

**Fort Bliss Regulation 385-10**

**Safety**

**FORT BLISS  
INSTALLATION  
SAFETY  
PROGRAM**

**Department of the Army  
Headquarters  
Fort Bliss, Texas 79916-6812  
20 April 2009**

Safety

Safety Regulations

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FOR THE  
COMMANDER:

Official:

//Original signed//  
JOHN G. ROSSI  
Colonel, GS  
Chief of Staff

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**History.** The summary of changes reflects the portions affected by this revision.

**Summary.** This revision replaces and rescinds the USAADACENFB Regulation 385-3, 1 December 1991.

**Suggested improvements.** The proponent office of this regulation is the Fort Bliss Safety. Send comments on DA 2028 (Recommended Changes to Publications and Blank Forms) to

Commander, Fort Bliss,  
Attn: ATZC-CSS),  
Fort Bliss, TX 79916-6812.

**Applicability.** This regulation applies to all Active Army, U.S. Army Reserve, Army National Guard organizations, and DA Civilians assigned or attached to Fort Bliss. It also applies to civilian contractors performing work on the installation.

**Distribution.** This publication is available electronically.

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\* This regulation supersedes USADAACENFB Regulation 385-3, dated 1 December 1991

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## **Chapter 1**

### **Introduction**

#### 1-1. Purpose

This regulation establishes the Fort Bliss Installation Safety and Occupational Health Program. It outlines policies, prescribes procedures, and affixes responsibilities for the program.

#### 1-2. References

Required and related publications and prescribed forms are listed in Appendix A.

#### 1-3. Responsibilities

##### a. The Installation Safety Director

(1) Is the primary person responsible for planning, developing, coordinating, evaluating, and providing technical consultation for assuring implementation of the command's safety program.

(2) Serves as a member of the commander's personal staff.

(3) Makes independent assessments to assist organizations within the command in integrating Federal, DOD, Army, and organizational requirements to reduce risk of accidental losses.

Will have unimpeded access to senior commander to reporting status of safety program and provide safety technical assistance directly to the commander.

(4) Advise, plan, develop, coordinate, and evaluate the safety program IAW AR 385-10 and DA Pam 385-10.

(5) Reports and gives advice to the commander on Safety and Occupational Health (SOH) issues/policy.

(6) Assists all elements of the command in the implementation of the Strategic Safety Plan (SSP) in implementing their specific tasks.

(7) Manages and provides technical oversight of the safety program, including identifying the metrics that best measure progress on implementing the SSP and achieving the command's safety goals.

(8) Develops policy and procedures for integration of SOH, composite risk management (CRM), and accident prevention activities of the command.

(9) Ensures the safety organization functions are an extension of the commander in the area of SOH.

(10) Is responsible for management, oversight, and implementation of core safety functional and sub-functional areas as defined in DA Pam 385-10, Appendix J to assist the commander in mission sustainment.

##### b. The Director of Health Services WBAMC—

(1) Performs direct supervision of the occupational health portion of the safety and occupational health program.

(2) Maintains liaison with the Safety Director on matters related to prevention of injury and occupational illness.

(3) Submits Admission and Disposition Sheets to the Installation Safety Office on a daily basis per TRADOC Regulation 385-2.

(4) Provide blood or urine laboratory analyses data to safety investigating officials for accident reporting purposes.

(5) Provides medical representation on accident investigation and evaluation boards.

- (6) Provides training for commanders and supervisors on specific occupational health hazards, as required.
  - (7) Surveys work areas to recognize and evaluate and provide control recommendations for occupational health hazards. The Director of Health Services provides survey results and recommendations to the Safety Director for coordination and inclusion in the installation hazard tracking system.
  - (8) Conducts medical surveillance of all employees who are or may be exposed to hazardous materials at or above the action level. If there is no action level, the director conducts medical surveillance of all employees who wear a respirator for 30 or more days per year. The director may also conduct such surveillance if medical evidence indicates surveillance is necessary following exposure to hazardous material.
  - (9) Provides data on occupational illnesses caused by exposure to chemical, biological, or physical agents associated with the work environment to the Installation Safety Office.
  - (10) Provides exposed workers occupational health care per Occupational Safety and Health Administration (OSHA), Department of the Army (DA), and Health Services Command directives.
  - (11) Upon request, provides employees access to their occupational health records.
  - (12) Provides occupational health examinations to employees.
  - (13) Conducts industrial hygiene and occupational health surveys to identify hazardous work areas.
  - (14) Conducts medical evaluations to determine an employee's capability to perform assigned task when respirators or other PCE might result in additional physiological stress.
  - (15) Provides eye examinations to civilian employees when required.
  - (16) Maintains health hazard inventory of work areas where employees are potentially exposed to hazardous materials, requiring the use of PCE.
  - (17) Provides technical advice on the proper PCE to the Safety Director and supervisors.
- Is the Installation Medical Authority (IMA) and will-
- (a) Ensure appropriate medical examinations and surveillance are provided for employees enrolled in the RPP.
  - (b) Ensure that the Occupational Health Section, WBAMC, determines that employees are physically able to wear RPE.
  - (c) Ensure that an annual review of the medical status of employees enrolled in the RPP is conducted per established directives. The IMA will ensure that the Occupational Health Section notifies the IRPD and the supervisor if there is a significant change in an employee's status that would indicate an inability to use required RPE. The section will also provide notification if the employee refuses to take the examination or fails to keep a scheduled appointment.
  - (d) Ensure medical evaluations are documented in employee medical files.
  - (e) Ensure Industrial Hygiene support per applicable regulations.
- c. The Director of Public Works will —
- (1) Ensure the Installation Safety Office reviews design plans.
  - (2) Notify the contractor when safety requirements (identified by the Installation Safety Office) are not being met. If such failure is not promptly corrected, the director will report the contractor's failure to comply with prescribed safety requirements to the responsible contracting officer.

- (3) Ensure accidents involving contractor employees are promptly reported through the responsible contracting officer to the Installation Safety Office.
  - (4) Ensure that all work requirements involving the correction of safety hazards categorized as life threatening (Risk Assessment Code 1) be given first priority and abated immediately after notification. (Permanent correction will be executed as soon as possible thereafter. This will include new work and repair requirements.)
  - (5) Forward to the Installation Safety Office all DA Forms 4283 (Facilities Engineering Work Request) that involve OSHA safety/AR 385-10 requirements for evaluation and assignment of a potential risk assessment category of 1 or 2 for review and risk assessment code determination. DA Forms will be returned to the Director of Public Works for continuing action.
  - (6) Verify all requests for local depot purchase to see if an MSDS is required. If items meet the criteria requiring an MSDS, the director will ensure that the purchase request to the Directorate of Contracting includes Federal Acquisition Regulation (FAR) clause 52.223-3 in the solicitation and contract, requiring the vendor depot to furnish an MSDS.
  - (7) Ensure all hazardous materials are properly identified and labeled upon receipt, during storage, and when issued.
  - (8) Assure to receive an MSDS with each hazardous product.
  - (9) Provide an MSDS to the user at the time of initial issue and when a new MSDS is issued.
  - (10) Provide the Installation Safety Office with a copy of each MSDS received.
  - (11) Provide chemical spill emergency evaluation and notification training per the installation hazardous waste plan.
  - (12) Not process any request for RPE unless approved by the Installation Safety Office.
- d. The Director of Contracting will —
- (1) Include safety provisions in contracts when required by procurement directives and include FAR 52.223-3 in solicitations.
  - (2) Ensure that contractors are advised during pre-performance conferences that all accidents involving construction contractor employees must be reported in a timely manner to the Installation Safety Office.
  - (3) Help enforce contract safety requirements through close coordination with the Installation Safety Office, Directorate of Installation Support inspectors, the contracting officer's representatives, and contract administrators.
  - (4) Ensure that chemicals /materials purchased locally are certified by the manufacturer or distributor as either harmless or containing a hazardous chemical.
  - (5) Ensure that any item identified as hazardous has an MSDS when the product is initially purchased. The director will include the requirement for the MSDS as part of the request for – quotation or invitation for bid. (The MSDS must accompany the material when delivered.)
  - (6) Not process any request for RPE unless approved by the Installation Safety Office.
- e. The Director of Civilian Personnel Advisor Center will —
- (1) Provide Federal Employees Compensation Act (FECA) information necessary in the investigation and evaluation of civilian employee accidents to the Installation Safety Office.
  - (2) Provide training facilities.
  - (3) Coordinate with the Installation Safety Office in response to all complaints filed by an employee union that have any bearing on safety of personnel or unsafe equipment.
  - (4) Provide training documentation procedures.
  - (5) Administer and document all RPE training.
  - (6) Include RPE requirements in job descriptions and job announcements.



(7) Coordinate removal of personnel from positions requiring the use of RPE when medical surveillance indicates a potential problem of employee exposure or failure of the employee to follow RPP requirements.

f. The Provost Marshal will provide the Installation Safety Office with a daily summary of accident information collected through the military police blotter and DA Forms 3946 (Military Police Traffic Accident Report) per AR 190-45, paragraph 7-15c.

g. Soldiers and Army civilians at all levels will—

(1) Stop unsafe acts detrimental to Army operations.

(2) Be responsible for accident prevention through the application of the mishap risk management component of Composite Risk Management (CRM) IAW FM 5-19.

(3) Comply with this regulation, the Occupational Safety and Health Act of 1970 (OSHAct), safety regulations, the Army Occupational Health Program, work practices, and standing operating procedures (SOPs).

(4) Use all personal protective equipment (PPE) and protective clothing provided, including seatbelts, in accordance with training, hazard analyses, work instructions, and as required by the task at hand.

(5) Report Army accidents, near misses, and hazards in their workplace as soon as possible to their supervisor or leader.

(6) Employ CRM in managing risk.

h. Supervisory and operating personnel who direct or affect the actions of others will—

(1) Maintain a safe and healthful workplace.

(2) Inspect the work area for hazards.

(3) Promptly evaluate and take action as required to correct hazards.

(4) Be responsible for use of CRM during planning, preparation, and execution of all operations.

(5) Be responsible for accident prevention to the same extent that they are responsible for production, service, and mission accomplishment.

(6) Be held accountable for accidents and property damage, occurring in operations under their direct supervision and control.

(7) Ensure that Soldiers and Army civilians are trained and competent to perform their work safely, efficiently, and effectively.

(8) Counsel and take action as necessary with Soldiers or Army civilians who fail to follow safety standards, rules and regulations, including the use of personal protective clothing and equipment, and seatbelts as set forth in the OSHAct; Federal, DOD and Army regulations and Army pamphlets.

(9) Conduct safety meetings (such as safety awareness, training, and procedures review) with the Soldiers and Army civilians they supervise.

(10) Protect Soldiers and Army civilians who identify hazards, raise safety and health concerns, or engage in authorized safety and occupational health activities against reprisal.

(11) Initiate the necessary actions to facilitate accident notification, investigation, and reporting as soon as they become aware of the occurrence of an accident. Be familiar with accident/injury reporting criteria outlined in DA Pam 385-40.

(12) Establish accountability for safety and occupational health through the performance evaluation system (civilian/military) and performance counseling sessions.

(13) Consult with their servicing civilian personnel office or legal office prior to implementing any rules, policies, procedures, or SOPs that could change the conditions of employment of Army civilian employees.

i. Army Leaders/Directors at all levels will—

(1) Provide leadership to their activity/units safety and occupational health program and accident reduction initiatives.

(2) Protect personnel, equipment, and facilities under their commands.

(3) Periodically review their activity/units' safety and occupational health program and accident reduction initiatives.

(4) Provide adequate resources for an effective safety and occupational health program, compliant with Army policy and program requirements.

(5) Establish accountability for safety and occupational health through the performance evaluation system (OER/NCOER) and civilian performance appraisal/counseling sessions.

(6) Implement safety and occupational health policies.

(7) Integrate CRM into their mission activities.

(8) Ensure range safety responsibilities and procedures are implemented in accordance with AR 385–63 and local Range Safety SOP requirements.

(9) Military units will appoint on orders an Additional Duty Safety Officer (Commissioned Officer) at the Battalion/BCT level and a Soldier in the rank of Staff Sergeant or above at the Company/Battery/Troop level IAW AR 385-10, Para 2-7g. Directors will appoint a Collateral Duty Safety Officer representative, on written orders, to accomplish assigned safety duties and responsibilities IAW AR 385-10, Para 2-7h.

(10) Submit a copy of unit, directorate, and activity correspondence carrying out and supporting the safety program to the Installation Safety Office. Examples are —

(a) An SOP signed by the current commander or director.

(b) Orders appointing the unit safety officer, the activity safety representative, and safety committee members.

(c) Minutes of unit/activity safety committee meetings.

(d) Copies of safety inspections/audits/assessments.

(11) Identify and eliminate hazardous conditions. Commanders (down to company level) and directors are responsible for developing abatement plans for all safety hazards (risk assessment codes 1,2, and 3) whose correction has exceeded 30 days.

(12) Establish safe practices and procedures consistent with the mission.

(13) Ensure safety inspections are performed.

(14) Ensure compliance with safety requirements to include rigorous enforcement of the use of required personal protective equipment (PPE).

