlers always wash their hands after using the latrine, smoking, between tasks, and after breaks?

____ 17. Are personnel who have been sick examined before being allowed to report for work?

_____18. Are food handlers prohibited from cleaning garbage cans, sewers, drains, latrines, or grease traps during food preparation periods?

_____19. Is the water used for cooking, preparing beverages, and dishwashing inspected for purity?

_____20. Is vehicle used to transport rations and ice cleaned with soap and water?

_____21. Are rations placed on dunnage and perishables in an ice chest?

_____22. Are rations covered to keep dirt out and protect from the weather before, during, and after unloading?

____23. Are food wastes, cartons, and cans disposed of often so that they will not cause odors and attract insects or rodents? Is solid and liquid waste disposed of properly?

____24. Are garbage-disposal policies in area of operation known (peacetime/wartime)?

_____a. Liquid waste: Soakage pit, soakage trench, arrangements to backhaul.

_ b. Solid waste: Burying, burning, arrangements to backhaul.

____25. Are proper procedures followed when using the mess kit line for cleaning and sanitizing pots, pans, serving utensils, and field-kitchen components?

_____26. Are high sanitary standards maintained in the kitchen at all times?

____ 27. Is equipment cleaned "as you go" and after each use?

_____28. Are storage and work areas free from dirt and grease?

____29. Do only properly trained mess personnel operate M2 burner units in accordance with TM 10-7360-240-13?

_____30. Do only properly trained personnel operate immersion heaters, and are they aware of which of the three types of heaters they are working with? (TM 5-4540-202-12 and TM 10-4500-200-13 contain preheating and lighting instructions.)

____31. Are gasoline lanterns operated properly? (TC 10-1 provides operating instructions for the field kitchen gasoline lantern.)

Field Sanitation

FM 21-10 covers field hygiene and sanitation. FM 21-10-1 covers unit field sanitation teams. In addition, use the checklist below to manage the risks associated with field sanitation.

____1. Is the water safe? If not, what method is available to treat it (iodine tablets, chlorine ampules, tincture of iodine, household or common bleach)?

____2. Do personnel wash their hands after using the latrine, before touching eating utensils or food, and after eating?

____3. Are mess kits washed properly (in a mess kit laundry or with treated water or disinfectant solution)?

____4. Is waste taken care of according to standard (garbage, rubbish, liquid kitchen or bathing waste, human waste)?

_____5. Are there plans for arthropod and other animal threats (such as snakes, domestic and wild animals, and birds)?

_____ 6. Is the field sanitation team used to train soldiers in preventive medicine measures? to control insects and other medically important arthropods in area of operation? to identify suspected lice infestations and refer for medical treatment?

____7. Are individual preventive medicine measures (e.g., use of insect repellent, shirts buttoned, sleeves rolled down, pants bloused inside boots) used?

_____8. Do personnel bathe or shower regularly (field expedients will do) and have clean uniforms?

____9. Are hand-washing devices in place, and do all personnel use them? (Make it mandatory.) ____10. Are latrines placed as far from food operations as possible (100 yards or more), downwind and on down slope if possible, down slope from wells, springs, streams, and other water sources (30 yards or more)?

_____11. Are latrines cleaned daily?

____12. Does the field sanitation team spray the latrines (not the pit contents) with insecticide as necessary?

Flammable and Combustible Material Storage

AR 385-63, TM 38-410, and 29 CFR 1910.106 provide guidance for storing flammable and combustible materials. In addition, use the checklist below to manage the risks associated with these materials.

____1. Are combustible waste materials and residues kept to a minimum within a building or unit operation area, stored in covered metal receptacles, and disposed of daily?

____ 2. Are flameproof storage cabinets used for storage of flammable/combustible liquids?

____ 3. Are all flameproof storage cabinets painted yellow and labeled in conspicuous lettering "Flammable - Keep Fire Away"?

____4. Are smoking and the use of open flame- or spark-producing devices prohibited in flammable/combustible liquids-handling and -storage areas?

____ 5. Are "No Smoking" signs posted in flammable/combustible liquids-handling and storage areas?

____6. Is all electrical equipment installed in accordance with the provisions of the National Electric Code (NEC) for hazardous locations, and are globes or lamps removed or replaced, and electric circuits repaired only while the system is not energized?

____7. Is close supervision exercised at all times over individuals engaged in handling flammable/combustible liquids?

____8. Are flashlights and electric lanterns used in connection with the handling of flammable/combustible liquids approved for use in hazardous areas?

____9. Are all tanks, hoses, containers, or any other parts of a flammable/combustible liquid-dispensing system permanently connected to a permanent ground or connected through an approved grounding clamp?

_____10. Are buildings and compartments where flammable/combustible liquids are stored, processed, or used properly ventilated?

_____11. If mechanical ventilation or exhaust systems are necessary, are they installed in accordance with National Fire Protection Association (NFPA) recommendations?

12. Is the day-to-day use of flammable/combustible liquids in buildings limited to a 1-day operation level, and are flammable/combustible liquids stored in an approved safety can?
13. Are all flammable/combustible liquids returned to flammable storage areas before closing buildings?

_____14. In operations where the use of flammable/combustible cleaners or solvents is authorized, is the supply on hand limited to that required for immediate use?

_____15. Are waste flammable/combustible liquids, including used crankcase oil, drained only into approved containers or drains?

_____16. Are adequate quantities and types of fire extinguishers readily available for personnel?

_____17. Are only authorized personnel permitted to enter fuel and POL storage areas?

______18. Are flammable/combustible liquids limited to 60 gallons or less per storage cabinet?

____ 19. Does unit SOP require supervision over individuals engaged in handling flammable/combustible liquids?

____ 20. Are only approved containers and portable tanks used to store flammable and combustible liquids?

____21. Are flammable and combustible liquids that are maintained in the immediate work area stored in approved storage cabinets? (These cabinets must be designed and constructed to limit the internal temperature to not more than 325°F when subjected to a 10-minute fire test as set forth in NFPA Code 251. The bottom, top, door, and sides of the cabinet must be at least No. 18 gauge sheet iron and double walled with 1½-inch air space.)

____ 22. Are not more than 60 gallons of Class I or Class II liquids or not more than 120 gallons of Class II liquids stored in a cabinet?

____ 23. Are storage cabinets used to store flammable and combustible liquids labeled "Flammable --Keep fire away"?

_____24. Are there provisions to contain the liquid in the event of spillage (liquid-tight raised sills or ramps at least 4 inches in height in *inside* storage rooms?

_____25. Are openings to other inside storage rooms provided with approved self-closing fire doors?

______ 26. Is the room liquid-tight where the walls join the floor?

___ 27. Is wood used for shelving, racks, dunnage, and floor overlay of at least 1 inch nominal thickness?

____ 28. Is capacity of inside storage rooms within the limits set forth in Table H-13?

____29. Do electrical wiring and equipment located inside storage rooms meet the requirements?

____ 30. Does ventilation system provide for a complete change of air within the room at least 6 times per hour?

____31. Is at least one clear aisle not less than 3 feet wide maintained at all times?

____ 32. Are flammable and combustible liquids prohibited from being stored in such a manner as to limit the use of exits, stairways, or areas normally used for the safe egress of personnel?

____33. Are *outside storage buildings* located 50 feet or more from a building or line of adjoining property that may be built upon? (Buildings located within 50 feet must have a 2-hour fire resistant wall.)

____ 34. Is outdoor container storage in accordance with Table H-16 or Table H-17?

____ 35. Is a portable fire extinguisher located outside of but not more than 10 feet from the door opening into any room or building used for storage?

_____ 36. Are open flames, smoking, and cooking prohibited in flammable- and combustible-liquids storage areas?

____ 37. Are water reactive materials prohibited from being stored in the same room with flammable and combustible liquids?

____ 38. Are spills promptly and properly cleaned up?

Gasoline Lantern Operations

TC 10-1 provides operating instructions for field kitchen lanterns. In addition, use the checklist below to manage risks associated with operating the gasoline lanterns.

____1. Was TC 10-1 reviewed before initial operation?

____2. Are lanterns inspected for loose, damaged, or missing parts (all nuts and caps tightened manually)?

____3. Are ventilator hood openings inspected to ensure they are free from obstructions?

____4. Is the pump leather properly lubricated and in good condition?

____5. Is the filler cap gasket on and in good condition?

____ 6. Are lanterns placed away from space heaters? (The pressure seal on the lanterns can rupture, allowing fuel to escape.)

Generators

AR 600-55 provides general guidance on working with generators; however, there are many different kinds of generators. Consult the TM or operators manual when operating, servicing, or repairing a generator. In addition, use the checklist below to manage the risks associated with working with generators.

____1. Do only licensed operators operate and maintain generators?

____2. Are generator sets properly grounded?

____3. Do personnel wear ear protection when working in and around areas where generators are running?

____4. Are spare fuel cans stored a minimum of 50 feet from generator sets?

_____ 5. Are generator sets kept clean to prevent spilled oil and fuel from becoming a fire hazard?

- ____6. Are power cables free from cuts, frays, and breaks?
- ____7. Is a fire point positioned between the generator and the fuel-storage point?
- ____8. Are power cables installed to prevent vehicle and cable damage?
- ___9. Are generator sets operated in a well-ventilated area?

Ground Guides and Ground Guiding

AR 385-55, FM 21-305, and FM 21-306 provide guidance on the use of ground guides and ground-guiding procedures. In addition, use the checklist below to manage the risks associated with ground-guiding operations.

____1. Are drivers and all other personnel trained to standard in the correct use of ground guides and ground-guiding operations?

- ____2. Are ground guides used when traveling cross country during periods of limited visibility?
- ____ 3. Do drivers keep ground guides in view at all times?
- ____4. Are ground guides trained to never walk backwards and to never get between two vehicles?
- ____5. Are ground guides used when backing and in congested areas?
- _____6. Are two ground guides used when vision is restricted?

____7. Are ground guides equipped with suitable lights (two flashlights and extra batteries) during periods of limited visibility or darkness?

Ground Refueling Operations

FM 10-69 and AR 385-55 provide guidance in ground refueling operations. In addition, use the checklist below to manage the risks associated with refueling.

- ____ 1. Do drivers know their responsibilities?
 - ____a. Shut down vehicles, turn off radios.
 - ____ b. Get out with passengers.
 - _____ c. Discontinue fueling when there is lightning within 5 miles.
- ____2. Do fuel tank operators know their responsibilities?
 - ____a. Position fire extinguishers.
 - ____ b. Ground vehicle if not waivered.
 - ____ c. During refueling, use a bonding cable to bond the nozzle to the vehicle being fueled.

Hazardous Materials and Wastes

TM 38-410 and Title 29 CFR 1910.122 provide guidance in hazardous materials and waste handling. In addition, use the checklist below to manage the risks associated with handling hazardous materials and wastes.

- ___1. Has a written hazard communication plan been established?
- ____2. Have all the hazardous chemicals in the workplace been inventoried and labeled?

____3. Have material safety data sheets been obtained for all hazardous chemicals, and are they readily available as required?

_____4. Have employees received information and training on hazardous chemicals in their work area at the time of their initial assignment and whenever a new hazard is introduced into the work area?

____ 5. Is waste material properly separated, handled, stored, and disposed of? Information can be obtained from the environmental office.

____6. Are vehicles with fuel leaks prohibited from transporting hazardous materials?

____7. Are vehicles that transport hazardous materials properly posted with placards on all sides? Is the load blocked and braced to prevent it from shifting? Does the driver have a completed manifest, accident information sheet, DD Form 1348-2 (Transportation Control and Movement Document), and other required documentation? (AR 385-55)

____8. Do vehicles that transport hazardous materials on public highways meet hazard classification and compatibility requirements? (AR 385-55)

Hearing Conservation

AR 40-5 and TB Med 501 provide guidance in hearing conservation. In addition, use the checklist below to manage the risks associated with operating in a noise-hazardous environment.

____1. Do unit commanders and other leaders maintain the SIDPERS birth-month roster of individuals exposed to hazardous noise? (This roster is provided by the Medical Department Activity (MEDDAC).)

____ 2. Do unit commanders notify the MEDDAC commander of noise-hazardous areas?

_____3. Is the wearing of earplugs mandatory for all personnel routinely or periodically exposed to hazardous noise levels? Is the earplug carrying case a mandatory part of the duty uniform?

_____4. Are hearing protection devices (earplugs or earmuffs, as required) provided? Are they properly fitted by trained medical personnel?

_____5. Do all personnel who are routinely exposed to hazardous noise receive at least one medical hearing evaluation per year, and do they attend a hearing conservation briefing annually?

_____6. Is appropriate personnel replacement action taken when the unit is notified by the MEDDAC commander of the results of medical examinations, evaluations, and surveys?

___7. Is the wearing of hearing protectors by unit personnel and visitors enforced during exposure to hazardous noise?

_____8. Does the unit maintain a written SOP on hearing conservation?

____9. Are noise-hazardous areas identified, and are noise-hazard signs posted within easy view?

____10. Where actual sound-level measurements are not available, do personnel assume the existence of a hazardous noise level if one or more of the following exists?

____a. There is difficulty in hearing spoken words in the area?

____b. Personnel experience ringing in their ears after working in the area?

____ c. Personnel experience a temporary loss of hearing that muffles speech and other sounds after exposure to noise?

____11. Are provisions for personnel who receive a threshold shift (permanent or temporary) included in the unit SOP?

___ 12. Are all exposed soldiers enrolled in the Hearing Evaluation and Recording (HEARS) Program IAW AR 40-5 and DA Pam 40-501?

_____13. Has a noise hazard survey been conducted by Industrial Hygiene/Preventive Medicine? (TB Med 50)

_____14. Is a hearing conservation officer or NCO appointed on orders?

_____15. Are permanent noise-induced hearing losses reported as occupational illnesses IAW AR 385-40, and DA Form 3349 (Medical Condition-Physical Profile Record) issued?

Heaters

TM 10-4500-200-13 cites procedures for using Type 1, 2, and Yukon-model space heaters. It also includes a preventive maintenance checklist. Consult the technical manual when installing and operating space heaters; each operator must be trained for the specific heater. In addition, use the checklist below to manage the risks associated with using heaters.

Portable radiant-type space/tent heater (potbelly and Yukon)

____1. Are operator instructions written in the unit SOP? Are operators trained to SOP standards and licensed for the specific heater?

____2. Are fireguard instructions written in the unit SOP? Are fireguards trained to SOP standards and licensed on the specific heater?

_____3. Are a sufficient number of stovepipe sections used so the top section is above the highest point of the tent? Are tent flaps tied back so that flaps do not come in contact with the hot pipe? _____4. Are stovepipe ends secured with sheet metal screws or rivets?

____ 5. When using Type I solid fuel (such as wood or coal) with the heater, is a spark arrestor installed on the top stovepipe section?

_____6. When using Type II liquid fuels and Yukon liquid fuel heaters, is a draft diverter installed on the top section and each section secured with three guy ropes? (Guy ropes are not used with solid fuel.)

____7. Are heaters operated with only the type of fuel that is required for that type of heater?

_____8. While some tent heaters are designed to use several types of liquid fuel, do operators know that gasoline will never be used as a heating fuel?

____9. Are space heaters cleaned IAW PMCS to prevent explosion or burning out of control?
____10. Is the flame arrestor mounted on top of the stovepipe? Is it checked whenever the heater is cleaned?

_____11. Are stovepipe sections straight up and not allowed to come into contact with any part of the tent? (Tents must be inspected to ensure that they are not sagging, and that canvas parts do not contact the stovepipe stacks.)

12. Is the area surrounding the heater inside the tent cleared of combustibles such as cots for a distance of 4 feet on a horizontal plane from the floor to the ceiling of the tent or building?
13. Are fuel cans, lines, and carburetors checked daily for leaks, particularly after changing fuel cans? (No heater will be operated when fuel leaks are present.)

_____14. When heaters are operating, are Class B carbon dioxide (CO2) or any other chemical fire extinguishers immediately available in the tent?

____ 15. Do operators know tent heaters must never be operated at full capacity even in extreme cold? (Overheating of the stovepipes may ignite tentage.)

_____16. Are space heaters located on a noncombustible base such as a stove box made of 2x4 lumber, minimum size of 40x28x4 inches high with a sheet metal bottom? (Stoves should be placed in the center of the box with at least $3\frac{1}{2}$ inches of sand or dirt, when operated in a tent with wood or canvas floor.)

____ 17. Is adequate ventilation provided where space heaters are operating?

_____18. Is the fuel supply can for the heater located outside the tent and as far from the tent as the fuel hose allows and supported on a stable platform or tripod?

_____19. Is an overflow hose used on the heater carburetor and run outside the tent?

____ 20. After fuel cans are changed, are cans, all line connections, and carburetors checked for fuel leaks?

____21. Are fuel systems checked daily for leaks and malfunctions? (Only qualified personnel should do repairs.)

____ 22. Are all fuel spills cleaned up immediately?

_____23. Are fuel cans stored away from the tent IAW FM 1-69?

____24. Is a fire alarm system established and implemented? (Firefighting equipment (extinguishers, shovel, and ax) should be available at selected fire points, and soldiers should be informed on the location of the fire points.)

_____25. Are heaters allowed to cool before refueling or relighting?

_____26. Is the use of heating and cooking devices prohibited in mobilflex tents?

Immersion heaters (TMs 5-4540-202-12 and 10-4500-200-13)

____1. Are immersion heaters operated only by personnel who have been trained to standard and properly licensed?

_____2. Are operators aware of which type heater they are operating?

_____3. Do operators use care not to expose their faces to combustion chambers while lighting and make sure that there is no fuel in the combustion chamber?

_____4. Do operators ensure the vent cap is closed when filling the fuel tank and all spilled fuel is wiped up?

____5. Is fuel tank installed on the heater only AFTER the heater is attached to the corrugated trash can?

____6. If used inside building or tent, are exhaust fumes piped outside (a *must*)?

____7. Are ventilating pipe seams aligned and facing away from where the user will stand?

____8. Is a fire extinguisher (dry chemical, CO2, or Halon) close by?

____9. Do operators know to never hold lighted torches under the fuel value to wet the torch with fuel?

____ 10. Is fuel never allowed to flow in a steady stream?

____11. Is only leaded or white gas used for fuel? (Diesel should never be used.)

_____12. Is the combustion chamber checked to ensure a burner assembly is in place before lighting the heater?

_____13. Are no parts of the heater soldered?

____14. Are defective heaters turned in to support maintenance facilities?

Herman Nelson or similar heaters

____1. Is the heater placed as far from structures as the length of heating ducts will allow?

____2. Is a 20-foot-long steel chain or cable attached to the heater to facilitate removal in case of fire?

____ 3. Is a 5-foot-high sandbag buffer maintained on the front and two sides of the heater?

_____4. Are fire guards posted when Herman Nelson heaters or other radiant-type tent heaters are operated?

M2 burners (TM 10-7360-204-13)

____1. Are heaters operated to standard?

____2. Do only properly trained, qualified, and licensed mess personnel operate the M2?

____3. Is fuel tank at least 15 meters (16 yards) from open flame or other flammable source and free of fuel spillage before lighting?

_____4. Is burner lit only outside the tent? (If wind conditions hamper lighting outside, a wind break should be constructed.)

____ 5. Is fuel (gasoline) stored at least 15 meters (16 yards) outside of kitchen enclosures? Are all fuel spills cleaned up immediately?

____ 6. Is tank not filled while the flame is burning or when the burner is hot?

___7. Are joints not tightened while burner is in operation?

____ 8. Is burner not operated when the pressure gauge reaches or exceeds 25 pounds per square inch (psi)?

____9. Is fuel tank not released until the burner has cooled?

Heat-Injury Prevention

Use the checklist below to manage the risks associated with hot-weather operations.

- __1. Is the WBGT monitored?
- ____ 2. Are subordinate commanders and leaders notified of changes in the heat-alert category?

____ 3. Are supervisory personnel trained in heat casualty hazard identification, assessment, and prevention?

_____4. Are newly assigned soldiers allowed approximately 14 days of progressive physical acclimatization?

Sunburn prevention

To eliminate or minimize sunburn, are personnel instructed to----

- ___1. Wear loose-fitting clothing?
- ____2. Use sun protection factor 15 cream or lotion on exposed skin (face, hands, feet)?
- ____3. Avoid extended periods of unprotected exposure to the sun?