(15) Ensure all organizational SOPs include any exposure restrictions or requirements for PPE.

j. Military/Civilian Direct Supervisors will —

(1) Carry out the safety program within their areas of responsibility. They will ensure that the work environment complies with applicable safety regulations and standards. Supervisors will also ensure that personnel under their supervision perform operations in the safest manner possible consistent with the mission.

(2) Make available a copy of Chapter 9, Paragraph 9-2, Hazardous Communications of this regulation and provide/brief a copy of each work area Material Safety Data Sheet to their employees, their union representative, and OSHA representatives. Supervisors must ensure that these documents are centrally located or posted by each chemical hazardous area.

(3) Orient all newly assigned personnel on the hazards inherent in their job and work environment.

- (4) Inform civilian contractors of hazardous chemicals and materials that their employees may encounter in the work area.
- (5) Conduct safety training for all personnel on a regular basis on general and specialized hazards in the workplace and methods for avoiding accidents.
- (6) Provide necessary instruction, guidance, and job training.
- (7) Enforce adherence to safe practices and safety regulations.
- (8) As appropriate, fill out the following injury forms for Civilian employees: CA-1/CA-2/ FECA forms and DA Form 285-AB-R (on-duty). Submit DA Form 285-AB-R to Installation Safety.
- (9) In consultation with the Civilian Personnel Office, take appropriate disciplinary action with employees who violate safety regulations.
- (10) Provide, budget, requisition, and issue personal protective equipment (PPE) to all individuals who require protection.
- (11) Ensure the requirement for appropriate PPE is included in each job description.
- (12) Enforce the use of prescribed PPE for all personnel. Supervisors will take appropriate disciplinary action when personnel deliberately or carelessly violate directives regarding the wearing of PPE. (Such disciplinary action must be consistent with the Federal Personnel Manual, UCMJ, USAG regulations, and disciplinary guidelines and terms of any collective bargaining agreement, if such is applicable.)
- (13) Ensure individuals who are exposed to environmental, biological, chemical, and physical hazards are released from duty to attend periodic examinations by the occupational health clinic.
- (14) Monitor the condition of PPE used by military and civilian personnel to ensure the correct equipment is used and that it is in satisfactory condition.
- (15) Ensure PPE is cleaned and disinfected (if needed) daily.
- (16) When PPE is not sufficient to protect working personnel, initiate necessary action to end hazards by means of —
  - (a) Engineering controls and modifications.
  - (b) Management controls.
  - (c) Procedural changes.
  - (d) Rearrangement of work sites.
- (17) Collect and inspect unserviceable PPE before issuing replacement items.
- (18) Inspect turn-in equipment for serviceability.
- (19) Ensure funding is provided for the procurement of respirators when necessary to protect the health of personnel.
- (20) Publish an SOP on the proper use, care, and selection of respiratory equipment for guidelines.
- (21) Route all DA Forms 3953 (Purchase Request and Commitment) for respiratory equipment through their servicing IRPS before obtaining Installation Safety Office approval for purchase of respiratory protection.
- (22) Ensure respirators are properly used, maintained, and stored.
- (23) Consult with the servicing IRPS before contacting the IRPD to request evaluation of potential respiratory protection requirements and to certify the adequacy of respiratory protection selected.
- (24) Remove employees from any position where exposure may occur until they are medically cleared, trained, and fitted.
- (25) Remove employees from the hazardous environment if they refuse a medical examination or fail to keep a medical examination appointment.

## **Chapter 2**

### **Safety Organization, Structure, and Training**

#### 2-1. General

This chapter establishes the Fort Bliss Safety and Occupational Health Advisory Council requirements and unit level safety structure and organization.

#### 2-2. Safety and Occupational Health Advisory Council (SOHAC)

- a. The Safety and Occupational Health Advisory Council is composed of management and military and civilian personnel.
- b. The Safety and Occupational Health Advisory Council will be chaired by the Ft. Bliss Commander or the commander's designee, who will be the senior management official.
- c. The Ft. Bliss Commander or the commander's designee will appoint the active participants of the council.
- d. The Ft. Bliss Safety Director will appoint members on orders per guidance from the Safety and Occupational Health Advisory Council Chair.
- e. The Chief of Staff or the Commanding General will chair the council. The Safety Director will conduct council meetings and publish council minutes .
- f. The council will meet semi-annually. The intent of meetings will be to review command accident experience, discuss important safety issues/problems, and suggest countermeasures for implementation. It is very important that decision makers attend each scheduled meeting.
- g. The Safety Director will plan meetings and provide the council members with an agenda and appropriate information. Each member of the council will be notified of the time, date, and location of the meeting.
- h. The purpose of the council is to —
  - (1) Evaluate the current status of the installation safety and occupational health program. The council will provide guidance for the program. It provides a forum for the discussion of safety problems and ideas.
  - (2) Develop significant participants of special safety emphasis programs. It will inform participants of the actions required to carry out these programs and ensure their effectiveness.
  - (3) Discuss significant problem areas and recommended corrective actions. The council will discuss and develop solutions to specific safety problems of mutual interest.
  - (4) Inform participants of changes in the accident prevention program. The council will clarify accident prevention requirements. It will provide guidance on safety program administration.
  - (5) Make recommendations to the Commanding General when his decision is needed for the resolution of serious installation safety and occupational health problems.
  - (6) Submit topics to be included in the agenda of future meetings.
  - (7) Promote safety education within the organization.
  - (8) Conduct periodic self-assessments in their areas of responsibility and coordinate with the organization's safety office.

### 2-3. Soldier and Army Civilian Employee Safety Committee

- a. Commanders of separate detachments, companies, and above will establish a Soldier and Army Civilian Employee Safety Committee.
- b. Recommend committee members meet at least Semi-Annually.
- c. The committee will be representative of the workforce within the organization.
- d. The number of safety committee members shall be based on the size, safety needs and diversity of the operations performed by the organization.
- e. Committee members will receive training to perform duties, and may be assigned responsibilities for operational safety matters. The safety committee members shall-
  - (1) Review safety suggestions.
  - (2) Review accident reports and recommend corrective measures to prevent recurrence.
  - (3) Review suspected unsafe or unhealthful working conditions and corrective measures.
  - (4) Promote safety education within the organization.
  - (5) Conduct periodic self-assessment in their areas of responsibility and coordinate with the organization's safety office.
  - (6) Council minutes of the meeting at Brigade level and above will be provided to the Installation Safety Office NLT 30 days following council meetings.

### 2-4. Safety Structure and Organization

Units from Company/Troop to Battalion/Squadron will be augmented by Additional Duty Safety Officers (military) or have a Department of the Army Civilian Safety professional assigned or civilian directorates will appoint a Collateral Duty Safety (Army civilian) IAW AR 385-10, Paragraph 2-7g. Additional/collateral duty safety personnel will—

- (1) Be appointed by commander on written orders.
- (2) Be a commissioned officer, at battalion and higher unit levels.
- (3) Be in the rank of staff sergeant or higher, at the company level.
- (4) Have 1 year or more retainability in the unit/directorate upon duty appointment.
- (5) Give their safety duties proper priority.
- (6) Report directly to their unit commander/director on safety-related matters.
- (7) Coordinate activities with their installation or garrison safety office.
- (8) Be authorized use of official time for participating in safety and occupational health activities, including application of mishap risk management component of CRM, walkaround inspections, and other safety functions authorized by AR 385-10 in support of their unit's mission.

### 2-5. Safety Briefings/ Training

- a. All Army Reserve and Army National Guard unit safety officers training at Fort Bliss, Mcgregor Range, or Dona Ana will report to the Installation Safety Office for an orientation briefing NLT 5 days upon arrival.
- b. The Installation Safety Director will meet with all new arriving Brigade Commanders and Directors within 60 days of their arrival and provide an Installation Safety support overview.
- b. All newly employed Fort Bliss DA civilians will be given a safety briefing during the New Employee Orientation Class. This training will inform employees of the installation safety program requirements. It will emphasize their rights and responsibilities.
- c. Newly arriving Soldiers 26 years and under will receive an initial safety brief from Installation Safety Office during in-processing which covers general safety issues and local hazards.

- d. Commanders/supervisors will present a safety briefing to all newly assigned personnel to inform them of their rights and responsibilities as specified by Army safety regulations and unit specific safety policies and philosophy.
- e. Supervisory personnel will perform unique, on-the-job safety training of employees or soldiers. This training will include job hazards such as —
  - (1) Hazardous machinery and equipment.
  - (2) Dangerous chemicals.
  - (3) Hazardous operations.
  - (4) Safety requirements.
  - (5) Necessary PCE and protective measures.
- f. Military personnel who are appointed as Additional Duty Safety Officers per AR 385-10, will attend the local Additional Duty Safety Officers Course. The Installation Safety Office will provide this training on a quarterly basis.
- g. Representatives of recognized employee groups (unions) are eligible and encouraged to attend any safety and occupational health courses presented by the Civilian Personnel Office, Installation Safety Office, or other organizations.
- h. Commanders and supervisors will conduct special safety orientations and briefings before holiday periods. As appropriate, safety orientations and briefings will include —
  - (1) Identification of seasonal hazards associated with —
    - (a) Holiday driving.
    - (b) Recreational activities.
    - (c) Fatigue.
    - (d) The effects of alcohol or other drugs.
    - (e) The effects of prescription medication and over-the-counter drugs.
  - (2) Dissemination of severe weather warning reports.

## **2-6. Army Directed Safety Training/Programs**

- a. Army Readiness Assessment Program (ARAP). ARAP was implemented by the CSA in February 2006 for all Battalion Commanders. The program/survey is intended to address the root causes of accidental losses by focusing on organization safety climate and culture. Within 90 days of a Battalion change of command, the new Battalion Commander will administer a web based unit safety assessment that takes Soldiers about 10 minutes to complete on line. The assessment captures unit posture on command/control, standards of performance, accountability, and risk management. After a confidential debrief by the USACRC staff, Battalion Commanders brief their higher chain of command on key results, their intended courses of action, and where they need assistance. At mid-tour or twelve months in command, the commander checks the unit progress against initial results through a second assessment. The unit must survey at least 2/3 of the assigned strength to receive thorough feedback from the USACRC staff. Battalions can enroll by logging onto <https://unitready.army.mil/>.
- b. Commanders Safety Course (CSC). Commanders are required to complete the Commanders Safety Course (CSC). The CSC provides commanders the tools to manage their unit safety programs effectively and to incorporate CRM into all unit planning and activities. It leverages multimedia, web-based distance learning technology, and, as such, is accessible and easily retained for everyday use. The CSC is accessible through the Combat Readiness University online. Company grade officers must complete the CSC prior to assuming command. Brigade Commanders, or first 0–6 in the chain of command, will certify that their officers have

successfully completed the CSC prior to assignment as Company Commanders. Brigade and Battalion level command designees must complete the CSC prior to attending the Fort Leavenworth pre-command course. The USACRC is the course proponent for the CSC. A copy of training will be retained in the training file. Commanders can enroll by logging into the Combat Readiness University website at

<https://crc.army.mil/Training/detail.asp?iData=102&iCat=629&iChannel=16&nChannel=Training>.

c. Additional Duty Safety Officers Course (ADSC). Additional duty safety officers and NCO's appointed IAW AR 385-10, Para 2-7g are required to complete an online ADSC. The course focuses on additional duty safety personnel from company through brigade level. The ADSC course establishes the Army standard for trained and qualified additional duty safety personnel. Course completion will also satisfy the requirements for completing a local unit safety officer course. The course will require approximately 16 hours to complete. The Installation Safety Office conducts additional quarterly ADSO resident course that supplements the ADSC and offers installation/duty specific training for ADSOs where needed. Additional duty safety personnel on active duty are required to complete the on-line ADSC within 30 days of appointment. Collateral Duty Safety Officers (Civilian) should complete the on-line Collateral Duty Safety Officers Course. Soldiers/Civilian can enroll by logging into the Combat Readiness University website at

<https://crc.army.mil/Training/detail.asp?iData=102&iCat=629&iChannel=16&nChannel=Training>.

d. Accident Avoidance Course (AAC). Anyone who operates an Army Motor Vehicle to include GSA vehicles will have first completed the online accident avoidance course as part of licensing procedures. The training includes mishap risk management component of CRM, personal responsibility, driving hazard awareness, defensive driving techniques, accident avoidance, and motorcycle safety. The online accident avoidance training will be repeated every 4 years as part of the license renewal procedure and commanders will establish internal control measures to ensure this requirement is met and tracked. A copy of the Soldiers certificate will be maintained in their training file. Soldiers can enroll by logging into the Combat Readiness University website at <https://crc.army.mil/Training/detail.asp?iData=102&iCat=629&iChannel=16&nChannel=Training>

e. Composite Risk Management (CRM) Basic Course. Completion of the CRM Basic Course must be completed by all Soldiers and Army Civilian employees. In lieu of completing the CRM Basic Course, Soldiers and Army civilians who have completed, or will complete, one or more of the following courses will satisfy the requirement to complete the CRM Basic Course:

- (1) Additional Duty Safety Officers Course (on-line) and familiar with FM 5-19.
- (2) Commanders Safety Course (on-line) and familiar with FM 5-19.
- (3) CRM Operational Course (on-line) (designed for SSG/SFC, CW3/4, CPT/MAJ and other who integrate CRM into Military Decision making Process).
- (4) CRM Basic Course for Army Civilian employees (online).

(Note: All above courses are available on-line via Combat Readiness University website at <https://crc.army.mil/Training/detail.asp?iData=102&iCat=629&iChannel=16&nChannel=Training>

Commanders and supervisors are responsible for documenting completion of training as part of individual training records. Resident training is available thru USACRC G-7, but must be locally instructed by installation/unit safety professionals.

f. Intermediate Traffic Safety Training Course IIIA. All newly assigned Soldiers less than 26 years of age will receive intermediate traffic safety training that reinforces the initial traffic safety-training course. Installation Safety Office provides training oversight of this course. Soldiers that have not completed the course as part of their in-processing can register for the

course at <https://airs.lmi.org> . Upon completion Soldier will be issued a certificate. A copy of the Soldiers certificate will be maintained in their training file.

g. Basic/Advanced Motorcycle Safety Course. Required for all Soldiers that ride motorcycles on/off the installation, on/off duty and civilians on post. Soldiers and civilians can register for these courses at <https://airs.lmi.org>. Commanders will authorize Soldiers to attend this course during duty hours.

#### 2-7. Bulletin Board/Safety Literature/Media

a. Each company, troop, directorate, division, branch, and section will devote a portion of their bulletin board to prominent display of safety and occupational health materials. In addition, safety posters will be strategically placed throughout the work area. Posters are available from the Installation Safety Office or can be downloaded/reproduced from US Army Combat Readiness/Safety Center website, <https://crc.army.mil/home/>.

b. Posters designed by members of the unit and oriented toward unit needs are normally more effective than stock posters. They should be used whenever possible. Posters lose their effectiveness rapidly and should be replaced frequently.

c. DD Form 2272, Department of Defense Safety and Occupational Health Program poster will be posted in each workplace in the location where personnel notices are usually placed. This poster explains employee rights and responsibilities per Public Law 91-596. It is available from the Installation Safety Office or downloadable thru the Army publications and forms website.

d. Units are encouraged to order Knowledge Magazine from the US Army Combat Readiness/Safety Center website.

e. Recommend Commanders/CSM's/ISG's and Safety Officers subscribe to receive Preliminary Loss Reports (PLR's) from the US Army Combat Readiness/Safety Center website. Leaders should post these reports in their unit areas and read them to Soldiers in formations.

### **Chapter 3 Safety Awards**

#### 3-1. General

a. Army accident prevention awards are meant to recognize units and individuals for contributions and enhancements to Army safety.

b. The use of awards as an adjunct to a comprehensive accident prevention program is effective in preventing accidents. Therefore, an awards program will be conducted at this installation per this regulation and AR 385-10.

c. DA Pam 385-10, Chapter 6 provides detailed recommendation and approval process for Army level safety awards.

c. Commanders at all levels are responsible for establishing procedures for implementing a safety awards program.

d. Units should consult with the Ft. Bliss Safety Director to determine which will be the most prestigious safety award or some other form of recognition.

e. Units should consult with the Ft. Bliss Safety Director regarding eligibility requirements, nominations, documentations and packets.

f. Additional Army Safety Awards information is available at the US Army Combat Readiness Center/Safety Center website, <https://crc.army.mil/home/>.



### 3-2. Department of the Army Level Awards

- a. Army Headquarters Safety Award. This plaque is awarded by the SA/CSA to ACOMs, ASCCs, and DRUs that have demonstrated significant improvements, sustained excellence and leadership in accident prevention programs.
- b. Army Exceptional Organization Safety Award. This plaque is awarded each fiscal year to the battalion through division and garrison organization with the most effective overall safety program.
- c. Army Individual Award of Excellence in Safety. This plaque is awarded each fiscal year to individuals who in each of 4 categories— officer, NCO/enlisted, Army civilian, and contractor make the most significant contribution to accident prevention.
- d. Director of Army Safety, Composite Risk Management Award. This plaque is awarded by the ODASAF to organizations or individuals who have made significant contributions to Army readiness through CRM.
- e. Sergeant Major of the Army (SMA), Superior Soldier Safety Award Plaque. The SMA awards this plaque to the Soldier who demonstrates “pockets of excellence” or “best practices” in safeguarding Army operations or personnel.
- f. United States Army Safety Guardian Award. This award is presented by the ODASAF to individuals who through extraordinary individual action in an emergency situation, prevent an imminently dangerous situation, prevent injury to personnel, or minimize or prevent damage to Army property.
- g. Army Aviation Broken Wing Award. This award is presented by the ODASAF to individuals who through outstanding airmanship, minimize or prevent aircraft damage or injury to personnel during emergency situations.

### 3-3. Army Headquarters and Organization Level Awards

- a. Army Accident Prevention Award of Accomplishment. This award is presented to TOE or TDA detachments; company–size units, battalions, or equivalent; brigades or equivalent; and divisions, installations, or activities that have completed 12 consecutive months, or a major training exercise, or an actual deployment of greater than 120 days without experiencing a class A, B, or C accident.
- b. U.S. Army Aircrew Member Safety Award. Commanders present this award to aircrew members with at least 500 flight hours of accident free hours as a crewmember.
- c. Other individual and organizational awards. Leaders at all levels will recognize safe performance of individuals and subordinate organizations. Leaders are encouraged to develop awards that are tailored to recognize the accident prevention accomplishments within their sphere of activity, interest or operation. Leaders may use DA Form 1119–1 (Management Control Evaluation Certification Statement) or are authorized to design and use locally produced certificates or trophies.
- d. Unit Impact Awards. Commanders are encouraged to develop and issue policies for safety impact awards to promote safety awareness through on the spot recognition of safety related actions that are above and beyond what is required of an individual or organization.

### 3-4. Other Individual Awards

- a. Commanders at all levels should consider developing unit level awards for individuals that display superior levels of safe performance or have contributed greatly to the units successful safety program. Awards can include certificates, plaques, coins, mugs, pens, or passes.

### 3-5. Installation Level Unit Safety Streamers.

- a. Company/Troops/Battalions/and Squadrons experiencing 6 months (2 consecutive quarters) and 12 month (4 consecutive quarters) accident free periods are eligible to receive a streamer for their guidons.
- b. A green safety streamer will be awarded to units having a 6 month accident free period.
- c. A gold safety streamer will be presented to units having a 12 month accident free period.
- d. Accident free periods are defined as unit not having a Class A, B, or C accident/injury during the period as defined by AR 385-10.
- e. Units must submit a memorandum to the Installation Safety Director (approval authority) indicating unit, dates of accident/injury free period, and a unit safety point of contact information. The memo must be signed/verified by the next level of commander above the unit being awarded the streamer. A sample of the request memo can be found at <https://imcom.bliss.army.mil/Safety/default.aspx>.
- f. Units will return the green safety streamer (6 months) to the Installation Safety Office if they are awarded the gold safety streamer (12 months).

## Chapter 4

### Accident Investigation and Reporting

#### 4-1. Introduction

This chapter provides policies and procedures for initial notification, investigating, reporting, and submitting reports of Army accidents and incidents.

#### 4-2. Policy

Army policy is to investigate and report Army accidents to prevent like occurrences. All Army accidents will be investigated, reported (to include immediate notification as specified in this regulation), and analyzed in accordance with the requirements of this regulation, DA Pam 385-40, USACRC use and preparation guides, and other USACRC developed tools for accident investigation and reporting.

#### 4-3. Army Accident- Defined

An Army accident is defined as an unplanned event, or series of events, which results in one or more of the following:

- a. Occupational illness to Army military or Army civilian personnel.
- b. Injury to on-duty Army civilian personnel.
- c. Injury to Army military on-duty or off-duty.
- d. Damage to Army property.
- e. Damage to public or private property, and/or injury or illness to non-Army personnel caused by Army operations (the Army had a causal or contributing role in the accident).

#### 4-4. Accident and Incident Classes

Accident classes are used to determine the appropriate investigative and reporting procedures. Accident classes are as follows:

- a. **Class A accident.** An Army accident in which the resulting total cost of property damage is \$1,000,000 or more; an Army aircraft or missile is destroyed, missing, or abandoned; or an injury and/or occupational illness results in a fatality or permanent total disability. Note that unmanned aircraft systems (UAS) accidents are classified based on the cost to repair or replace

the UAS. A destroyed, missing, or abandoned UAS will not constitute a Class A accident unless replacement or repair cost exceeds \$1,000,000 or more.

b. **Class B accident.** An Army accident in which the resulting total cost of property damage is \$200,000 or more, but less than \$1,000,000; an injury and/or occupational illness results in permanent partial disability, or when 3 or more personnel are hospitalized as inpatients as the result of a single occurrence.

c. **Class C accident.** An Army accident in which the resulting total cost of property damage is \$20,000 or more, but less than \$200,000; a nonfatal injury or occupational illness that causes 1 or more days away from work or training beyond the day or shift on which it occurred or disability at any time (that does not meet the definition of Class A or B and is a lost time case).

d. **Class D accident.** An Army accident in which the resulting in total cost of property damage is \$2,000 or more, but less than \$20,000; a nonfatal injury or illness resulting in restricted work, transfer to another job, medical treatment greater than first aid, needle stick injuries and cuts from sharps that are contaminated from another person's blood or other potentially infectious material, medical removal under medical surveillance requirements of an OSHA standard, occupational hearing loss, or a work-related tuberculosis case.

e. **Class E aviation accident.** An Army accident in which the resulting total cost of property damage is less than \$2,000.

f. **Class E aviation incident.** When the mission (either operational or maintenance) is interrupted or not completed due to a fair wear and tear failure or malfunction of a component or part. Intent for flight may or may not exist. Fair wear and tear failure or malfunction of items found on preflight or postflight inspections do not apply.

g. **Class F aviation incident.** Recordable incidents are confined to aircraft turbine engine damage because of unavoidable internal or external foreign object damage, where that is the only damage (does not include installed aircraft auxiliary power units). These incidents will be reported using DA Form 2397-AB-R (Abbreviated Aviation Accident Report); check "F" in the "Accident Classification" block. Note that when appropriate, it is the unit commander's responsibility to ensure that an SF Form 368 (Product Quality Deficiency Report) or equipment improvement report (EIR) for Category II or message for Category I is completed and forwarded to the appropriate agency per AR 750-6, DA Pam 750-8, or DA Pam 738-751. The USACRC and the appropriate Army Headquarters will be information addressees on all Category I EIRs and product quality deficiency reports.

#### **4-5. What to Report**

Commanders/supervisors will investigate and report in accordance with paragraph 3-8b to the unit/local safety office unplanned events that result in one or more of the following:

a. Injuries and occupational illnesses.

- (1) Injury or occupational illness (fatal or nonfatal) to on-duty or off-duty military personnel.
- (2) Injury or occupational illness (fatal or nonfatal) to on-duty Army civilian personnel, including nonappropriated fund employees, and foreign nationals employed by the Army when the accident is incurred while performing work related duties.
- (3) Injury or illness to non-Army personnel as a result of Army operations.
- (4) Soldier training related deaths not covered in subparagraphs 4-5a(1) through 4-5a(3).

- (5) Persons who are missing, and/or presumed dead, as the result of a potential accident will be reported as accident fatalities.
- (6) Occupational injuries and illnesses reported by a contractor or subcontractor where accident reporting to the Army is contractually required.
- (7) Injury or occupational illness to on-duty contractors supervised by Army personnel on a day-to-day basis.
- (8) Fatal accidents involving members of the visiting public when involved in authorized recreational activities on Army facilities, installations, and properties, to include all Title 36 USACE properties.
- (9) Incidents involving Army civilian personnel injured as a result of violence in the work environment will be reported to the U.S. Department of Labor in accordance with 29 CFR 1904.5.
- b. Damage to Army property. This includes Government furnished material (GFM), or Government furnished property (GFP), or GFE provided to a contractor.
- c. Damage to public or private property. Damage to public or private property caused by Army operations (the Army had a causal or contributing role in the accident). Note that commanders will investigate unplanned events and make the decision as to whether the event is an accident, combat loss, or some other category of loss.

#### **4-6. Non-Reportable Events**

The following events are not reportable through safety channels:

- a. Combat losses. Damage or injury as a direct result of action by an enemy force is not an Army accident. It is termed a combat loss when one or more of the following conditions exist:
  - (1) Damage, loss, or injury directly caused by enemy action or sabotage.
  - (2) Damage, loss, or injury due to evasive action taken to avoid enemy fire.
  - (3) Loss of equipment in combat or failure of an individual to return from a combat mission when the last known position was in or over enemy territory.
- b. Malfunctions or failure of parts that are normally subject to fair wear and tear and have a fixed useful life less than the complete weapon system or unit of equipment are not considered accidents if the malfunction or failure is the only damage and the sole action is to replace or repair that component part. (The only exception is that all fires or fire damage involving vehicle component parts must be reported.) Although these occurrences do not constitute an Army accident, they may meet the criteria of a Class E aviation incident and should be reported accordingly. When a malfunction or failure of a component part results in damage to another component, this paragraph does not apply.
- c. Damage to Army equipment or property that is planned, intended, or expected during authorized testing or intentional destruction is not considered an accident. "Planned and intended" means that the damage was specifically required to accomplish the objectives of a formally authorized test or was the desired outcome of an authorized destruction or disposal of property. This includes damage to test fixtures designed to provide protection. Any unplanned and unintended damage incurred during these operations will be reported as an accident.
- d. Intentional, controlled jettison or release, during flight, of canopies, cargo, doors, drag chutes, hoist cable, jungle penetrator, hatches, life rafts, auxiliary fuel tanks, missiles, drones, rockets, non-nuclear munitions, and externally carried equipment not essential to flight. When there is no injury, no reportable damage to the aircraft or other property, and in the case of missiles, drones or non-nuclear munitions, when the reason for jettison is not malfunction.