Heat cramp, heat exhaustion, and heatstroke prevention

To eliminate or minimize heat injuries, do leaders ensure-

- ___1. Proper acclimatization (14 days)?
- ____2. Adequate water intake (1 quart of water per hour during the hot hours of the day)?
- _____3. Continual surveillance of all personnel to detect early symptoms of heat illness?

____4. Personnel are trained to recognize symptoms of heat illness and administer emergency first-aid treatment? (TB Med 507, para 18-20)

Helicopter Slingload Operations

FM 55-450-3 and FM 57-38 provide guidance in slingload operations. Unit commanders are responsible for training personnel and determining the level of proficiency for those involved in helicopter external-load operations. Use the checklist below to manage risks associated with slingload operations.

- ____1. Has a risk assessment been performed?
- ____ 2. Has coordination been conducted between ground and aviation units?

____ 3. Are PZ/LZ locations suitable for slingload operations (minimum clearance, 80 to 100 meter diameter, FM 57-38)?

- ___4. Have all loads been rigged in accordance with FM 55-450?
- ____ 5. Do load weights meet maximum allowable limits for specific aircraft?
- ____ 6. Have all loads been inspected by trained personnel (e.g., Pathfinder, aviation liaison)?
- ___7. Are markings on PZ/LZ suitable for day and night operations?
- ____8. Are ground guides using protective equipment?
- ___9. Is static discharge wand used to ground the helicopter?
- ____ 10. Have emergency procedures been established and explained to air and ground personnel?

Housekeeping and Fire Prevention

AR 385-55, AR 420-90, 20 CFR 1910.106, and FM 29-2 provide guidance for storing flammable materials, housekeeping, and fire prevention. In addition, use the checklist below to manage the risks associated with housekeeping and fire hazards.

___1. Are flameproof storage cabinets provided for storage of oil, paint, grease, or other flammable materials?

____ 2. Are all rags and waste that are soiled by combustible or flammable materials kept in tightly closed metal containers for daily disposal?

___ 3. Are fire plans posted?

____4. Is a building identification card posted on the building where it can be seen from the outside?

___ 5. Are "No Smoking in Bed" signs posted in the billets?

____ 6. Are coffee pots and other appliances used in office areas inspected by the Fire Department?

____7. Are exits identified with exit signs, and are exits visible to all occupants?

____8. Are placards reading "In Case of Fire - Dial (Emergency number)" placed near telephones in buildings?

____9. Are the proper type fire extinguishers placed in appropriate, well-designed locations, and are they properly inspected?

____10. Are maintenance areas kept clean and orderly?

____ 11. Are oil spills cleaned up immediately?

____12. Are defective parts and components removed from vehicles and other controlled equipment and removed from the work area?

____13. Are tools properly maintained?

____ 14. In addition to job-by-job cleanup, is a scheduled period of 15 to 30 minutes each shift used for housekeeping duties?

____ 15. Are drip pans used in motor pool bays under vehicles that have seeps or leaks of POL products?

____16. Is smoking prohibited in shops, garages, or motor pool parking areas, except in areas specifically designated by competent authority? Are designated smoking areas marked?

____ 17. Is smoking prohibited within 50 feet of vehicles that are transporting or dispensing flammable liquids, explosives, or other combustible materials?

____18. Are vehicles with fuel leaks of any type not operated?

____19. Do drivers turn off motors and set emergency brakes when fueling vehicle?

____ 20. Are all flammable waste materials removed to a collection area outside motor shops and garages at the close of each workday?

_____21. Are trucks that are loaded with combustible wastes unloaded before they are parked for the night?

____22. Is the use of gasoline prohibited for any cleaning purposes, including cleaning vehicle parts, clothing, and floors?

_____23. Are only approved solvents used for cleaning vehicle parts in motor pools?

____24. Are vehicles that are used to transport flammables, explosives, or other dangerous

materials equipped with a fire extinguisher having a 10B:C rating or greater?

____ 25. Are all vehicles (fire, police, security protection, ambulance) that respond to emergency calls equipped with fire extinguishers?

_____ 26. Are fire extinguishers available in vehicles that—_____

_____a. Are used as personnel carriers with a capacity of seven or more persons?

____ b. Store or handle ammunition or other hazardous materials?

_____ c. Carry valuable equipment or materials on a mission requiring special protection?
_____ 27. To minimize the danger of fire or explosion caused by static spark, are the gasoline tank, truck, and fuel source bonded during each fueling operation?

____ 28. Are tank trucks grounded before refueling?

_____ 29. Are vehicles that transport hazardous materials properly posted with placards on all sides, and is the load blocked and braced to prevent it from shifting?

____ 30. Do vehicles that transport explosives and ammunition on public highways meet hazard classification and compatibility requirements?

____31. Are vehicles that transport explosives on public highways unloaded before maintenance is performed, with the exception of normal servicing? (Note: There is no restriction on a tractor separated by 50 feet from explosives-loaded trailer.)

____32. Are vehicles that transport explosives and fuel inspected before loading?

33. Are vehicles that transport explosives on public highways equipped with side stakes, and is the cargo protected by a tarpaulin or canvas top?

_____ 34. Are personnel prohibited from riding on or in the cargo compartment of a motor vehicle transporting explosives?

____35. Are explosives prohibited from being transported in the passenger compartment of a vehicle?

____36. Have the unit's designated fire marshall and fire wardens been appointed on orders? Are duties specified, and are they accomplished?

____ 37. Are the unit fire marshall and fire wardens performing monthly fire prevention inspections? Are results documented and files maintained?

_____38. Are fire alarms installed, visible, and tested periodically?

- _____ 39. Is access to fire extinguisher points kept free of obstructions?
- 40. Are lawn mowers, lanterns, generators, and compressors purged of fuel before storing?
- ____41. Are fire doors free of obstructions, unlocked, and unbolted?
- ____42. Are electrical power cords free of splices and frays?

Laser Rangefinders, Designators, and Illuminators

AR 385-63 and TB Med 279 provide guidance in using laser rangefinders, designators, and illuminators. In addition, use the checklist below to manage the risks associated with using these devices.

- ___1. Has a laser range safety officer (LRSO) been designated and properly indoctrinated?
- ____ 2. Does the LRSO ensure that—____
 - _____a. All participating personnel are instructed in safety precautions as they relate to lasers?
 - _____b. Laser safety SOPs are established and implemented for each laser device being used?
 - _____ c. Laser buffer zones are established around the designated target area?

_____d. Adequate surveillance of the target area is established to prevent unauthorized personnel from entering that area?

_____e. Any case of suspected eye exposure to laser radiation is reported to the installation surgeon and installation safety office?

____ 3. Does the laser operator----

____a. Fire lasers only at designated targets and never fire at specular surfaces such

as glass, mirrors, and windows?

_____b. Ensure that lasers are never aimed at other personnel and that personnel are prohibited from looking into the laser beam?

_____4. Do personnel who must be in the target area wear laser protective eye wear designed for the specific type of laser being fired?

____ 5. Has the range been cleared of exposed flat glass to prevent hazardous reflections?
____ 6. Are optical devices (i.e., binoculars) that are used to observe the target during laser operations equipped with the appropriate laser safety filters?

____7. Are radio communications maintained with personnel downrange in the target area during laser operations to ensure that eye protection is worn?

____8. Are laser operations immediately terminated when communications are broken?

____9. Is the use of laser devices, other than eye-safe lasers, prohibited in force-on-force tactical exercises unless all personnel are equipped with appropriate eye protection?

____10. Do commanders know how and where to procure laser safety goggles?

____11. Are laser hazard boundaries properly marked with appropriate warning signs?

Lightning

The most common military activities that result in lightning strikes are soldiers using field phones, electrical equipment, computers, switchboards, and radios. Use the checklist below to manage the risks associated with thunderstorms.

____1. Do soldiers know not to wear metallic objects?

____2. Are soldiers trained to avoid high places, hilltops, isolated trees, open spaces, ponds, lakes, oceans, deep standing water, wire, and electrical equipment?

____3. Is all equipment grounded? (Examples: Kevlar helmet, ALICE pack, weapons, knives, radios, and any other metal or electrical equipment.)

_____4. Are soldiers trained to move to low ground until lightning stops or further instructions are issued?

_____ 5. Do soldiers know the indicators of a potential lightning strike and actions to take? (A strike may be imminent when hair stands on end. Soldiers should make as small a target as possible by dropping to their knees and bending forward, putting hands on knees. Soldiers should not lie flat on the ground or place their hands on the ground.)

Materials Handling and Storage

29 CFR 1910 provides guidance for materials handling and storage. In addition, use the checklist below to manage the risks associated with these operations.

____1. Where mechanical equipment is used, has sufficient clearance been allowed for aisles,

through doorways, and wherever there are turns or other passages? ____2. Is material stored in tiers so that it is stacked, blocked, interlocked, and limited in height so material is stable and secure against sliding or collapse?

_____3. Are storage areas kept free from accumulation of materials that constitute hazards from tripping, fire, explosion, or pests?

____4. Is vegetation controlled in and around outside storage areas?

Motor Pool

FM 29-2 provides a comprehensive reference in all aspects of operating a motor pool. Use the checklist below to manage the risks associated with motor-pool operations.

____1. Are periodic shop maintenance inspections conducted by the commander?

____2. Do training schedules reflect adequate time for preventive maintenance services for operators, crews, and maintenance personnel?

____3. Are inexperienced mechanics assigned to work with an experienced senior supervisor for on-the-job training and skill verification?

_____4. Does the unit safety SOP cover common maintenance hazards and take into consideration all conditions peculiar to the specific operations of the unit, including—

- ____a. Quality control?
- _____b. Fire prevention?
- ____ c. Equipment operations?
- ____d. Moving hazardous materials?

____e. Personal protective clothing and equipment?

- ____f. Explosives weapons safety?
- ____g. Carbon monoxide?

___h. Electrical and tool safety?

- _____ i. Lifting devices?
- ___ j. Painting?

_____5. Are personnel briefed on their responsibility to follow all safety instructions and to use all safeguards when using tools, machinery, equipment, and processes?

_____6. Do operators, repairmen, section chiefs, platoon sergeants, and platoon leaders work together to develop safe working procedures to prevent injuries to personnel and damage to materials and facilities?

____7. Are personnel in critical maintenance positions certified as proficient in the technical aspects of their duties?

____8. Are maintenance and equipment publications current and accessible to equipment operators, mechanics, and leaders?

____9. Are safety inspections conducted by the unit safety officer or NCO, supervisors, and maintenance personnel?

____10. Are risk assessments performed?

_____11. Do supervisors conduct regular safety meetings in the work area?

____12. Are personnel cross trained to operate vehicles, materiel-handling equipment, generators, space and immersion heaters, and other equipment?