- e. Property damage as a result of vandalism, riots, civil disorders, or felonious acts such as arson. Damage to Army aircraft, vehicles, or any other property which occurs after an aircraft or vehicle has been stolen is not reportable as an accident. Damage to Army aircraft, vehicles, or any other property, which occurs when an individual misappropriates an aircraft or vehicle not authorized to be flown or driven by the individual will not be reported as an accident.
- f. Deliberate damage to aircraft or equipment or injury to aircraft or equipment occupants. Such damage and injury—
- (1) Will be reported to the military police (MP) or the Criminal Investigation Command (CIC) for investigation.
  - (2) Will also be investigated by a collateral board that will determine responsibility.
- g. Mishaps that involve factory new production aircraft prior to the Government accepting risk of damage or loss are reported as contractor mishaps.
- h. Accidents occurring during the transportation of Army materiel by commercial carriers.
- i. Army equipment leased, on bailment, or loaned to contractors, commercial airlines, other Government agencies, or foreign Governments, when the lessee has assumed risk of damage or loss.
- j. Civil aircraft owned by civil operators and accomplishing contract air missions for the Army.
- k. Injuries associated with non-occupational diseases, when the disease, not the injury, is the proximate cause of the lost time, such as diabetes and its resultant complications like loss of vision. Complications of the injury (such as the infection of a cut aggravated by a work-related activity) that result in lost time are reportable.
- l. Suicide or attempted suicide, homicide, or intentionally self-inflicted injuries. For incidents involving Army civilians, see paragraph 4-5a(9).
- m. Injuries resulting from altercations, attack, or assault, unless incurred in the performance of official duties (for example, MPs).
- n. Injuries sustained before entry into military service or employment by the United States Government, unless specifically aggravated by current tenure of service.
- o. Illnesses caused by specific organisms and toxins (such as food-borne disease), unless the disease is directly related to or the result of the worker's employment.
- p. Minimum stress and strain (simple, natural, and nonviolent body positions or actions, as in dressing, sleeping, coughing, or sneezing.) These are injuries unrelated to accident producing agents or environments normally associated with active participation in daily work or recreation.
- q. Hospitalization for treatment where the patient is retained beyond the day of admission solely for administrative reasons. Hospitalization for observation or administrative reasons not related to the immediate injury or occupational illness.
- r. Injuries or fatalities to persons in the act of escaping from or eluding military or civilian custody or arrest.
- (1) Death due to natural causes unrelated to the work environment (see glossary for definition of a training related death as it relates to a non-training related death due to natural causes).
  - (2) Adverse reactions resulting directly from the use of drugs under the direction of competent medical authority.
  - (3) Death or injury resulting solely from the use of alcohol, illegal drugs, or other substances.
- s. Pre-existing injuries musculoskeletal disorders unless aggravated or accelerated by Federal employment.

#### **4-7. Initial Notification and Reporting of Army Accidents**

Persons involved in, or aware of, an Army accident will report it immediately to the commander or supervisor directly responsible for the operation, materiel, or persons involved.

a. Initial notification. The commander or supervisor who first becomes aware of any Class A or B Army accident or Class C Army aviation (flight, flight related, and aircraft ground, or UAS) accident will, through their chain of command, immediately notify—

(1) The immediate commander or supervisor of all personnel involved and then notify Installation Operations Center, 569-6950/51/52.

(2) The commander, USACRC. Immediate notification is by telephone (DSN 558–2660/558–3410, commercial (334) 255–2660/255–3410).

(a) At a minimum, notification will include the information on DA Form 7306 (Worksheet for Telephonic Notification of Ground Accident).

(b) At a minimum, notification will include the information on DA Form 7305 (Worksheet for Telephonic Notification of Aviation Accident/Incident).

(c) For all Class A and B on-duty accidents and Class C Aviation, immediate notification of accidents will be followed by CAI or installation-level accident investigation (IAI).

(d) For Class A and B off-duty accidents, at minimum, immediate notification of the accident will be followed with an investigation.

(3) The U.S. Department of Labor via Installation Safety Office. Within 8 hours after the death of any Army civilian employee from a work-related incident or the in-patient hospitalization of 3 or more civilian employees as a result of a work-related incident, an activity representative must orally report the fatality/multiple hospitalization by telephone or in person to the area office of the OSHA, U.S. Department of Labor, that is nearest to the site of the incident.

(4) The USACRC, in the event a safety-of-use, safety-of-flight, or ground precautionary message issue is identified. The accident board investigator or the commander responsible will contact the USACRC immediately by telephone (334–255–2660/334–3410).

b. Reporting. All accident reports, Abbreviated Ground Accident Reports (AGAR's), DA Form 285-AB or Abbreviated Aviation Accident Reports (AAAR's), DA Form 2397-AB will be submitted thru proper MACOM channels. A courtesy copy of all accident reports will be forwarded to Installation Safety Office NLT 21 days from date of incident. All reports are due to USACRC NLT 30 days after incident. MACOM Commanders will determine internal suspense dates to meet requirements. Accident reports will be completed IAW DA Pam 385–40 and USACRC's use and preparation guides.

(1) Class A, B, and C on-duty accidents. For all Class A, B, and C on-duty accidents, the report of investigation will be completed and submitted to USACRC within 90 calendar days.

(2) Off-duty accidents. For all off-duty accidents and other classes of on-duty accidents, the report of investigation will be completed and submitted to the USACRC within 30 calendar days. See Para 4-6a(4)b.

(3) Safety and Occupational Health Program injury/illness log.

(a) Department of the Army installations and/or the responsible safety office for the employees will be provided the required information necessary to meet the OSHA recordkeeping requirements (see DA Pam 385–40).

(b) Using the standards outlined in the OSHAct, DA installations and/or the safety office in the employees chain of command are responsible for ensuring that injuries and occupational illnesses to Army civilians as defined in this regulation and contractors specified in paragraph 4–5 are recorded using the appropriate Army accident reporting forms in accordance with

paragraphs 4–6b(1) and 4–6b(2). Note that although a report is required, contractor accidents will not be counted as Army accidents unless one of the conditions listed in paragraph 4–3 exist. They are further responsible for maintaining an OSHA Form 300 (Log of Work–Related Injuries and Illnesses) in accordance with OSHA standards. At the end of each calendar year, safety offices will post OSHA Form 300A (Summary of Work–Related Injuries and Illnesses), from 1 February to 30 April of the year following the year covered by the form. The senior commander or management official of the installation or activity will certify and sign the accident log annually. These records will be retained for 5 years in accordance with the OSHA Act.

(4) Contractor accidents involving Army property and personnel. See AR 385-10, Chapter 3 for additional contractor related reporting requirements.

#### **4–8. Accountability for Army Accidents**

a. The purpose of accountability in this regulation is to address the most likely organization to affect corrective actions. Accidents normally will be charged in this order of precedence—

- (1) The unit or element having operational control of the equipment or facility.
- (2) The unit having operational control of the most responsible person.
- (3) The unit or organization to which the injured person(s) is assigned.

b. Exceptions to the above include, but are not limited to, the following:

(1) Design–induced failure or malfunction. An Army accident caused solely by design–induced failure or malfunction will be recorded as a “materiel” accident and will be charged to a special HQDA accident account. The unit experiencing the failure or malfunction is required to submit an EIR or SF Form 368 product quality deficiency report. A copy of the EIR/SF Form 368 will be submitted with each accident report that identifies a material defect as a primary/contributing or secondary/noncontributing cause factor.

(2) Environmental factors. Accidents caused solely by environmental factors (for example, high winds, hail, lightning) will be reported and recorded in ASMIS as an “environmental” accident. They will be charged to a special HQDA account unless the accident could have been avoided by command action. If the accident investigation board determines an accident could have been avoided by the command taking preventive action, the accident will be charged to the activity having operational control of the equipment or the activity to which the persons involved in the accident are assigned.

(3) Special cases.

(a) Accidents involving persons on temporary duty (TDY) pass, or military leave will be charged to the activity or Army Headquarters to which the person is permanently assigned. For the military, “permanently assigned” means on the Standard Installation/Division Personnel System or Military Personnel Office unit strength report. For Army civilians, it means assigned by current SF Form 50–B (Notification of Personnel Action).

(b) Accidents involving Army students and foreign military students on TDY, longer than 30 days at an Army school, will be charged to the school’s Army Headquarters.

(c) Accidents involving military personnel in permanent change of station (PCS) status (with or without leave) or Army civilians in PCS status will be charged to the losing unit. The PCS status ends on the assignment order reporting date or arrival date, whichever occurs first.

(d) Accidents involving Soldiers assigned to a personnel control facility for disciplinary reasons, pending separation in which the Soldier is not under the control of the facility, or after being

dropped from the unit rolls while in an absent without leave status at the time of the accident will be charged to a DA account.

c. If a conflict in determining accountability between Army Headquarters cannot be resolved within command channels, the commanders involved will submit a formal request for decision to the DASAF. The request will include a summary of circumstances, statements of involved commanders, and recommendations. These actions are separate from accident investigation requirements and will not restrict or impede the investigation and reporting process. The final determination for accountability will be made by the DASAF based on—

- (1) Teardown and analysis results.
- (2) Recommendations and analysis prepared by the accident investigation board.
- (3) Analysis of the accident report.
- (4) Analysis of the EIR/SF Form 368.
- (5) Any combination of (1) through (4), above.

d. In the event of an accident that involves 2 or more DOD components, each DOD component shall report its own losses.

#### **4-9. Categories of Accident Investigation Reports**

The Army has 2 categories of safety accident investigation reports— limited use reports and general use reports.

a. Limited Use Safety Accident Investigation Reports. These are close–hold, internal communications of DA whose “sole” purpose is prevention of subsequent DA accidents. They are required for all flight/flight related and fratricide/friendly fire accidents. They are authorized for use in certain accidents as explained in subparagraph (3), below.

(1) Since much of this information is available only from persons directly or indirectly involved in the accident, a means must be provided to establish frank and open exchange of such information without fear of recrimination or other adverse action.

(2) All persons who provide information to accident investigators in this category under a promise of confidentiality may be assured that DA will use its best efforts to honor the promise if the record containing the information becomes the subject of a request under the Freedom of Information Act (FOIA), and will not voluntarily disclose this information.

(3) In addition to flight accidents and fratricide/friendly fire accidents, Limited Use Safety Accident Investigation Reports may be used for accidents involving other complex weapon systems, equipment, or military–unique items (such as ships and shipboard systems, guided missiles, laser devices, or armored vehicles), and military–unique equipment/operations/exercises when the determination of causal factors is vital to the national defense. The selection of system categories to be included in this application of Limited Use Safety Accident Investigation Reports is delegated to the Commander, USACRC.

(4) The following restrictions are imposed on the handling of Limited Use Safety Accident Investigation Reports:

(a) Reports shall not be used, before any evaluation board, as evidence or to obtain evidence for disciplinary action, in determining the misconduct or line of duty status of any personnel, or to determine liability in administrative claims for or against the Government. In limited use investigations, witnesses may be given the option of making their statement under a promise of confidentiality if they are unwilling to make a complete statement without such a promise and the investigation board believes it is necessary to obtain a statement from a witness.



(b) To the extent permissible under the law, these reports shall not be released in their entirety to the public or any Federal agency outside of DOD. Subject to court order to the contrary, reports may not be used in any legal proceeding, civil or criminal. Department of Defense will use its best efforts to seek available appellate review of a court order to release a report. Exceptions to the foregoing are stated in subparagraph (c), below.

(c) Portions of the safety investigation reports are privileged. The privileged portions include findings, recommendations, and analysis of the accident board, and confidential witness interviews. Excerpts from safety investigation reports comprised of purely factual material, such as date, time, location, type system, weather, maps, and transcripts of air traffic communications, may be released to other investigators and to the public subject to traditional FOIA exemptions. Only the initial denial authority, the Commander, USACRC, may authorize release of information protected under FOIA. Transcripts of relevant portions of intra-cockpit voice recordings may be included in the report and released to the accident legal investigation board; however, recordings of intra-cockpit voice communications may only be released outside of DOD upon specific authorization of the Commander, USACRC.

(d) The notation “Limited Use Safety Accident Investigation Report” shall be used for the identification of these reports.

b. General Use Safety Accident Investigation Reports. These are reports prepared to record data concerning all recordable DA accidents not covered by Limited Use Safety Accident Investigation Reports. These reports are intended for accident prevention purposes and will not be used for administrative or disciplinary actions within DOD. Portions of these reports that contain privileged material, such as investigative findings, analyses, and recommendations, are not generally releasable to the public, to any Federal agency outside of DOD, or within DOD except to requesters who have a need to know for the purpose of accident prevention. Witnesses will be advised that their statements may not be used for internal DOD disciplinary purposes. The information will be treated as exempt from mandatory disclosure in response to a request under the FOIA.

c. Safety and legal accident investigation reporting. Commanders may initiate a legal accident investigation (formerly known as a collateral investigation) to obtain and preserve all available evidence for use in subsequent administrative or legal actions. The safety accident investigation has priority over a legal accident investigation.

(1) Legal accident investigations are used to obtain and preserve all available evidence for using in litigation, claims, disciplinary action, or adverse administrative actions. They are essential for the protection of the privileges afforded to accident investigation reports, as they ensure there is an alternative source of evidence for use in legal and administrative proceedings. Although nonprivileged information acquired by a safety accident investigator shall be made available to the collateral investigation, the latter is conducted independently and apart from other types of accident investigations.

(2) Safety personnel (assigned or MOS-trained) and personnel responsible for conducting accident investigations will not conduct, review, evaluate, assist with, or maintain on file the collateral investigation. However, safety personnel can use and shall be given access to any information in a collateral legal/administrative investigation.

(3) This type of investigation will be prepared—

(a) On all Class A accidents. Note that a line of duty investigation will satisfy this requirement for off-duty fatalities.

(b) As directed by the command's Staff Judge Advocate (SJA) or legal counsel in accordance with the claims regulation (AR 27–20).

(c) On those accidents where there is a potential claim or litigation for or against the Government or a Government contractor.

(d) On accidents with a high degree of public interest or anticipated disciplinary or adverse administrative action.

(4) A legal accident investigation may be conducted on any other accident at the direction of the commander whose personnel, equipment, or operations were involved in the accident. The investigation will usually use the procedures in AR 27–20 because most will involve potential claims. If that regulation is not applicable, the procedures in AR 15–6 for informal investigations will be followed.

#### **4-10. Actions When Criminal Activity is Determined**

a. If evidence of intentional criminal activity is discovered during the initial investigation by either MP/CID or the accident board, the board president will be notified immediately. After notification/consultation with the Commander, USACRC and the local commander, the board president will discontinue the investigation if no further need is present.

If the accident investigation does continue, it will be secondary to MP or CID investigations in so far as access to witnesses, accident scene, and evidence is concerned.

b. If, during the investigation, the board discovers evidence of intentional criminal activity (other than negligence, dereliction of duty, or disobedience of an order); the board president will provide the following to MP/CID investigators—

(1) If the evidence is physical or is a common source item, MP/CID investigators will be notified. The evidence will be surrendered to MP/CID personnel, and the board members will provide the documents necessary to establish the chain of custody.

(2) If the evidence is based upon witness statements obtained on a promise that the information would be used within DOD only for accident prevention purposes, the board president will provide a list of personnel interviewed and copies of all common source materials. The board president will not discuss individual statements or specific comments that led to the board's suspicion of criminal activity.

#### **4-11. Accident Investigation Board Appointing Authority**

a. The commander having general court-martial jurisdiction over the installation or unit responsible for the operation, personnel, or materiel involved in an accident, or the Commander, U.S. Army Reserve Command (USARC), for U.S. Army Reserve (USAR) units assigned to USARC, or the Commander, USACE for personnel assigned to the USACE, or the appropriate State Adjutant General in the case of ARNG accidents, is responsible for appointing accident investigation boards as required by this regulation. Exception to the general court-martial convening authority (GCMCA) requirement of this paragraph may only be granted by HQDA (DACS–SF) upon request.

(1) When personnel or materiel involved in an accident are from units under the command of different GCMCAs, the convening authorities concerned should agree on who will appoint the board. Their decision should be based on their relative degrees of involvement as well as considerations of administrative convenience. If an agreement cannot be reached, the decision will be made by the first general officer in both chains of command or by the respective Army Headquarters commanders.

(2) When an accident occurs away from the responsible unit's home station, the officer who would normally appoint the board may request the GCMCA for the installation closest to the accident or upon which the accident occurred to conduct the investigation. Coordination for such a transfer of authority should include specific agreement on funding the cost of the investigation.

(3) For accidents involving USAR personnel on active duty for training status, assigned or attached to a command other than USARC, the officer who exercises GCMCA over the accident site will appoint accident investigation boards.

(4) In some cases, the unit or installation that is responsible for the personnel, equipment, or operation involved in the accident may be under the command of a different Army Headquarters than the GCMCA who would normally appoint the board. In this case, the two Army Headquarters commanders may enter into supplemental agreements that

provide for a different appointing authority.

b. The appointing authority will—

(1) Appoint on orders the president and other members of the board from units or organizations other than the accountable organization. Individuals from the accountable organization may be designated as advisers (nonvoting) to enhance the investigation and reporting of the accident.

(2) Request support from higher headquarters when investigation requirements are beyond the unit's capability. However, USACRC is the sole authority for requesting outside Army, Government, and public or private agency assistance.

(3) Give priority to accident investigation and reporting duties to ensure prompt completion of accident reports. Appointing authorities will ensure that adequate clerical and administrative support is available to assist in the rapid completion of accident investigations.

(4) Ensure that no member of the board has a personal interest in the outcome of the accident investigation.

#### **4-12. Types of Safety Accident Investigation Boards**

Two types of boards may be convened, either CAI or IAI. Upon notification of a Class A or B accident, the Commander, USACRC will determine whether a CAI or IAI will be conducted.

a. Centralized Accident Investigation Board.

(1) The USACRC will provide the following information to the board appointing authority:

(a) Name, rank, security clearance, and social security number of USACRC board members.

(b) The special requirements and desired qualifications for local board members (for example, instructor pilot, flight surgeon, vehicle technician).

(2) The board appointing authority will—

(a) Appoint a member of the local safety office to serve as point of contact for the board.

(b) Assure that preliminary actions required by this regulation are initiated before arrival of the USACRC board members. At a minimum, these actions include, but are not limited to, the following:

1. Administrative and logistical support for the investigation board. Note that CAI board members deployed into a combat zone for Army accident investigation purposes will be attached (for all administrative and logistical support) to the highest level of Army command having responsibility for theater.

2. Fund all support costs other than travel and per diem costs of USACRC personnel and those other Government, public or private agency personnel specifically requested by USACRC to provide assistance.

3. Secure the accident scene and take action as required by this regulation.

4. Obtain copies of personnel, medical, and training records (to include licensing and qualification records) for all personnel directly involved in the accident.
  5. Identify and notify local board members.
  6. Publish orders appointing investigation board.
  7. Confirm personnel security clearances as necessary and obtain any special clearances necessary for access to the accident scene by all board members.
  8. Provide logistical support to include equipment to recover wreckage and resources necessary to ship components to the appropriate Army depot or lab for teardown analysis, and arrange for special transportation such as tactical vehicles or aircraft, if required, to transport the board members to the accident scene.
  9. Obtain the following witness information: name, rank, unit, and telephone number.
  10. Obtain Serious Incident Report, MP, and CID reports, if completed.
  11. Obtain name of medical officer conducting autopsy and the date, time, and location it will be/was performed and results.
  12. Obtain a map that includes the accident site.
  13. Obtain directives that pertain to the operation that resulted in the accident.
  14. Obtain weather statements (signed by forecaster).
  15. Provide any other data or information requested on the USACRC pre-coordination checklist sent by the board president.
- b. Installation–Level Accident Investigation Board.
- (1) The appointing authority will appoint on orders a board to investigate all on–duty Class A and B accidents and Class C aviation accidents except those investigated by USACRC accident investigation boards.
  - (2) The appointing authority will ensure a board of any accident designated by HQDA or an Army Headquarters performs an in–depth investigation.
  - (3) In addition to the above requirements, the appointing authority may elect to conduct IAI (board mandatory or board optional) of any type of accident.

#### **4-13. Accident Investigation Boards**

- a. The following accidents will be investigated in accordance with DA Pam 385–40 by a board consisting of a minimum of 3 members:
  - (1) All on–duty Class A and B accidents.
  - (2) Any accident, regardless of class, that an appointing authority or the Commander, USACRC believes may involve a potential hazard serious enough to warrant investigation by a multimember board.
- b. Class C aircraft accidents (flight, flight related, or aircraft ground, UAS) will be investigated by a board of at least 1 member.
- c. While the following accidents do not require formal board appointment orders, they will be investigated by 1 or more officers, warrant officers, safety officers/noncommissioned officers (NCOs), supervisors, or DA safety and occupational health specialist/manager/engineer, in the grade of GS–018/803–9 or higher:
  - (1) All off–duty military accidents.
  - (2) Class C and D ground accidents.
  - (3) All aircraft Class D, E, and F accidents/incidents.
- d. When an accident involves Army property and another Service’s property, a single Joint board may be convened. Board members may be from the 2 Services involved. Appointment of the

members and identification of a senior member as president will be made by mutual agreement between the commanders of the safety centers. For uniform reporting within each Service, the board's proceedings will be recorded in the format required by each Service.

e. When an Army aircraft accident involves a civil aircraft or function of the Federal Aviation Administration, compliance will be per AR 95-30. Army aircraft accidents that involve aircraft of treaty nations will be investigated in accordance with DA Pam 385-40.

#### **4-14. Board Composition**

a. The following personnel may serve on Army safety accident investigation boards:

- (1) Army officers or warrant officers (Army aviators for aircraft accidents).
- (2) Department of the Army safety and occupational health specialist/manager/engineer, GS-018/803-9 or higher (for aircraft accidents, one who directly manages an aviation safety program).
- (3) Full-time technicians who hold current federally recognized officer or warrant officer status.
- (4) Department of Defense medical officers or DOD contracted medical officers (flight surgeons are preferred for aircraft accidents).
- (5) Qualified DOD maintenance personnel.
- (6) Senior NCOs when they are considered subject matter experts for the equipment or operation involved.
- (7) E-5 and above with an MOS of 93U, 33U, or 52D, for investigations of UAS accidents.
- (8) DOD weather officers.
- (9) Any other personnel approved by Commander, USACRC.

b. The safety accident investigation board appointing authority will be as specified in paragraph 4-11.

- (1) Voting members will be screened to ensure they do not have an interest in the accident that may bias the outcome of the investigation.
- (2) Personnel appointed as advisors are nonvoting participants. Local advisors function to enhance and expedite accident investigation and reporting. Local advisors will normally consist of the safety office point of contact and a point of contact from the organization incurring the accident. In cases where equipment involved is unique to one organization or activity at a location, technical personnel from the organization incurring the accident may be used in an advisory status at the discretion of the board president.

c. Personnel of other services may be used as members of Army accident investigation boards; however, a participant from another Service will not be designated as president of the board. Investigation and reporting will conform to this regulation and DA Pam 385-40. If assistance is required in obtaining members from other Services, the request will be forwarded to USACRC.

d. For on-duty Class A and B accidents, individuals appointed as board members will not be from the unit that incurred the accident (that is, same battalion, company, or detachment).

- (1) The president of the board will be a field grade officer (W4/W5 is considered field grade) or an Army civilian, familiar with the type of operation, in the grade of GS-12 or higher.
- (2) One member will be appointed to act as recorder.
- (3) When an accident involves any of the following, a medical officer or flight surgeon (if a flight surgeon is not available, an Army medical officer may be appointed) is required to be a board member. In the case of an on-duty Army civilian accident, a medical advisor is sufficient.
  - (a) Personal injuries.

- (b) Issues (including injuries) associated with personnel protective equipment, egress from the aircraft, medical evacuation, rescue, or survival.
- (4) One member will be a qualified maintenance officer or technician if materiel is involved.
- (5) One member may be a qualified weather officer if/when weather is a suspected factor.
- e. Class A and B aviation accidents specific board requirements.
  - (1) Manned aircraft accidents.
    - (a) One member will be a master or senior Army aviator.
    - (b) One member (who could be the master or senior aviator) will be qualified in the mission, type, design, and series of the aircraft involved for class A or B accidents.
  - (2) Unmanned aircraft systems.
    - (a) One member will be an Army aviator.
    - (b) One member will be qualified in the mission, type, design, and series of the UAS involved with an MOS of 96U, 33U, or 52D in the grade of E5 or higher.
  - (3) For watercraft accidents, at least 1 board member will be an Army Marine warrant officer or a Army civilian familiar with boat operations, navigation, and boating safety.
- f. In the case of Class C aircraft accidents, when more than 1 individual is on the board, the president will be an Army officer, senior warrant officers (CW3 and above), a Army civilian in the grade of GS-11 or higher that directly manages an aviation safety program, or a full-time ARNG or USAR technician. In addition, a flight surgeon (if not available, an Army medical officer may be appointed) is required to be a board member when an accident involves—
  - (1) Personnel injuries.
  - (2) Issues (including injuries) associated with personnel protective equipment, aircraft egress, medical evacuation, rescue, or survival. Note that for one-member boards, the board president must be senior in grade to the aircraft crewmembers. Also, Class C UAS accidents do not require a rated Army aviator board member.
- g. Specific duties and responsibilities of board members are outlined in DA Pam 385-40.

#### **4-15. Off-Duty Definition**

Army personnel are off-duty when they—

- a. Are not in an on-duty status, whether on or off Army installations.
- b. Have departed official duty station, TDY station, or ship at termination of normal work schedule.
- c. Are on leave and/or liberty.
- d. Are traveling before and after official duties, such as driving to and from work.
- e. Are participating in voluntary and/or installation team sports.
- f. Are on permissive (no cost to Government other than pay) TDY.
- g. Are on lunch or other rest break engaged in activities unrelated to eating or resting.