____13. Do supervisors----

- _____a. Orient new personnel?
- ____b. Teach safe practices?
- ____ c. Enforce rules and regulations?
- ____ d. Investigate accidents?

____e. Prepare and submit DA Form 285 on reportable accidents?

_____f. Ensure unsafe conditions are corrected?

_ 14. Do individuals—

____a. Follow established safety rules and procedures?

- ____b. Correct or report unsafe conditions?
- _____ c. Report all accidents?

____ d. Warn others of hazards?

____e. Use protective devices (earplugs, safety glasses, safety shoes, gloves) when required?

_ 15. Does the unit have a shop safety SOP?

_____16. Does the SOP include the following safety precautions and procedures applicable to most units?

____a. Never, under any circumstances, use gasoline as a cleaning agent, solvent, or firestarter.

____b. Never permit a radio antenna to contact high-tension wires.

_____c. Never use or observe the use of grinding machines without wearing safety goggles.

_____d. Never weld or observe welding without wearing prescribed safety glasses or shields.

e. Always properly secure machines such as lathes and drill presses.

_____f. Always use the proper tool for the job (a screwdriver is not a chisel or pry bar).

_____g. Always keep the heads of tools such as punches, chisels, and drills properly maintained.

__h. Always wear protective headgear when riding in tracked vehicles.

_____i. Always secure tracked vehicle hatches when operating vehicles.

_____j. Always use ground guides when backing vehicles, and at any other time the operator's vision is obscured.

____k. Always ground electrical equipment during operations.

______l. Inspect firefighting equipment often (in accordance with AR 420-90) to ensure that it is properly located on a bracket, not blocked by parts or equipment, designated for type use, and in proper working condition (minimum inspection monthly). Document all inspections.

____m. Inspect first-aid kits often to ensure they contain the proper items.

____n. Ensure that all lifting devices such as hoists, lifts, cranes, and booms are properly inspected and marked showing maximum lift capacity, and that proper use is enforced. (TB 43-0142)

_____ o. Always inspect machines before each use. Never use machines if safety guards are broken or missing, power controls are inoperative, or electrical cords or plugs are damaged or frayed.

_____p. Do not use compressed air for cleaning purposes except where air pressure is reduced to less than 30 psi and appropriate chip guarding and PPCE are used. (29 CFR 1910.242)

____ q. Always lockout/tagout machines and equipment before performing services or maintenance to avoid accidental or unintentional operation. (29 CFR 1910.147)

_____17. Are platoon leaders and section chiefs required to have frequent and regular meetings to brief their personnel on safety procedures, to get suggestions on improvements in safety practices, and to publicize any newly adopted safety procedures?

_____18. Are procedures clearly identified for instructing all personnel to prevent horseplay, practical jokes, and unauthorized recreation? Do platoon leaders and section chiefs prohibit such actions, and is disciplinary action taken when such behavior occurs?

_____19. Are shop cleanup and notification procedures for POL spills established?

20. Are hearing protection requirements established? (TB Med 501)

_____21. Are vehicle dispatch procedures established for motor pool operations? (FC 43-2)

_____22. When low temperatures prevent setting the parking brake, do SOPs instruct personnel to chock wheels of unattended vehicles? (AR 385-55)

____23. Does the SOP include procedures for proper use of respirators? (29 CFR 1910.123)

_____24. Does the shop SOP define the specific respirator required for each job? (29 CFR 1910.134)

____25. Does the shop SOP include proper procedures for draining all gasoline-operated equipment (generators, stove fire units, lawn mowers, lanterns) before placing in temporary storage?

____26. Is there an approved SOP posted in the battery shop? (TM 9-6139-200-14)

Exhaust control (AR 385-55)

____1. Are vehicles periodically inspected to ensure that there are no leaks in the exhaust system?

____ 2. Are motor pool shops and other enclosed areas that are used for vehicle maintenance ventilated to prevent asphyxiation?

_____3. Are standards established that prohibit vehicle engines from being run inside shops longer than needed to move the vehicle in or out of the building?

_____4. Are shops periodically tested under full working conditions to determine the presence of carbon monoxide?

_____5. Are personnel prohibited from sleeping in parked or unattended vehicles when the engine or heater is running?

____ 6. Are shop exhaust (ventilation) systems properly used to remove exhaust gases?

____7. Are maintenance pit ventilation systems installed and operational? (29 CFR 1926.57)

Natural Hazards

FM 21-11 provides guidance in avoiding the natural hazards associated with field operations. Use the checklist below to manage risks associated with these hazards.

___1. Do all personnel know how to avoid snake bites?

____a. Walk carefully; watch your step and where you sit.

____ b. Be careful where you place your hands when climbing or when lifting objects from the ground.

____ c. Never tease or pick up a snake. Even bites of nonpoisonous snakes may cause infection requiring medical treatment.

_____d. Avoid sudden motion when placing your hands or feet near an area that may conceal a snake. Beware of shady areas.

____2. Are personnel familiar with snake bite treatment? (If a soldier is bitten, try to kill the snake without destroying the head. Take the dead snake with the victim to the medical treatment facility.)

____ 3. Have all soldiers been trained to----

____a. Check clothing, socks, and shoes before putting on?

____b. Avoid sleeping or leaving clothes near damp places?

____ c. Remain still if they feel an insect or spider crawling? (Sudden movement may cause it to bite or sting.)

_____d. To never step in the shade of a bush without visually checking that spot?

_____e. To keep sleeping area clean and free of food crumbs that attract insects, which in turn attract scorpions, spiders, and centipedes?

_____4. Do personnel know how to treat spider bites and scorpion stings?

- _____a. Keep patient quiet and send for medical aid.
- ____ b. Clean the punctures with a mild antibacterial agent.

____ c. Apply ice, if available, to the area for 10 to 12 inches around the puncture point.

NBC Operations

FM 3-50 and AR 385-63 provide guidance in nuclear, biological, and chemical (NBC) operations. In addition, use the checklist below to manage the risks associated with NBC operations.

____1. When operations are conducted in mission-oriented protective posture (MOPP), is 10°F added to the Wet Bulb Globe Temperature (WBGT) when determining the level of activity of the unit? (TB Med 507)

____ 2. When operating in MOPP, do leaders require personnel to consume additional water by enforcing a policy to drink water on order?

_ 3. Do leaders plan additional time to conduct missions and rotate personnel often?

____4. Do leaders delegate tasks to subordinates and pace themselves to reduce stress and fatigue?

_____5. When conducting operations involving hexachloroethane (HC) smoke, do all personnel have protective masks available?

_____6. Are personnel required to mask when using smoke in MOUT operations or other enclosed areas, when operating in dense smoke (visibility less than 50 meters), and when operating in a smoke haze (visibility greater than 50 meters) for more than 4 hours?

____7. Do personnel employing smoke grenades, smoke pots, and riot control agents (RCAs) take care not to throw or ignite them near people, tents, vehicles, and flammable materials?

<u>8</u>. Is a chemical officer or NCO or an officer or NCO with an NBC-additional skill identifier present when conducting training with RCAs?

___9. Are RCAs employed only in approved areas?

____10. Are personnel medically evaluated before conducting training with RCAs?

____11. Are CS capsules used in the CS chamber? (This is the only permissible means of generating CS for the CS chamber.)

____12. Are DS2 and STB separated during transport and field storage?

____13. Do personnel wear masks and rubber gloves when handling leaking containers of DS2 and STB?

Overhead Cranes

29 CFR 1910 provides guidance for operating overhead cranes. In addition, use the checklist below to manage risks associated with these operations.

____1. Is the rated load of the crane plainly marked on each side?

____2. If the crane has more than one hoisting unit, is the rated load marked on each hoist or each load block?

____ 3. Is this marking clearly legible from the ground or floor?

_____4. Is a minimum clearance of 3 inches overhead and 2 inches laterally provided and maintained between crane and obstructions?

____5. Are only designated personnel permitted to operate the crane?

____6. Are stops provided at the limits of travel of the trolley?

____7. Are bumpers capable of stopping the crane provided where required?

____8. Do the sheaves and ropes of hoisting equipment meet the requirements of 29 CFR 1910.179?

____9. Are periodic inspections performed on cranes, hooks, ropes, slings, chains, and hoists in accordance with 29 CFR 1910.179?

_____10. Are all new cranes and extensively repaired or altered lifting devices load tested at 120 percent before use? Is evidence of the test readily available in the form of MFG written certification or maintenance records?

____11. Do annual inspections of crane hooks for cracks use magnetic particles or other suitable crack detection/inspection methods?

____12. Are crane hooks removed from service when the throat opening exceeds more than 15 percent of normal or the hook shows more than a 10° twist from the plane of the unbent hook or shows signs of cracks?

_____13. Do hooks have safety closure latches and are they properly positioned and functional?

_____14. Are hoists, chains, slings, and hooks marked to indicate the item identification number, load rating, and next periodic inspection date?

Parachuting

FM 57-220 provides guidance for parachuting techniques and training. Jumpmasters should also follow their unit SOP and FM 57-230. In addition, use the checklist below to manage the risks associated with parachute operations.

- ____1. Have conditions on the drop zone (DZ) been reviewed?
- 2. Have actions to be conducted on the DZ after the jump been rehearsed?
- ____ 3. Have parachute landing falls been reviewed?
- ____ 4. Have emergency landing procedures been reviewed?
- _____5. Are corrective lenses worn by personnel who require them?
- ____ 6. Are helmets required on all jumps?

____7. Are loads limited to jumper's capability? (Excess weight will increase the probability of a weak exit.)

- ____ 8. Are obstacles on and around the DZ marked?
- ____9. Are soldiers trained on 1-second interval, good door position, and correct exit procedures?

____10. Have towed-parachutist procedures, equipment tiedowns, and accidental reserve activations been emphasized?

____11. Have jumpmasters been briefed to ensure that the reserve parachute does not catch and activate during towed-parachutist retrieving procedures?

____12. Have reserve parachute activation procedures been reviewed? Do jumpers know what method to use based on the situation?

- ____13. Have procedures for jumping with weapons exposed been reviewed?
- _____14. If operating in the desert, has depth perception been thoroughly briefed?

_____15. For night jumps, have all jumpers gone through the five points of performance? (Place special emphasis on getting into the fifth point ASAP; it is sometimes difficult to determine altitude at night.)

_____16. Are only red lights used for 30 minutes before and during night jumps? (Use of white lights may degrade jumpers' night vision.)

- _____17. Are night halo jumps rehearsed during daylight when the situation permits?
- _____18. Is an experienced buddy assigned to assist inexperienced jumpers?
- ____ 19. Do jumpmasters know and identify the correct release point?
- ____ 20. Are door bundles used for extra equipment and ammunition?
- ____ 21. Has crossloading plan been reviewed?
- ____ 22. Have aircraft crash drills been conducted?

Personal Protective Clothing and Equipment

AR 385-10 provides guidance on purchase and issue of personal protective clothing and equipment (PPCE); additional references are DA Pam 385-3, DODI 6055.2, and TB Med 502. The following OSHA regulations have been used as a source for this checklist: 29 CFR 1910 and 19 CFR 1926. Further resources are EM 385-1-1 (Corps of Engineers Safety and Health Requirements Manual) and National Electrical Code (NEC). Use the checklist below to ensure PPCE is used to manage the risks inherent in the mission.

____1. Is approved protective eye and face equipment provided to personnel who work in designated eye-hazard areas?

_____2. Is approved safety-toe footwear provided to personnel who work in areas where hazards exist that could result in foot or toe injuries (e.g., heavy objects that could drop or fall)?

____3. Is approved hearing protection provided to personnel exposed to areas that have been identified as noise hazardous?

_____4. Are approved hardhats provided to personnel who are exposed to falling and flying objects and from limited electric shock and burn?

_____5. Are suitable facilities available for quick drenching or flushing of the eyes and body within work areas where people might be exposed to corrosive materials?

<u>6</u>. Is approved equipment available to protect brake and clutch mechanics from asbestos dust in the form of sprayers when using the wet method or encapsulation devices equipped with HEPA-filter vacuum dust collectors?

____7. Are personnel whose clothing may become wet provided with rubber aprons, coats, jackets, sleeves, or other garments to keep their clothes dry?

____8. Are rubber or other impervious boots provided to personnel who work in areas where their feet may become wet?

____9. Are personnel who are required to handle work that is wet with a liquid other than water provided with gloves impervious to the liquid?

_____10. Are respirators provided to personnel working in oxygen-deficient environments or areas contaminated with harmful dust, fog, fumes, mists, gases, smoke, sprays, or vapors?

____11. Are the respirators suitable and approved for the purpose intended?

____12. Do written SOPs govern the selection and use of respirators?

_____13. Is the user trained in the proper use of respirators and their limitations?

____14. Are respirators routinely inspected during cleaning? Are worn or deteriorated parts replaced?

____15. Does air breathed with air-line respirators meet the requirements for grade D breathing air? (Oxygen must never be used with air-line respirators.)

____16. If an oil-lubricated air compressor is used to supply air to air-line respirators, is a high temperature or carbon monoxide alarm, or both, installed?

____ 17. If only a high temperature alarm is installed, is the air from the compressor tested frequently for carbon monoxide?

_____18. Has training provided the user the opportunity to handle the respirator, have it fitted properly, test its face piece for proper seal, wear it in normal air for a long familiarity period, and wear it in a test atmosphere?

_____19. After inspection, cleaning, and necessary repair, are respirators stored to protect them from dust, sunlight, heat, extreme cold, excessive moisture, and damaging chemicals? Are the respirators packed or stored so the face piece and exhalation valve rest in a normal position?

_____20. Are all hazardous operations and hazardous working areas identified with hazard identification signs? (The requirements for these signs are found in separate sections of the 1910. The references for this question deal with the specifications for warning signs. Look in the 1910 Index under "Markings" and "Signs and Tags" for specific requirements.)

____21. Are adequately stocked first-aid kits approved by the consulting physician and readily available?

____ 22. Are personnel trained in first aid?

Petroleum, Oil, and Lubricant Operations

FM 10-69, FM 10-71, and AR 385-55 provide guidance in POL operations. In addition, use the checklist below to manage the risks associated with such operations.

___1. Have personnel been trained to know that—

____ a. A flammable liquid has a flash point below 100°F, and a combustible liquid has a flash point at or above 100°F?

_____b. Vapors from petroleum products that are mixed with the proper amount of air will form explosive mixtures and ignite on contact with a spark or flame?

____ c. There may be an explosion if the explosive mixture ignites in a closed space?

______d. All fires connected with flammable products result from ignition of vapors?

____e. There is little danger in a closed container that holds a flammable product unless it is

exposed to heat? (The hazard arises from ignition of vapors produced in transfer, use, spills, or leaks.)

____2. To prevent petroleum fires, do personnel control ignition sources by-____

_____a. Not smoking and having no matches or cigarette lighters within 50 feet of vehicle refueling points?

____ b. Grounding and bonding?

____ c. Prohibiting the use of open flames, heating stoves, and electrical tools in refueling/storage areas?

- ______ d. Placing flame and spark arresters on all equipment?
- _____e. Not wearing nylon clothing?

____ 3. Do personnel control vapor formation by—____

____a. Avoiding spills and cleaning up spills?

_____b. Using drip pans and catch basins?

_____ c. Inspecting frequently for leaks and cracks in fuel, oil, and exhaust lines?

_____d. Inspecting hoses, hose reels, and nozzles for bulges, tears, and cuts?

_____e. Keeping containers of flammable liquids closed?

4. Do personnel know that the most common causes of fires are smoking and matches?

____ 5. Are "No Smoking Within 50 Feet" signs posted at all petroleum handling, storing, and displaying areas?

____6. Do personnel carefully control sources of friction sparks, such as tools and grinding wheels, to prevent igniting combustibles such as rubbish, paper, and oily rags?

____7. Are personnel aware that portable lights, power tools, and extension cords become a fire hazard when overloaded by the heat generated and the short circuits that result from worn insulation?

____8. Are personnel trained to know the causes of static electricity (friction; flow of flammable liquids; flow of steam, air, or gas through pipe, hose, or tank opening; and movement of vehicles with nonconductive tires over nonconductive road surfaces)?

___9. Do personnel bond and ground tanker vehicles being loaded or unloaded to permit the safe transfer of static that may build up within the tank?

- ____ 10. Are storage tanks and pods grounded?
- ____ 11. Are AMVs prohibited from operation unless entirely free of fuel leaks?
- ____ 12. When refueling are the following controls practiced?

____a. Does one person man a portable fire extinguisher having a 10C rating or greater?

____b. Is the engine shut off and master switch in off position?
____ c. Is smoking prohibited and are signs posted?

____ d. Are vehicles grounded and bonded?

____e. Is correct fuel placed in vehicle?

____f. Do personnel wear safety goggles or eye protection?

_____13. Before welding and cutting, are storage tanks, tank cars, tank vehicles, drums, and vehicle fuel tanks thoroughly clean and free of vapor and certified by the fire department?

_____14. Are lock and latch opening devices on automatic petroleum dispersing nozzles prohibited?

_____15. Are portable CO2 fire extinguishers placed at refueling and fuel-storage points?

____16. Is aircraft refueling accomplished in accordance with FM 10-68?

____ 17. Are personnel familiar with the health hazards inherent in petroleum products as listed in FM 10-69?

_____a. Dust: Solid particles result from grinding, scraping, buffing, riveting, rivet cutting, drilling, sanding, or sandblasting and/or from evaporating or burning liquids and residues that contain finely divided substances that injure organs and tissues when inhaled or ingested.

_____b. Gases and vapors: A gas exists as a gas at ordinary temperature and pressure; a vapor is a gas-like form of a solid or liquid. Poison, asphyxiants, anesthetics, and irritant gases and vapors may injure or destroy the eyes, blood-forming system, tissues, or bones or keep the lungs from getting oxygen, have a narcotic affect, or inflame the lungs and respiratory track.

____ c. Flammable liquids: Flammable liquids (gasoline, jet fuel, solvents, paints, lacquers, varnishes) are dangerous inside the mouth, eyes, and body. They also cause skin contamination.

_____d. Fumes and mists: A solid substance that can turn directly into a vapor without first becoming a liquid and can later return to the same solid state.

____e. Oxygen deficiency: The air lacks the normal amount of oxygen due to flammable vapors.

____18. Are loading and unloading of tank cars or trucks accomplished in accordance with appropriate regulations?

_____19. Do personnel know first aid for petroleum-related injuries?

____ 20. Are petroleum samples taken by an approved sampler only, not by a hose-and-mouth suction?

____21. Do refueling operators wear gloves, safety goggles, and other PPE to prevent skin contamination?

____ 22. Are showers and eyewash facilities available to personnel?

<u>23</u>. Are personnel trained to remove POL-soaked clothing only under showers to prevent ignition by static electricity?

Privately Owned Vehicles (POV)

AR 190-5 and AR 385-55 provide guidance on operating POVs. In addition, use the checklist below to manage the risks associated with driving POVs.

____1. Does the commander ensure that all drivers know the main causes of POV accidents (speeding, fatigue, and alcohol) and injuries (failure to wear safety belts) and are trained in prevention measures?

____ 2. Does the unit have a POV accident prevention program?

____3. As a condition for continued on-post driving privileges, does the commander require that personnel involved in traffic offenses attend driver-improvement courses?

_____4. Does the commander ensure that safety belts are used by Army personnel driving or riding in POVs on and off the installation?

____ 5. Does the commander have a procedure for identifying Army personnel who are

repeat traffic offenders?

- ____6. Are repeat traffic offenders required to attend remedial training courses?
- ____7. Are driving privileges denied to repeat offenders?
- ____8. Is use of protective equipment while riding motorcycles/ATVs enforced?

Radiation Protection

ARs 40-5, 40-14, and 385-11 provide guidance for working with radiation. TB Med 525 provides further guidance. In addition, use the checklist below when managing the risks associated with radiation.

____1. Are appointments of radiation protection officer (RPO), alternate RPO (ARPO), unit-level local RPO (LRPO), and alternate LRPO (ALRPO) in writing and signed by the commander?