#### **4-16. On-duty Definition**

Army personnel are considered on-duty, for purposes of accidents, when they are—

- a. Physically present at any location where they are to perform their officially assigned work. (This includes those activities incident to normal work activities that occur on Army installations, such as lunch, coffee, or rest breaks, and all activities aboard vessels.

- b. Being transported by DOD or commercial conveyance for the purpose of performing officially assigned work. (This includes reimbursable travel in POVs for performing TDY, but not routine travel to and from work.)
- c. Participating in compulsory physical training activities (including compulsory sports) or other installation events.

#### **4-17. Reporting Civilian On-the-job Injuries**

- a. On-duty DA civilian accidents/fatalities will be reported to the Installation Safety Office using DA Form 285-AB. Initial notification will be telephonically and followed up by submitting DA Form 285-AB within 21 days of accident. Report will be used to investigate, analyze and develop measures to reduce civilian employee on-the-job injuries. Forms and preparation instructions can be found at <https://imcom.bliss.army.mil/Safety/default.aspx>
- b. Department of Labor Forms CA-1 and CA-2 must be completed .
- c. FECA reporting will be reported to FECA Office, 568-5628, Bldg 504B and processed on the EDI internet site at [https://hamlet.cpms.osd.mil/static\\_java\\_edi\\_sup.html](https://hamlet.cpms.osd.mil/static_java_edi_sup.html)

### **Chapter 5**

#### **Motor Vehicle Accident Prevention**

##### **5-1. Introduction**

- a. This chapter establishes requirements for traffic safety and loss prevention to reduce the risk of death or injury to Army personnel from POV, AMV, and ACV accidents. It also establishes requirements for motor vehicle accident prevention on Army installations and supplements public traffic safety law.
- b. This chapter applies to all active duty Army military personnel at any time, on or off a DOD installation; to Army National Guard (ARNG) and USAR personnel while in a military duty status; to all Army civilian personnel in a duty status, on or off a DOD installation; to all personnel (including contractor personnel) in a DOD owned motor vehicle; and to all persons (including contractor personnel) at any time on an Army installation.

##### **5-2. Motor Vehicle Accident Prevention Policy**

To facilitate accident prevention efforts, Army personnel listed below will accomplish the listed tasks—

- a. Commanders and directors at all levels—
  - (1) Brief all fatal and other Class A vehicle-related accidents (Soldiers on-duty or off-duty, and on-duty Army civilians, contractor reported, and visitors to Army installations) to the first general officer in the chain of command.
  - (2) Ensure Army vehicle maintenance and required before, during, and after operation checks are carried out according to Army regulations, technical manuals (TMs), and operator's manuals.
  - (3) Collect, analyze, and evaluate motor vehicle operator behavior and accident data to identify where accident prevention efforts must be focused.
  - (4) Ensure that AMV operators are selected, trained, tested, and licensed in accordance with Army regulations.
  - (5) Ensure AMV driver candidates meet state driver licensing requirements.
  - (6) Ensure senior occupants are familiar with their authority and responsibilities according to paragraph c, below.

(7) Provide training, education, and motivation programs to prevent motor vehicle accidents. These programs will encompass the on-duty and off-duty operation of motor vehicles and recreational vehicles.

(8) Develop procedures to respond to traffic accidents, to include first aid, evacuation of injured, and the safe removal of disabled vehicles.

(9) Ensure formal recognition of vehicle operators and organizations with outstanding safe driving records.

(10) Ensure personnel riding in vehicles requiring personnel to be exposed, are trained in rollover and other emergency procedures.

b. Supervisors of Army motor vehicle and Army combat vehicle operations.

(1) Enforce standards of performance to ensure safety and consistency of Army Soldiers' vehicle operations.

(2) Ensure an assistant driver is assigned when required by paragraph 5-4c.

(3) Verify that Army vehicle drivers meet rest, duty time, and the alcohol restriction requirements.

(4) Supervisors will verify whether Soldiers are taking prescription or non-prescription medication that may impair driving or alertness.

(5) Assess driver performance periodically and use incentives to reward drivers with good driving records.

(6) Incorporate the principles of mishap risk management component of CRM process into all motor vehicle-related duties and responsibilities.

(7) Report hazardous operating conditions of Army vehicles to vehicle dispatcher.

(8) Ensure that personnel operating or riding in tactical or combat vehicles have trained and rehearsed crew evacuation or rollover and fire drills.

c. Senior occupant. The senior occupant is the senior ranking individual present or in the case of a combat vehicle, the vehicle commander (VC), is responsible for the overall safety of the occupants. The senior occupant/VC will—

(1) Ensure the requirements of this regulation and AR 600-55 are met.

(2) Ensure the vehicle is operated in a safe manner and in accordance with applicable AMV standards and traffic safety laws.

(3) Ensure that the driver is licensed on the vehicle to be operated.

(4) Prevent drivers who appear fatigued or who are physically, emotionally, or mentally impaired from operating a vehicle.

(5) Ensure that drivers obey headphone and listening devices, operator distraction, and alcohol consumption restrictions.

(6) Ensure vehicle occupants use occupant restraint devices at all times. If the senior occupant cannot be ascertained, the driver shall be responsible for enforcement.

(7) Ensure the authorized seating capacity of the vehicle is not exceeded.

(8) Assist the driver in identifying unsafe mechanical conditions of the vehicle.

(9) Report hazardous operating conditions of vehicles in accordance with organization maintenance SOPs.

(10) Identify road and/or other driving hazards.

d. Motor vehicle operators will—

(1) Operate vehicles in a safe and prudent manner. This includes complying with local speed limits, vehicle speed limits, operating limits, municipal and state laws, SOFAs, and military vehicle regulations.



- (2) Report use of prescription or non-prescription medication that could reasonably impair driving or alertness to immediate supervisor.
- (3) Report hazardous operating conditions of vehicles to vehicle dispatcher.
- (4) After seeking emergency aid, report accidents immediately to their supervisor and to the vehicle dispatcher.
- (5) Ensure cargo is properly loaded and secured prior to and during transport.
- (6) Wear installed restraint systems to include gunner restraint systems and enforce the requirement for passengers to wear occupant restraint devices at all times. Personnel involved in emergency medical care are exempt from the restraint use requirement.
- (7) Ensure vehicles and their contents are properly secured when left unattended, to include setting the emergency brake and adequately blocking and chocking the wheels.
- (8) Safely ensure highway-warning devices are properly displayed when the vehicle stops on or beside the traveled portion of the roadway.
- (9) Post personnel and warning triangles to warn approaching traffic when the vehicle is disabled or halted in a location that obstructs traffic.
- (10) Use ground guides in accordance with the provisions of this regulation, FM 21–60, and FM 21–305.
- (11) Ensure that personnel riding in tactical or combat vehicles have been trained and have rehearsed crew evacuation or rollover and fire drills.
- (12) Soldiers will report to the commander, any traffic violations received from traffic authorities, on or off post.

### **5–3. Motor Vehicle Safety Standards**

#### **a. General Army motor vehicle safety standards.**

- (1) Army motor vehicles will be maintained in a safe and serviceable condition in accordance with AR 750–1, DA Pam 750–8, TM 38–600, appropriate maintenance manuals and vehicle TMs, and this regulation.
- (2) Before, during, and after vehicle operation, commanders or their representatives will ensure that drivers perform the appropriate safety checks, in addition to required preventive maintenance checks and services, to correct or prevent the following conditions:
  - (a) Improper functioning of steering, lights, windshield wipers, horn, warning signals, side or rearview mirrors, occupant restraint devices, and other safety devices. The driver and all passengers will use restraint systems. Personnel performing emergency medical care are exempt from the restraint use requirement.
  - (b) Improper condition of windshield, windows, mirrors, lights, reflectors, or other safety devices that are broken, cracked, discolored, or covered with frost, ice, snow, dirt, mud, or grime. Glass will not have posters, placards, stickers, or nontransparent materials that impair operator vision or create a hazard.
  - (c) Defective, inoperable, or out-of-adjustment service or parking brakes. (When moving vehicles with inoperative service brakes, tow the vehicle using the appropriate recovery vehicle or towbar.)
  - (d) Fluid leaks. Service leaks in accordance with equipment TMs.
  - (e) Tires that are excessively worn, deeply cut, or have exposed cords (see TM 9–2610–200–14).
  - (f) Any condition likely to cause injury to personnel or failure of a component. Examples are cracked wheel hubs, worn or frayed tiedown straps, torn sheet metal with exposed sharp edges, damaged or missing exhaust pipe shields, and leaks from exhaust systems.

- (g) Improperly secured loads.
  - (h) Vehicle loaded beyond design load limits.
  - (i) Unsafe transport of personnel.
  - (3) Operators are responsible for bringing any vehicle deficiency to the supervisor's attention. Fault status instructions of DA Pam 750–8 will be followed to ensure that no “status symbol X” faults are changed to “circle X status” (that is, allowing for one time operation or mission) if it will endanger the operator/crew and/or cause further damage to the equipment.
  - (4) Operators will ensure that all required safety equipment is present, current, and functional, in accordance with the standards outlined in the appropriate operators manual.
  - (5) Supervisors will report defects in accordance with the provisions established in DA Pam 750–8. Suspected design or manufacturer safety defects will be fully documented and conspicuously annotated with the phrase “DEFECT WHICH MAY AFFECT SAFETY,” as described in AR 58–1.
- b. Technical Army motor vehicle safety standards.
- (1) Commercial type passenger carrying AMVs, as defined in AR 58–1, which are purchased, leased or rented by the Army for use in the United States and U.S. territories and possessions, shall meet all applicable requirements of 49 CFR 571.
  - (2) Non–developmental item vehicles built to Government–modified manufacturers' specifications will also meet applicable requirements of the Federal Motor Vehicle Safety Standards unless a written waiver is obtained from the U.S. Army Tank–Automotive and Armaments Command (TACOM), which has been designated by the DCS, G–4 as the lead agent for wholesale logistics management.
  - (3) Tactical and combat vehicles, designed to contract specifications, may be exempt from Federal Motor Vehicle Safety Standards if such compliance would unacceptably degrade essential military characteristics. Commanders responsible for establishing design characteristics will follow MIL–STD 1180B(1). Copies may be obtained from TACOM.
  - (4) All AMVs other than tactical and combat vehicles shall be designed to be equipped with restraint systems unless a waiver is obtained from TACOM.
  - (5) Army motor vehicles will be provided with rollover protection or vehicle roof structure crush protection that conforms to 49 CFR 571.216 and 56 FR 15510 unless a waiver is obtained from TACOM.
  - (6) Tactical and combat designed wheeled vehicles undergoing developmental testing will be provided with appropriate restraint system/rollover protective structures for protecting test participants.
- c. Periodic motor vehicle inspection requirement (HSPG Number 1). All DOD vehicles, including nonappropriated fund vehicles and Government–owned and contractor–operated vehicles, shall be required to pass a safety inspection at least annually. This inspection is described in AR 58–1 and DODI 6055.4 and is in addition to the dispatch inspections.
- (1) The inspection will evaluate systems and components for vehicle performance, such as occupant restraint devices, lighting, glazing, exhaust system, wipers, horn, brake systems, steering systems, suspension, tires, and wheel assemblies.
  - (2) The inspection will ensure that exhaust emissions do not exceed any applicable Federal, state, or municipal requirements.

#### **5–4. Safe Motor Vehicle Operations**

- a. Occupant protection (HSPG Number 20).

- (1) Occupant protective devices will be worn by all persons in or on an Army-owned motor vehicle on or off the installation.
  - (2) All personnel, to include Family members, guests, and visitors, will wear occupant protective devices at any time on an Army installation.
  - (3) Occupant protective devices will be worn by all Soldiers driving or riding in a POV whether on or off the installation.
  - (4) Individuals will not ride in seats from which manufacturer-installed occupant restraints, including airbags, have been removed or rendered inoperative.
  - (5) Child safety seats shall be used on all Army installations. Installation traffic safety programs shall be consistent with state or local child safety seat laws and with AR 190-5. If there is no applicable local requirement, the installation traffic safety program shall specify age, weight, seating placement, or other criteria for child safety seat use.
  - (6) The vehicle operator is responsible for informing passengers of the occupant protective device requirement and the senior occupant is responsible for ensuring enforcement. If the senior occupant cannot be ascertained, the driver is responsible for ensuring enforcement.
  - (7) Failure to wear PPE or comply with licensing or operator training requirements may be considered in making line of duty determinations if the injury is contributed to by the non-use of PPE or noncompliance with requirements.
  - (8) Soldiers will complete a Travel Risk Planning System, POV risk assessment when going on leave, pass, or TDY out of the immediate local area and will be operating a motor vehicle. The definition of "local area" will be determined by the commander. The risk assessment tool is accessed through the USACRC Web site at <https://crc.army.mil>.
  - (9) In the event the online risk assessment tool is not available, supervisors may substitute the online tool with the individual risk assessment found in the POV risk management toolbox on the USACRC Web site.
  - (10) When access to the internet is not available, supervisors will ensure the Soldier is provided with assistance in completing a DA Form 7566 (Composite Risk Management Worksheet), and ensure the form is signed by the appropriate authority based on residual risk.
- b. Driver fatigue management. To reduce the potential for traffic accidents caused by operator fatigue, commanders will establish and enforce specific rest and duty hour limits for AMV operators.
- (1) Operators will be provided with at least 8 consecutive hours of rest during any 24-hour period.
  - (2) An operator will not drive more than 10 hours in a duty period (including rest and meal breaks).
- c. Assistant driver scheduling guidance.
- (1) If more than 10 hours are needed to complete operations, commanders will assign to each vehicle an assistant driver who is qualified to operate the vehicle.
  - (2) Assistant drivers for other operations will at a minimum, be familiar with the vehicle operations and trained for ground guide duties. Other operations that require assistant drivers include:
    - (a) More than 4 hours of the mission are expected to be during darkness.
    - (b) The need to wear mission-oriented protective posture (MOPP) equipment is anticipated.
    - (c) Night vision goggles (NVG) will be worn during the mission.
    - (d) Travel over unfamiliar terrain will require detailed en route navigation.
    - (e) Use of a ground guide is anticipated and required.

- (f) Deteriorating weather or road conditions are expected.
- (g) High-value or mission-critical weapons systems or equipment is being transported.
- (h) Other unusually difficult mission conditions are expected.
- d. Use of headphones, earphones, and listening devices.
  - (1) The wearing of any portable headphones, earphones, or other listening devices (except for hands free cellular phones) while operating a motor vehicle is prohibited.
  - (2) Motorcycle operators may wear motorcycle helmets equipped with operator-passenger intercom systems.
- e. Cellular phone use. Vehicle operators on DOD installations and operators of Government-owned vehicles shall not use cellular phones unless the vehicle is safely parked or unless they are using a hands free device. The only exceptions to this prohibition are emergency responders, such as MP, ambulance, fire emergency, EOD, and HAZMAT responders.
- f. Operator Alcohol Consumption (HSPG Number 8). Vehicle operators will not operate a vehicle for 8 hours after consuming intoxicating beverages, or longer if residual effects remain.
- g. Safety equipment.
  - (1) Eye protection (ANSI Safety Code Z87.1 approved safety goggles or spectacles with side shields) will be worn by VCs, drivers, and assistant drivers of combat or tactical vehicles, when exposed to hazards outside the vehicle, except when protected by a windshield.
  - (2) Head protection (combat vehicle crewman (CVC) approved ballistic helmet or flight helmet as appropriate) will be worn by all personnel operating or riding as a passenger in Army tactical vehicles in the field. The wear of kevlar in AMV's in garrison will be dictated by MACOM guidance.
  - (3) All trailers will be equipped with safety chains or similar devices, properly connected to the prime mover, to prevent breakaway trailer accidents.
  - (4) Trailer brake lights, taillights, and turn signals will be in operating condition.
  - (5) Army motor vehicles, except non-tactical vehicles, will be equipped with properly sized chock blocks for use when parked on sloping terrain, while maintenance is being performed, or when a vehicle is parked and a trailer is attached.
  - (6) All AMVs operating over public roads will be equipped with highway warning triangles. Vehicles carrying flammable or explosive materials will not use or carry flares.
  - (7) Emergency, repair, and utility servicing vehicles, truck tractors designed to haul oversized slow-moving loads, truck wreckers, and other vehicles that frequently deviate from or obstruct normal traffic patterns will be equipped with rotating or flashing warning signal lamps. Lights will be red and white for ambulance and firefighting vehicles, blue, or red and blue for law enforcement vehicles, and amber for all others. These devices will be used by emergency response vehicles only when responding to emergency calls, when required to warn traffic of emergency vehicles stopped at the scene of an accident or breakdown, or when military vehicles are used in the pursuit of offenders.
  - (8) Rotating or flashing amber lights will be used for cranes (wreckers), oversize or overweight vehicles, snow removal equipment, and other highway maintenance vehicles.
    - (a) These lights will not be used when their operation is a hazard to other traffic.
    - (b) Rotating lights or beacons must be mounted so as not to be a hazard or nuisance to the operator or to other vehicle operators.
  - (9) Convoy signs, as well as rotating or flashing amber warning lights, will be used for the first and last vehicle in a convoy.

h. Use of ground guides. Ground guides are required when wheeled and tracked vehicles are backed, or when moved within an assembly area or motor pool.

(1) Ground guides will be properly trained in accordance with FM 21–60, FM 21–305, and TC 21–306.

(2) For information regarding rail–vehicle transportation, refer to MTMCTEA Pam 55–19, available from SDDC.

(3) Engineer vehicles operating outside of supervised or controlled access construction sites will use the ground guide standards for tactical or combat-wheeled vehicles. Operators of graders, bulldozers, and other engineer vehicles will walk around the vehicle before starting the engine, to ensure the area is clear of obstructions.

(4) When backing or maneuvering in controlled access construction sites, a signal person shall be provided when the point of operation (includes area of load travel and area immediately surrounding the load placement) is not in full view of the vehicle, machine, or equipment operator, when vehicles are backed more than 100 feet, when terrain is hazardous, or when two or more vehicles are backing in the same area.

(5) When operating a vehicle, machine, or equipment within a controlled access construction site and the point of operation is in full view, the operator may back without the assistance of a signal person or spotter provided:

(a) The operator walks behind the vehicle, machine, or equipment to view the area for possible hazards.

(b) A reverse signal alarm is activated, which is audible above the surrounding noise level in accordance with 29 CFR 1926.602.

i. Vehicles equipped with radio antennas.

(1) Operators of vehicles equipped with radio antennas should be familiar with the fire and electrocution hazards associated with antennas contacting overhead power lines.

(2) Antennas will be clipped under the antenna-retaining clip when vehicles are operated in areas that may have overhead power lines.

(3) Vehicle operators should not stop their vehicle under power lines. This could increase the risk of an electrical shock if the antenna tiedown fails.

(4) When antennas on tracked and wheeled vehicles are secured, they will be tied down to a height of between 8 feet and 13 feet. The ends of the antennas will be blunted with an antenna tip assembly, antenna ball, and tiedown kit.

(5) Antennas will be removed and stored inside the vehicle before loading onto the rail car.

j. Fire prevention.

(1) Army motor vehicles will not be operated unless they are entirely free of gasoline, JP 8, or Class III diesel leaks.

(2) Smoking is prohibited within 50 feet of vehicles loaded with flammable or combustible liquids, flammable gases, or explosives and in the presence of flammable vapors such as those present when fueling vehicles or examining or repairing vehicle engines or fuel systems.

(3) During fueling, drivers will turn off engine, put transmission in low gear or park position if automatic, and use parking brakes. When low temperatures preventing setting brakes, wheels will be chocked. For refuel–on–the–move operations, follow safety precautions provided in FM 10–67–1.

(4) The use of cellular phones is prohibited during fueling operations or when flammable vapors are present.

(5) Fuel cans must be offloaded from the vehicle and placed on the ground for filling to avoid static electricity buildup or discharge.

(6) Fire extinguishers will be provided for off-road Army vehicles per applicable TM or technical bulletin.

(7) Fire extinguishers will be mounted in vehicles responding to calls for assistance (such as fire, police, and security protection) and vehicles carrying valuable equipment or materials on a mission requiring special protection.

(8) To minimize the danger of fire or explosion caused by static sparks, positive bonding connections are required between fuel tank trucks and the source from which the tank truck is being filled or offloaded, and the grounding of tank trucks is required before approaching the fuel tank.

k. Carbon monoxide poisoning precautions.

(1) Vehicle engines will not be operated in a maintenance facility longer than needed to move the vehicle in or out. If vehicles must be operated in a maintenance facility, an exhaust ventilation system that adequately exhausts vehicle engine gases will be used.

(2) Maintenance facilities and other enclosed areas used for vehicles will be ventilated adequately at all times to prevent overexposure to exhaust gases from vehicle engines or space heaters.

(3) Sleeping in parked vehicles with the engine heater, or externally mounted generator running is prohibited. Carbon monoxide poisoning may result from exhaust gases entering the vehicle.

(4) When the power train, cooling, and exhaust systems are separated from the crew by engine access panels, the operator will ensure that the panels seal properly to prevent carbon monoxide from entering the crew compartment. Commanders of organizations that have vehicles of this type will ensure annual carbon monoxide tests are conducted, under full working conditions, by trained personnel using calibrated test equipment. Commanders should coordinate with their local preventive medicine office for support. Any vehicle that fails the annual carbon monoxide test will be considered non-mission capable until the vehicle satisfactorily passes the test.

l. Vehicles that make frequent stops. Vehicles that make frequent stops (for example, police, garbage detail, trail vehicles, and so forth) will be equipped with fully operational rotating warning lights, either portable or permanently mounted and visible for 360 degrees.

m. Specialty vehicles.

(1) Commanders of organizations that utilize COTS, utility vehicles, referred to as specialty vehicles, such as Segway HT, M-Gators, Gators, "Mule" utility vehicle, aircraft-Tugs, in garrison or tactical environments, will establish the following:

(a) An SOP that includes at a minimum, the safe operations, limits of operational work areas, PPE, and vehicle safety equipment requirements.

(b) A driver qualification and training program.

(2) Operators must possess a military operator's permit with the vehicle qualification annotated on the operator's OF Form 346 (U.S. Government Operators Motor Vehicle Operator's Identification Card).

(3) Commanders will establish "operational work areas" to limit the travel of non-tactical specialty vehicles that are routinely used in garrison areas on Army installations. An operational work area is that area in which a specialty vehicle can travel that is not on a public or installation roadway.

(4) Manufacturer installed safety equipment will be maintained in working order.

- (5) Tactical specialty vehicles such as the M-Gator will not be driven on installation or public roads except to cross the roadway and it will only be driven on a public roadway at designated crossing points or with a road guard.
- (6) Operators will not exceed the recommended load carrying capacity, personnel capacity, or maximum safe vehicle speed. Cargo items will be secured as necessary to prevent tipping.
- (7) Occupant protective devices will be worn by operators and passengers of specialty vehicles where installed by the manufacturer.
- (8) Adequate head protection is required for operators and passengers operating or riding in tactical specialty vehicles and for operators and passengers of non-tactical vehicles operated outside of the designated operational work areas.
  - (a) For Segway HT, the minimum head protection standard for garrison operations is an approved bicycle helmet.
  - (b) Operators of tactical specialty vehicles will wear approved head protection (helmet) that at a minimum conforms to DOT 218 standards or equivalent, protective goggles or face shield, full fingered gloves, long sleeve shirt or jacket, long trousers, and over the ankle boots. Commanders may authorize the use of helmets that offer ballistic protection in lieu of DOT 218 standards when the tactical situation dictates such use.
  - (c) Operators will wear approved head protection (helmet) that at a minimum conforms to DOT 218 motorcycle safety standards or equivalent, and passengers of non-tactical specialty vehicles that are not equipped with manufacturer installed rollover protection, and are operated on installation or public roads that are outside the designated operational work area.
- (9) Non-tactical specialty vehicles that are allowed to operate outside a controlled work area and on installation streets, roads, and highways will meet the minimum vehicle safety standards in accordance with 49 CFR 571.5, to include rollover protection, occupant protective devices, and placement of "Slow Moving Vehicle" emblems where required.

## **5-5. Safe Movement of Personnel**

### **a. General movement of personnel.**

- (1) The following safety precaution must be in place before transporting troops in vehicles:
  - (a) Fixed seating is installed and passengers are seated wholly within the body of the truck.
  - (b) The body is equipped with stakes or sideboards, rear safety strap or tailgate protection, and tailgate step or ladder.
  - (c) Canvas tops are in place with sides rolled down when cargo space is used for passengers at the discretion of the commander.
- (2) Before starting the engine, operators transporting passengers in trucks must ensure that the tailgate, safety device, or safety strap is in place and determine that all passengers are in a safe position.
- (3) Operators will follow passenger carrying capacities for tactical and administrative vehicles as per TB 9-639 or the appropriate vehicle TM.
- (4) Passengers may be transported without fixed seating for short distances on the installation if each passenger remains seated and wholly within the body of the vehicle.
- (5) Personnel will not be transported in the bed of an Army truck, off post, unless the truck is specifically designed to carry troops.
- (6) When transporting passengers in cargo trucks in which cargo is loaded, ensure they are seated in fixed seats and the cargo is adequately secured.