____ 2. Is required training provided for the RPO, ARPO, unit LRPO, and ALRPO?

____ 3. Is a formal, written ionizing and nonionizing radiation safety program established?

____4. Are workers informed of radiation hazards in their work areas? (Document training.)

____ 5. Is personal protective clothing and equipment available for workers?

_____ 6. Is an ionizing radiation control committee (IRCC) established? (Quarterly meetings are recommended.)

____7. Are individually controlled items properly tracked? (Records should show who has them and if they are used by personnel who have been trained to standard.)

____ 8. Are copies of current physical ionizing and nonionizing radiation inventories furnished to the RPO by the responsible organization?

____9. Does the RPO have access to testing instruments suitable for detection and measurement of alpha, beta, and gamma levels?

____10. Are active radiac meters that are used for health and safety calibrated every 90 days IAW AR 40-5?

_____11. Are radioactive materials monitored within 3 hours after receipt during normal duty hours, or within 18 hours if received after normal duty hours? (Verify. Surveys should be recorded showing dates, times, and places.)

____ 12. Are vehicles and military aircraft that transport radioactive material monitored? (Must be able to verify.)

_____13. Are personnel who are responsible for loading, unloading, and transporting radioactive materials and other hazardous materials trained IAW DOT requirements? (Verify documentation.)

____14. Is the film badge/TLD monitoring program in compliance?

____ 15. Are current Form DD 1141 (exposure records) and DD 1952 (dosimeter records) filed in personnel health and medical records?

_____16. Is the controlled storage area for contaminated equipment in compliance? (Should be restricted and posted.)

____17. Is the fire department informed of the locations of stored radioactive materials on the post?

_____18. Are surveys conducted of work areas where radioactive materials are used or stored? (Verify documentation.)

_____19. Is "need to know" training provided for personnel who handle or use mortar fire control equipment, rifle sights, and muzzle reference sensors with radioluminescent lamps containing tritium? (Verify.) Training should include emergency response procedures to be followed when breakage or damage to these items occurs.

____ 20. Does the RPO know procedures to follow when a radiation incident occurs?

Rail Loading and Unloading

Public Law 91-596, FM 55-30, and TM 55-2220-058-14 provide guidance in rail loading and unloading. In addition, use the checklist below to manage the risks associated with rail operations.

____1. Does the ramp OIC ensure that all vehicles are inspected before loading (brakes, lights, turn signals, fire extinguishers)?

____2. Are windows and windshields covered with cardboard to prevent damage during deployment/redeployment?

____3. Have loading teams been instructed in rail loading and unloading procedures?

____4. Before loading the railcar—

____ a. Have rocks, leaves, and other trash been removed from railcar channels so chain anchors will slide freely?

____b. Have all chains needed for tiedowns been pulled out of the channels, and have chain anchors been moved along the bottom of the channel to their required locations?

____ c. Has the turnbuckle body been turned until the threaded ends are fully extended?

_____e. Have all turnbuckles been laid so that they point inboard toward the center of the car and placed between the channels?

5. While loading and unloading-

____a. Are vehicles driven only by qualified drivers?

____b. Are vehicles mounted or dismounted only when stopped?

_____c. Are personnel prohibited from riding on moving vehicles?

_____d. Are ground guides used during all loading and unloading operations? (The ground guide will stay one car length away from the vehicle being ground guided and will *never* walk backwards while ground guiding.)

_____e. Are tank turret guns in the aft travel position and lowered into the saddle block? (Turret rotation and gun elevating controls must be wire tied to prevent movement.)

_____f. Have antennas been removed or tied down as appropriate?

____6. Have tiedowns been inspected for breaks, cracks, gouges, open welds, or deformed components? (Remove from use any chains that have defects.)

____7. Has inspection been made of the connector link that attaches the chain to the anchor fitting?

____8. Have chains with defective connector links been removed from use?

____9. Has chain been checked to see if it has stretched beyond normal limits?

_____10. Are chains kinked or twisted?

_____ 11. Have chains been tightened in a manner that will maintain equal tension on all tiedowns. (Hand-tighten turnbuckles, then continue to tighten them with a 1½-inch open-end wrench or a 15-inch crescent wrench. Tighten front and rear at the same time to maintain equal tension.

Tighten until 1/8-inch of the rubber pads in the compression unit shows between the metal rings.)

____12. After tightening tiedowns for loading or before loosening for unloading, have exposed turnbuckle threads and jamnuts been lubricated?

____13. Has the load attachment hook end of the chain assembly been secured so it cannot swing freely?

____14. Have unused chains, shackles, and rings been secured to the flatcar so they will not swing free?

____15. Are personnel required to wear safety shoes where appropriate?

_____16. After unloading, were all tiedowns, shackles, and rings securely stowed on the railcar?

Range Safety

AR 385-63 provides comprehensive guidance on range safety. Other guidance is in FM 9-13 and TM 9-1300-206. In addition, use the checklist below to manage the risks associated with range operations.

__ 1. Has a risk assessment been done?

____ 2. Has an officer in charge (OIC) been designated to be responsible for the safe conduct of training for each unit using a range training facility?

____ 3. Has a range safety officer been appointed to assist the OIC during live firing?

____4. Have the range OIC and safety officer received a range-safety briefing and certification from range control?

____ 5. Are range safety officers assigned no additional duties or responsibilities other than supervision of weapons firing?

<u>6</u>. Are the designated safety officers thoroughly knowledgeable of the weapon system being fired and the safety requirements associated with it?

____7. Before occupying any range, does the OIC ensure that—____

____a. A current copy of the technical manual for the weapon(s) being fired is on hand?

____ b. Radio (FM band) and telephone communications have been established with range control?

____ c. All personnel on the range are briefed on medevac procedures, cease fire procedures, duds, prohibited downrange areas, and adjoining ranges and facilities?

_____ d. All vehicle operators (tracked and wheeled) are trained to standard to operate radios and call for help in the event of emergencies (contact range control, DUSTOFF, exercise headquarters)?

_____e. Medical personnel with vehicle and equipment (aid bag, litter) are present and briefed as to the best route to the nearest hospital?

____ f. A red range flag (day) or red blinking light (night) is attached to the top of the range flagpole, and a red light is hung on left and right range limit markers at night?

____g. Emergency telephone numbers/medevac cards are in vehicles?

8. While using/firing any range, does the OIC ensure that—

____a. The OIC/safety officer is present and has been briefed?

____b. Permission to fire has been received from range control?

____ c. Radio communications are maintained at all times and checked hourly with range control?

____d. No personnel are allowed forward of the firing line?

____e. Required safety measures are observed, and effective firing control is maintained?

____f. Personnel are using proper hearing protection and wearing helmets?

____g. A cease fire is ordered when—

__(1) Communication with range control is lost?

__ (2) A weapon or ammunition malfunction occurs?

__ (3) A safety violation, accident, or incident occurs?

___ (4) A fire is started?

___ (5) Rounds land or detonate or are suspected of landing or detonating outside the impact area or safety limits?

____(6) When range control directs a cease fire?

____h. Tanks, armored personnel carriers (APCs), and other vehicles display red flags when mounted weapons systems are being loaded or fired?

___9. After using any range facility, do the OIC and safety officers ensure that—

____a. Weapons are cleared of ammunition?

____b. Ammunition and explosives are turned in by individuals?

______ c. Ammunition, simulators, explosives, and pyrotechnics are not abandoned on the range?

____ d. Inspection and clearance are requested and received from range control before departing the range?

____e. The inspection checklist for ranges is completed?

Artillery and mortar firing

____1. Is an individual designated to perform every action connected with crew/drill firing?

____2. Does a separate individual in the supervisory chain of command ensure that safety procedures are performed properly?

____3. Are artillery safety officers and NCOs certified on the weapons being fired?

Armor/Mech

___1. Is all weapon firing contained within the range fan?

____2. Do all vehicles not on the firing line have weapons elevated and pointed downrange?

____3. Are all weapons properly cleared by designated safety personnel before leaving the firing line?

Field artillery

____1. Do howitzers have safety tape placed properly?

____ 2. Is the safety fan shown on firing charts?

____ 3. Does the safety officer have a copy of the safety data?

Small arms

___1. Are left-handed firers using brass deflectors on M16s?

_ 2. Are weapons cleared properly at the conclusion of firing?

Ammunition care and handling

____1. When ammunition is removed from its packaging in preparation for firing, do supervisors ensure that debris (banding, empty pallets) is removed from the work area as soon as possible?

____2. Are gloves and eye protection available to personnel who cut banding and lift wooden ammunition boxes? Do supervisors ensure these items are worn?

____ 3. Is ammunition, particularly pyrotechnics and propellant charges, protected against exposure to the elements, especially moisture and sun? (Ammunition should not be removed from its packaging until just before firing, should never be placed directly on the ground, and should be covered after removal from packaging.

____4. Do ammunition handlers wear steel-toed shoes when performing operations involving artillery, tank, or boxed/palletized ammunition?

_____5. Do unit policies and procedures ensure that smoking and operation of spark- and flame-producing items are not permitted within 50 feet of ammunition and explosives? _____6. Are at least two operational handheld fire extinguishers available at all locations where ammunition is stored? These extinguishers may be either the 2½-gallon-capacity water type or

the dry chemical type with a minimum classification of 3A.

____7. Is unserviceable and potentially hazardous ammunition stored in a separate area, away from work areas and other areas containing serviceable ammunition?

____ 8. Is white phosphorous/plasticized white phosphorous (WP/PWP) stored base down at all times?

____9. Are water-filled barrels or tubs available at all pads and other sites used to store WP- or PWP-filled munitions? (The water-filled barrels are used to submerge leaking WP/PWP rounds and are also used to immerse WP/PWP burns on personnel.)

Pyrotechnics

____1. When pyrotechnics are used, do supervisors ensure that controls are observed IAW TM 9-1370-206-10, TM 9-1370-207-10, and TM 9-1370-208-10?

____2. Are all pyrotechnic items (flares, signals, and simulators) kept away from excessive heat and open flames?

____3. Do personnel using pyrotechnics wear gloves and helmets?

_____4. Do personnel read instructions in the appropriate technical manual before using a pyrotechnic item? (TM 9-1370-206-10 covers pyrotechnic signals; TM 9-1370-207-10 covers pyrotechnic simulators; and TM 9-1370-208-10 covers photoflash cartridges, surface flares, and miscellaneous pyrotechnic items.)

_____ 5. Are soldiers trained to never attempt to disassemble any pyrotechnic item, including duds? (These items contain photoflash powder, which is extremely flammable and may cause serious injury.)

Note: The safety checklist for ammunition handling, storing, and transporting begins on page 1 of this booklet. The safety checklist for explosives and unexploded ordnance (duds) begins on page 10.

Rappelling

TC 90-6-1 and TC 21-24 provide guidance in rappelling operations. In addition, use the checklist below to manage the risks associated with these operations.

- ____1. Are personnel trained?
- ___ 2. Is aircrew briefed?
- _____3. Are safety and serviceability checks performed on all equipment?
- _____4. Are rucksacks under 50 pounds?
- _____5. Are helmets and gloves used?

____ 6. Is cutting of ropes prohibited except in emergency and only after visual confirmation that the rope is clear?

___7. Do all participants understand techniques and responsibilities of the operation and can they perform to standard?

8. Is the standard enforced?

____9. Does only the rappel master clear ropes and ensure that 5- to 6-foot lengths of rope are on the ground?

_____10. Does rappel master wear night vision goggles when required?

Respiratory Protection

AR 11-34 provides guidance for establishing and running a respiratory protection program. Also see the checklist on personal protective clothing and equipment on page 28 of this book. In addition, use the checklist below to manage the risks associated with respiratory hazards.

- _____1. Does the unit have a respiratory protection SOP?
- 2. Are personnel who are exposed to potentially hazardous chemicals-
 - ____a. Informed of the potential health hazards?
 - ____b. Enrolled in an appropriate medical surveillance program?

____ c. Provided and fitted with a respirator compatible with the hazards they may encounter in their workplace?

- _____d. Evaluated and quantified for chemical exposure?
- _____3. Are respirators selected on the basis of hazards to which personnel are exposed?

_____4. Are users instructed and trained in the proper use of respirators and their limitations? (29 CFR 1910.134)

____ 5. Are respirators assigned and fit-tested to individual personnel for their exclusive use? (29 CFR 1910.134 and TB Med 502)

_____6. Are personnel who use respirators given a physical examination to use the equipment without health risk? (29 CFR 1910.134)

Risk Management in Training Operations

FMs 25-100 and 25-101 provide guidance in all aspects of training and supervision. AR 385-10 provides the doctrinal force behind risk management (RM) as a part of force protection. Use the checklist below to manage the risks associated with training operations.

Targeting

____1. Has the command assessed various training mission elements to determine those with the greatest risk potential?

- _____2. Are training operations targeted to integrate safety into the concept and planning stages?
- ____ 3. Are hazards routinely stated in terms of their systemic origins?

_____4. Are top-priority hazards given proper priority for RM control actions and resources?

Risk identification

____1. Are hazard-identification techniques given a strong priority as information-collection procedures?

____ 2. Are training accident prevention priorities strongly influenced by the degree of risk of target areas?

____ 3. Are hazard identification measures concentrated in the pre-operational phases of training?

Risk assessment

___1. Are risk-assessment processes influenced by hazard/cost considerations? Are worst risks attacked first?

<u>2</u>. Does the assessment process focus on identification of systemic causes as the sources of hazards?

Risk controls and decision making

____1. Do the commander and his staff routinely consider a full range of risk-control options (human factors, procedures, materiel)?

____ 2. Are training safety problems generally considered by line leaders in risk-decision terms (mission objectives balanced with safety needs)?

____ 3. Has the commander provided leaders with practical risk-acceptance guidelines?

_____4. Are mission objectives and control measures properly balanced during the decision-making process?

_____ 5. Are risk decisions made at the lowest possible leader level consistent with the risk importance?

____6. Are final controls developed as standards (just like other unit standards)?

Implement risk controls

____1. Are controls integrated in SOPs, orders, job aids, training tasks, METLs, and other individual and unit guidance?

____2. Are leaders at all levels provided essential risk- and hazard-recognition training?

Supervise

____1. Is the effectiveness of controls assessed over time?

____ 2. Does the commander apply risk management concepts to punish "gamblers" and protect prudent risk takers regardless of the outcome of the operation?

_____3. Is the impact of change during training operations evaluated as a cause of risk?

_____4. Is effective risk-management performance incorporated in job standards and other training performance evaluation criteria (AARs)?

Sports and Recreation

DA Pam 385-5 provides guidance for sports and recreation programs. In addition, use the checklist below to manage the risks associated with sports and recreation.

____1. Is safety integrated into unit sports and recreation programs?

____ 2. Do all supervisors of sports and recreational activities under their jurisdiction coordinate procedures with other activities and units?

_____ 3. Have coaching officials been selected and trained in sports safety?

____4. Do officials ensure that playing facilities meet all mandatory requirements?

_____5. Do officials ensure that spectators do not pose a danger to players or themselves?

_____ 6. Do officials enforce safety-related rules without exception and remove individuals involved in unsportsmanlike conduct?

____7. Is there an installation safety director to assist the commander by advising on safety matters?

_____8. Is there a morale support officer (MSO) to provide guidelines for the overall program?

___9. Are authorized swimming areas supervised during hours of operation?

____10. Are periodic health examinations given to those taking part in more strenuous sports and physical training?

____11. Do participants go through some type of training program to ensure they are ready for a particular sport?

_____12. Are teams or opponents matched as to their capabilities?

_____13. Do all participants know the rules of the game and the physical skills needed for safe conduct of the sport?

_____14. Are participants encouraged to develop a personal responsibility for safety and given the opportunity to plan, execute, and evaluate their own conduct?

_____15. Is there a unit safety officer to ensure the success of the program?

_____16. Are participants cautioned against swimming while exhausted or overheated?

____ 17. Do swimming pools meet safety and sanitation standards established by local authorities and Army regulations?

_____18. Are the areas selected for sports suitable for their intended use?

_____19. Are periodic inspections conducted of areas selected for recreational use?

____ 20. Are facilities and equipment inspected before use?

____21. Are athletic fields flat, smooth, and free of rocks, sticks, standing water, broken glass, and other debris?

____ 22. Are gymnasium floors free of obstructions?

____23. Is proper protective equipment worn?

____24. Do participants always use the proper practice equipment to ward off cuts, bruises, sprains, and broken bones?

Spray-Painting Operations

29 CFR 1910 provides guidance for spray-painting operations. In addition, use the checklist below to manage the risks associated with spray painting.

_____1. Is the average velocity of the exhaust air over the open face of dry-type spray booths (or cross section during spraying operations) not less than 100 linear feet per minute?

____2. Is the spray booth equipped with visible gauges, audible alarms, or pressure-activated devices to indicate or ensure that required air velocity is maintained?

____ 3. Is space within dry-type spray booths on the downstream and upstream sides of filters protected with approved automatic sprinklers?

____4. Are sprinkler heads kept free of deposits by daily cleaning, if necessary?

____ 5. Is a clear space of not less than 3 feet on all sides of the spray booth kept free from storage or combustible construction to provide ready access for cleaning?

____ 6. Is open flame or spark-producing equipment prohibited in and within 20 feet of spraying areas unless separated by a partition?

____7. Is electrical wiring and equipment, including lights, of the explosion-proof type approved for Class I, Group D locations? Are electric lamps totally enclosed and protected from mechanical damage by suitable guards?

____8. Is the exhaust duct system of the spray booth an independent system that discharges to outside the building?

___9. Is the fan rotating element of a nonferrous or nonsparking construction?

____10. Is air exhaust from spray operations directed so that it will not contaminate makeup air being introduced into the spray booth?

_____11. Is the quantity of flammable or combustible liquids kept in the vicinity of spraying operations limited to a 1-day or 1-shift supply?

____ 12. Is an adequate supply of suitable portable fire extinguishers installed near all spraying operations?

_____13. Are painters provided with and required to wear airline respirators, coveralls, and loose-fitting hoods as personal-protective equipment when painting with chemical-agent-resistant coating (CARC) paint?

Tents

TM 10-8340-211-13 provides guidance for erecting and using general-purpose tents. In addition, use the checklist below to manage the risks associated with erecting and using tents.

- ____1. Are tents set up away from roads, trails, and POL-storage areas?
- ____2. Is area level and free from pot holes, sharp rocks, and other hazards?
- ____3. Is sufficient space planned and established for walking paths and firefighting between tents?
- ____4. Is sufficient anchorage provided for sandy and high-wind conditions?
- ____5. If rebar is used as stakes, are sharp edges covered to protect personnel from cuts?
- ____ 6. Are exits free from obstructions?
- ____7. Are fire extinguishers available in all tents, and are operators assigned and knowledgeable?
- ____ 8. Are fire guards posted (as required)?
- ___9. Are liners used as added insulation from heat and cold?
- ____10. Are stovepipe flaps tied back to prevent contact with hot pipes?

Tire-Servicing Equipment for Multi-Piece Wheels

29 CFR 1910 provides guidance for servicing tires on multi-piece wheels. In addition, use the checklist below to manage the risks associated with these operations.

- ____1. Does the facility have on hand a serviceable, approved safety cage?
- _____2. Does the facility use a 10-foot air hose with clip-on chuck to connect to the tire valve stem?

____ 3. Does the facility have DOT posters posted in the tire-servicing area on safety procedures for changing multi-piece wheel rims?

____4. Does the facility have a program to train all employees who service rim wheels in the hazards involved and safety procedures to be followed?

Tracked Vehicles

FM 21-306 provides guidance in tracked-vehicle operations. In addition, use the checklist below to manage the risks associated with operations involving tracked vehicles.

- __1. Are riders prohibited from riding on the outside of tracks?
- ____ 2. Is smoking prohibited in or near tracked vehicles?
- ____ 3. Do personnel always wear protective headgear when riding in tracks?

_____4. Do drivers warn the crew when the track is about to cross a ditch, climb an obstacle, or take any action that might cause crewmembers to be caught off balance?

- ____5. Do track personnel test hatch covers to make sure they are locked in position?
- _____6. Does driver check the driver's escape hatch to make sure it works and that it is properly sealed and locked?
- ___7. Are all CVCs working properly?
- ____8. If not using lights at night, is reflective tape mounted on rear of vehicle?
- ___9. Do crewmembers comply with the following emergency procedures?

____a. When tracked vehicles get out of control and overturn, do personnel stay in the vehicle until it stops moving?

____b. When the vehicle stops moving, do personnel get out as fast as possible in case spilled fuel and oil catch on fire?

____ c. In such an emergency, does the driver immediately shut off the engine and turn off the master switch to minimize the fire hazard?

_____d. Are fire drills practiced?

____10. Is the vehicle's intercommunication system checked periodically to ensure it is working properly?

_____11. For night driving, do drivers—

____ a. Keep on course by using points in the skyline, glow of lights against the sky, the stars, important terrain features, and good judgment?

_____b. Adapt to darkness by waiting 30 minutes in total darkness before driving?

_____ c. Keep distance between vehicles by the number of light spots visible in the taillights of the track ahead?

_____d. Know how to operate the infrared periscope and not look into infrared headlights?

Training and Supervision

FM 29-2 provides guidance in training and supervision. Use the checklist below when managing risks associated with training and supervising soldiers.

___1. Are periodic shop-maintenance inspections conducted by the commander?

_____2. Are supervisory personnel and other leaders trained in risk-management techniques?

_____ 3. Do training schedules reflect adequate time for preventive-maintenance services for operators, crews, and maintenance personnel?

_____4. Do commanders, motor officers, and NCOs assign inexperienced mechanics to work with an experienced senior supervisor for on-the-job training and skill verification?

____ 5. Does the unit safety SOP cover the following and take into consideration all conditions peculiar to the specific operations of the unit?

____a. Quality control?

- ____b. Fire prevention?
- ____ c. Equipment operations?
- _____d. Moving hazardous materials?
- _____e. Personal protective clothing and equipment?
- ____f. Explosives/weapons safety?
- ___g. Carbon monoxide?
- __ h. Electrical/tool safety?
- ______ i. Lifting devices?

____j. Painting?

_____6. Are personnel briefed on their individual responsibilities to follow all safety instructions, to perform to standard, and to use all safeguards incident to the use of tools, machinery, equipment, and processes?

____7. Do operators, repairmen, section chiefs, platoon sergeants, and platoon leaders work together to integrate safe working procedures into operations to prevent injuries and damage?

____8. Are personnel in critical organizational maintenance positions certified as proficient in the technical aspects of their duties?

____9. Are maintenance and equipment publications accessible to equipment operators, mechanics, and leaders? Are they current?

____10. Are safety inspections conducted by the unit safety officer or NCO, supervisors, and maintenance personnel?

_____11. Do supervisors conduct regular safety meetings in the work area?

_____12. Are personnel cross trained to operate vehicles, materiel-handling equipment, generators, space and immersion heaters, and other equipment?

_____13. Do supervisors—

- ____a. Orient new personnel?
- _____b. Teach safe practices?
- ____ c. Enforce rules and regulations?

____e. Prepare and submit DA Form 285 on reportable accidents?

- _____f. Ensure unsafe conditions are corrected?
- __ 14. Do individuals—
- ____ a. Follow established safety rules and procedures?
- b. Correct or report unsafe conditions?
- _____c. Report all accidents?
- ____d. Warn others of hazards?
- _____e. Use protective devices (earplugs, safety glasses, safety shoes, gloves) when required?

Vehicle Movement

AR 385-55 establishes procedures for carrying out the Army Safety Program's motor vehicle accident prevention program. FM 55-312 and TCs 21-305 and 21-306 describe special instructions for vehicle operations. In addition, use the following checklist to identify and control the hazards of moving vehicles (including in and through bivouac and assembly areas).

- ____1. Are vehicles driven through assembly or bivouac areas as an operational necessity only?
- ____2. Are maximum speed limit and direction of traffic flow briefed to all drivers?
- ____ 3. Are vehicles ground guided through assembly areas?
- ____ 4. Do ground guides have flashlights?
- ____ 5. Are ground guides trained to standard?

____ 6. Are vehicle dismount points established and clearly marked, and are vehicle

ground-guiding procedures strictly enforced at all bivouac areas?

____7. Do vehicle operators ensure that vehicles are clear of personnel or obstacles before moving? Do crewmembers of tracked vehicles walk around the vehicles to make sure no one is in danger before the vehicle is started?

<u>8</u>. Are personnel required to be no higher than name-tag defilade when traveling in tracked vehicles?

____9. Is the safety belt requirement enforced? Are all drivers and passengers instructed to use safety belts in vehicles where they are provided?

- ____10. Are only trained and licensed personnel authorized to operate motor vehicles?
- ____11. Are vehicle loads checked to ensure that all loose items are properly secured?
- ____12. Are riders prohibited from riding on the outside of tracks?
- ____13. Is smoking prohibited in and near tracked vehicles?
- _____14. Are personnel required to wear protective headgear when riding in tracks?

Vehicle Swimming/Fording

FMs 21-306, 71-1, and 90-13 and appropriate training manuals provide guidance in swimming and fording vehicles. In addition, use the checklist below to manage the risks associated with vehicle swimming and fording operations.

___1. Before crossing lakes or rivers, do commanders ensure that—

_____a. A risk assessment has been done?

_____b. An onsite physical reconnaissance has been conducted to determine safe water entrances, exits, stream-bed conditions, depths, and stream currents?

_____ c. A rescue boat with two qualified lifeguards is in the water standing by? Scuba equipment is available?

- ____ d. Rescue boats are equipped with life ring, rope (3/9 inch or 1/2 inch), and boat hook?
- ____e. The rescue boat is positioned downstream from the crossing site?

____ g. During limited visibility, emergency lighting (tank spotlight, vehicle headlight) is beamed on the water surface?

___h. An assembly area has been selected to check equipment and conduct precrossing check?

- _____i. A qualified crossing control officer has been designated?
- ____j. All personnel are briefed on emergency evacuation procedures?

____k. All personnel are wearing personal flotation devices (PFD) during water operations?

____l. No personnel in the vehicle have on load-bearing equipment during the swimming operation?

____m. All vehicles are predipped not more than 72 hours before the crossing during the swimming operation?

____2. Before entering the water, do drivers or track commanders—

- ____a. Check hull drain plugs?
- _____b. Select a spot that is firm and free of rocks, stumps, and deep drops?
- _____ c. Enter head-on in low range?
- ____ d. Raise the front by accelerating?
- ____e. Ensure all personnel are wearing Coast Guard-approved life jackets?
- _ 3. While in the water, does the driver—
- ____a. Shift to low range?
- ____ b. Use pivot steer levers?
- _____c. Head straight across slow streams, head downstream diagonally across swift current?
- ____ d. Avoid obstacles?
- ____e. If vehicle stalls and is not sinking, is the crew trained to---
 - __ (l) Stay in the vehicle and not climb out?
 - ___(2) Stay on top with life preserver on?
 - ___(3) Await rescue and NOT attempt to swim to shore?
- _ f. If the vehicle starts to sink, is the crew trained to evacuate immediately?
- ____ 4. When exiting stream, does the driver—
 - ____a. Exit on a clear bank, free of obstacles or mud?
 - ____b. Hit the bank slow and easy and in low range?
 - ____ c. Use pivot steer until clear?
 - ____ d. Climb the bank in low range?

Waste Disposal

FM 21-10 and FM 21-10-1 provides guidance for waste disposal. In addition, use the checklist below to manage the risks of burning solid wastes.

____1. Are soldiers aware that burning solid wastes is the most hazardous method of waste disposal?

_____2. Is the proper fuel used to incinerate wet garbage or fecal matter? (A mixture of 1 quart gasoline to 4 quarts of diesel oil is effective but must be used with caution. Never use highly volatile fuel such as JP4 because of its explosive nature.)

_____3. Is the proper amount of fuel used to incinerate wet garbage or fecal matter? (Never add fuel to a fire that has already been started. If the contents are not rendered dry and odorless by one burning, they should be burned again after cooling.)

____4. Do personnel stand up-wind and far enough away when igniting fuel?

- ____ 5. Is the area clear of all unnecessary personnel and equipment?
- ____ 6. Is firefighting equipment handy?
- ____7. To prevent explosions, is rubbish checked for items such as spray cans?

Weapons Handling

FM 23-series provides guidance in weapons handling. In addition, use the checklist below to manage the risks associated with weapons handling.

Fratricide

- __1. Is horseplay prohibited?
- ___ 2. Are weapons kept on safe?
- ____ 3. Are soldiers trained to consider weapons as loaded at all times and to check chamber often?
- ____4. Are soldiers trained to know their targets? (Train in target identification.)
- ____ 5. Is strict control of weapons and ammunition required?
- ___6. Has the danger of cookoffs been reviewed?
- ___7. Have immediate-action drills for misfire/weapons malfunctions been rehearsed?
- ____8. Are soldiers reminded to clear for backblast when firing anti-armor weapons?

___9. Have soldiers received correct ammunition for the weapon system being used? (Refer to the operator's manual when in doubt.)

____10. Are blank and live ammunition kept separated?

Maintenance

___1. Has a weapons-lubrication policy been established?

- ____2. Are weapons, ammo, and magazine cleanliness standards enforced?
- ____ 3. Are muzzles covered to prevent clogging?

____4. Are headspace and timing set in accordance with TM? (Caution soldiers not to rely on memory, to always verify.)

Lasers

___1. Do only trained personnel operate and handle lasers?

____2. Are personnel trained to fire lasers only at designated targets and to never fire at specular surfaces such as glass, mirrors, and windows?

____3. Are laser safety filters installed on binoculars and other optical devices for observing laser operations?

_____4. Is eye protection available and worn?

____ 5. Are laser safety procedures established and implemented for each device used?

____ 6. Are safety briefings conducted on all Class II and higher lasers, specifying required eye protection and viewing limitations?

Wheeled-Vehicle Operations

AR 385-55, AR 600-55, FM 21-305, TC 21-305, and appropriate operators manuals provide guidance on wheeled-vehicle operations. In addition, use the checklist below to manage the risks associated with Army motor vehicle operations.

____1. Are AMV drivers given classroom instruction in risk management and accident avoidance?

____ 2. Do all military vehicle and equipment operators possess a valid Government Motor Vehicle Operator's Identification Card, Optional Form (OF) 346?

____3. Are vehicle operators prohibited from driving AMVs when their state or host nation driver's license has been suspended by a court of law?

_____4. Do vehicle operators perform preventive maintenance inspections?

_____ 5. Do all drivers receive annual refresher training on local traffic rules, safe driving procedures, and seasonal weather hazards?

_____ 6. Are vehicle operators who have been convicted of two or more moving violations or at-fault accidents provided retraining?

____7. Do vehicle operators ensure that all occupants are wearing safety belts when available?

_____8. Are all drivers trained in ground-guide procedures?