- (7) Transportation to and from troop training or maneuver areas may be done with cargo trucks provided such transportation is part of training and the vehicle is equipped with fixed seating.
  - (8) When transporting large numbers of Soldiers for training purposes, only approved semitrailers such as, van, personnel carrier 80 passenger, are authorized. No other types of semitrailers are considered safe to transport personnel.
  - (9) Drivers must know actions to take in the event of a breakdown and separation from a convoy.
  - (10) Do not move military vehicles in blackout conditions on roads open to the public at any time.
  - (11) Drivers hauling partially full tanks of liquid will take extra care to ensure that liquids do not shift in turns that could resulting in an accident.
  - (12) All vehicle towing will be conducted IAW applicable vehicle TM's or FM's.
- b. Movement of personnel in cargo trucks.
- (1) When transporting personnel in cargo truck convoys, the last vehicle in the convoy will not be used to carry passengers.
  - (2) Transporting troops in the bed of dump trucks shall only occur on an emergency basis and with extreme caution. When troops are transported in dump trucks, fixed seating will be installed and positive locking devices will be used to prevent accidental activation of lift controls.
- c. Transportation in 15-passenger vans.
- (1) Fifteen-passenger vans do not meet the federally mandated safety standards required for school buses, and cannot be used to transport pre-primary, primary, or secondary school age children to and from school. Fifteen-passenger vans may be used to transport children to and from childcare facilities and youth service centers if—
    - (a) Use of the 15-passenger vans is restricted to driving within the boundaries of the installation.
    - (b) 15-passenger vans are only operated during daylight hours.
  - (2) The use of 15-passenger vans to transport children to and from childcare facilities and youth service centers will not be allowed after 30 September 2008.
  - (3) Commanders will ensure that personnel who operate 15-passenger vans—
    - (a) Are experienced drivers with good driving records.
    - (b) Are trained on the hazards and handling characteristics associated with 15-passenger vans.
  - (4) Multifunctional school activity buses are not considered school buses and cannot be used for daily transport of students to and from school because they do not meet federally mandated safety guidelines. Multifunctional school activity buses should be used whenever transportation is required for after school activities, field trips, and so forth. Multifunctional school activity buses provide a safer means of transportation than the 15-passenger van (see HSPG Number 17 for student transportation safety). Provisions shall be made to reduce the danger of death or injury to children while they are being transported to and from school or related activities in DOD or contractor-owned vehicles.
  - (5) In CONUS, DOD school buses shall be marked, equipped, operated, and maintained consistent with AR 58-1 and 49 CFR 571.
  - (6) Contractors shall comply with state and local requirements in addition to any contractual requirements imposed by the applicable Army installation.

## **5-6. Tactical Vehicle Safety**

a. Requirements. The following safety requirements apply to vehicles operated in noncombat tactical environments:



(1) Before a vehicle is started in an assembly area, a crewmember will walk completely around the vehicle to ensure that no one is in danger and that the area is free of obstructions or material that could be impacted by the vehicle.

(2) Tactical vehicle operators will keep service drive lights on at all times when on public roadways outside military installations except where SOFA or local laws prohibit use of headlights during daylight (sunrise to sunset) hours.

(3) All safety standards (including speed limits, passenger transportation standards, and vehicle maintenance) apply during tactical operations. Any deviation from the standard will be properly assessed utilizing the mishap risk management component of CRM process. Leadership at the appropriate risk acceptance authority level will grant subsequent approval.

(4) Tactical vehicles operated on public highways will not exceed posted speed limits or speed restrictions addressed in the vehicle's operator manual, whichever is less. Additionally, tactical vehicles will be operated at speeds appropriate for the environmental conditions.

(5) Personnel will not expose more than their head and shoulders (name tag defilade) while riding in tactical vehicles that have hatches, except when actively engaging targets with the vehicle mounted weapons systems.

b. Convoy operations. Convoy operations will be conducted in strict compliance with FM 55–30 and FM 4–01.011.

#### **5–7. Driver Education (HSPG Number 4)**

a. Army Traffic Safety Training Program. The Army Traffic Safety Training Program is required training for all Army personnel. The training is established to reinforce a positive attitude toward driving, individual responsibility, and correct response to routine and emergency driving situations. Each progressive traffic safety–training course builds on the previous module to reinforce the Army's expectations for a safe Army driver.

(1) Introductory Training Course I. During initial entry training all Soldiers shall be given traffic safety training at Advanced Individual Training (AIT). The course will establish and reinforce a positive attitude toward driving, individual responsibility, and correct response to routine and emergency driving situations.

(2) Local Area Hazard Training Course II. All Army personnel who are newly assigned to an Army installation/theater will receive a briefing on the local driving hazards they may encounter while serving at that installation.

(3) Intermediate Traffic Safety Training Course IIIA. All newly assigned Soldiers less than 26 years of age will receive intermediate traffic safety training that reinforces the initial traffic safety–training course. Other personnel maybe required to attend the training as deemed necessary by the local command. Soldiers can register for this course on-line at <https://airs.lmi.org> .

(4) Traffic safety instruction. All newly assigned Army supervisors will receive traffic safety instruction on their responsibilities and the expectations of the Army Traffic Safety Training Program.

(5) Accident Avoidance Training Course. Anyone who operates an AMV will have first completed the online Accident Avoidance Course as part of licensing procedures. The training includes mishap risk management component of CRM, personal responsibility, driving hazard awareness, defensive driving techniques, accident avoidance, and motorcycle safety. This on-line training is available thru the USACRC web site at <https://crc.army.mil/home/>

- (a) Tactical vehicle drivers are required to complete additional vehicle specific training as required by AR 600–55.
  - (b) The online Accident Avoidance Training will be repeated every 4 years as part of the license renewal procedure.
- b. Remedial driver training. Installation commanders may establish a remedial driver training program to instruct and educate military personnel requiring additional training. Personnel will be identified for the program based on their individual driving records. The curriculum should provide instruction to improve driver performance and compliance with traffic laws.

### **5–8. Unit Privately Owned Vehicle Safety Inspections**

Unit commanders will ensure that unit POV safety inspections are conducted for their Soldiers. Re-inspections should be conducted when unsafe conditions are identified. Vehicle inspections should include verification of motorcycle rider training, licensing, and personal protective equipment. Example inspection checklists are included in the POV risk management toolbox accessed through the USACRC Web site at <https://crc.army.mil>. (At a minimum, this inspection is required every 6 months.)

### **5–9. Motorcycle Safety**

#### **a. Licensing.**

- (1) Operators of Government–owned and privately owned motorcycles (both street and off–highway versions) on Army installations must be appropriately licensed to operate on public highways except where not required by the applicable local laws.
- (2) A valid OF Form 346 or DA Form 5984E (Operator’s Permit Record) fulfills the licensing requirement for operators of tactical motorcycles.
- (3) Where state or local laws applicable to the installation require special licenses to operate privately owned motorcycles, motorized bicycles (mopeds), motor scooters, or all–terrain vehicles (ATVs), such license requirements, at a minimum, shall be required for operation of those vehicles on Army installations.
- (4) Minibikes, pocket bikes, and similar vehicles do not meet Federal highway safety standards and therefore will not be operated on installation roads. These vehicles may be operated in designated areas (off–installation roads) as designated by the installation commander.
- (5) Motorcycle riders who operate motorcycles on or off post must comply with the skills training, licensing, and permit requirements of their state or local law.

#### **b. Motorcycle training.**

- (1) Prior to operation of any motorcycle, Army personnel will successfully complete a Motorcycle Safety Foundation (MSF) or MSF–based approved motorcycle rider safety course. Commanders are not authorized to waive or defer the training.
- (2) Anyone who operates a motorcycle on an Army installation, to include Government–owned motorcycles, shall successfully complete a MSF–based rider safety course, or present documentation of previous attendance.
- (3) The Army standard motorcycle rider’s course is an MSF–based Basic Rider Course (BRC). Commanders may offer the Experienced or Advanced Rider Course (ERC/ARC) in addition to the BRC, but not in lieu of the BRC. The ERC/ARC is designed to provide additional highway safety skills for experienced motorcycle riders. It is highly encouraged that both courses be offered to ensure adequate training for both new and experienced riders. The ERC/ARC builds upon and provides additional skills taught in BRC or gained through previous experience.

Anyone who has documentation of prior completion of the ERC/ARC will be in compliance with the Army standard for motorcycle training and will not be required to attend the BRC. Soldiers can register for these courses on-line at <https://airs.lmi.org>.

(4) Operators will not be required to repeat BRC training when relocating to a new assignment. This does not restrict commanders from requiring additional motorcycle safety training specific to that location.

(5) Licensed motorcycle operators who have not yet completed the requirements of paragraph 5-9b(1), may operate their motorcycle to travel to the rider course training site. When the training is offered on an Army installation, the licensed operator may enter the installation for the sole purpose of attending the course. The rider will have documentation in their possession to show the date of the course.

(6) Soldiers deployed 6 months or more and those Soldiers that upgrade their motorcycles 400cc's or more or purchase "high boost" motorcycles will attend refresher training conducted by a qualified Motorcycle Safety Foundation Instructor. Soldiers attending the ERC/ARC course will fulfill this requirement

(7) Personnel who operate privately owned ATVs or motorcycles off-road should complete appropriate operator safety training.

c. Motorcycle vehicle equipment.

(1) When operated on any DOD installation, in both on- and off-road modes, all Government-owned or privately owned motorcycles, mopeds, motor scooters, and ATVs (when equipped) must have headlights turned on at all times, except where prohibited by military mission, the SOFAs, or local laws.

(2) Motorcycles shall be equipped with both a left-hand and right-hand rear view mirror mounted on the handlebar or fairing. (Note that Government-owned off-road motorcycles on tactical missions or training are exempt from this requirement.)

d. Motorcycle personal protective equipment. The following PPE is mandatory for the following personnel while operating or riding as a passenger on a motorcycle, moped, or ATV: all Army military personnel at any time, on or off a DOD installation; all Army civilian personnel in a duty status, on or off a DOD installation; all personnel in or on a DOD-owned motorcycle; and all persons at any time on an Army installation.

(1) Helmets, certified to meet DOT standards, must be properly fastened under the chin.

(2) Impact or shatter resistant goggles, wraparound glasses, or fullface shield properly attached to the helmet must meet or exceed ANSI Safety Code Z87.1, for impact and shatter resistance. A windshield alone is not proper eye protection.

(3) Sturdy footwear, leather boots or over the ankle shoes must be worn.

(4) A long sleeved shirt or jacket, long trousers, and full fingered gloves or mittens designed for use on a motorcycle must be worn.

(5) For on-road operations, a brightly colored, outer upper garment during the day and a reflective upper garment during the night. Military uniforms do not meet this criterion. The outer garment shall be clearly visible and not covered. Items may be worn on top of the outer garment, but they must meet the same visibility requirements of the outer upper garment. Reflective belts may be used in a crossing pattern on the rear of backpacks (if worn); however, the reflective belt alone is not authorized to be used as a reflective outer upper garment.

(6) During off-road operations, operators and riders must use additional personal protective equipment, such as knee and shin guards and padded full fingered gloves.

(7) Installation commanders will ensure motorcycle operators, when entering the installation, are properly licensed, have successfully completed a motorcycle rider course, and are wearing the required personal motorcycle safety equipment.

e. Tactical motorcycle and all-terrain vehicle operations.

(1) For tactical motorcycle operations, the wearing of PPE will be based on the commander's composite risk assessment of mission requirements.

(2) Prior to tactical motorcycle and ATV operations, operators will be trained on the tactical operations and on the controls that have been implemented to mitigate hazards. Curriculum and proficiency training for tactical motorcycles and Government furnished (tactical and non-tactical) ATVs will be tailored to satisfy specific mission objectives. In addition to the above training, governmental motorcycle operators will have completed the training required in paragraph 5-9b(2). Government ATV operators will complete the Specialty Vehicle Institute of America based course.

### **5-10. Motorcycle Mentorship**

a. Commanders at all levels will establish a motorcycle mentorship program within their units.

b. Commanders will appoint in writing senior motorcycle mentors down to at least company/troop level. The mentor should be an experienced/seasoned motorcycle rider that will serve as a coordinator of motorcycle safety activities and the mentoring of new/inexperienced riders within their respective units.

c. Unit motorcycle mentorship programs should address procedures for identifying operators that need refresher training.

d. Additional motorcycle mentorship information can be located at the USACRC web site, <https://crc.army.mil/home/>

### **5-11. Army Combat Vehicle Safety Guidelines**

a. Army combat and track vehicle commanders. Each ACV will have a track commander (TC) or VC who will occupy the commander's position within the vehicle. The TC or VC will receive vehicle specific training on the vehicle capabilities and limitations.

b. Operator and crew safety.

(1) Operators will not start ACVs unless the portable and fixed fire extinguishers are present and in operating condition.

(2) The intercom must be operational and in use. The movement of an ACV without a TC or VC and a working intercom or dismounted ground guide is prohibited.

(3) The positive safety-locking pin will be used to fasten open hatches to avoid accidental closing during movement of the vehicle.

(4) Crew personnel will not wear rings or bracelets while conducting vehicle operational duties or when performing vehicle maintenance.

(5) Personnel in ACVs will wear protective headgear. The crew will wear fully operational CVC helmets or approved ballistic helmets with chinstrap fastened.

(6) Personnel exposed to eye hazards will wear appropriate eye protection.

(7) Personnel will not position themselves between an ACV and another vehicle or fixed object while the vehicle is moving or being slaved (started with jumper cables).

(8) Personnel in hatches will not expose more than their head and shoulders "nametag defilade." When nametag defilade is not observed, commanders must establish clear guidance and

implement controls to mitigate or eliminate the added risk. All other personnel will ride with their bodies completely inside the vehicle.

(9) Riding on the exterior of ACVs is prohibited except where outlined as an accepted practice in an Army TM or field manual.

(10) Seated personnel will wear occupant restraints, unless specifically exempted in the unit SOP or by the commander after completing mishap risk management component of CRM for the mission.

(11) When vehicles and dismounted personnel are training together during darkness, the dismounted personnel will notify vehicle operators and TCs or VCs of their location.

(12) Operators of ACVs will stop at railroad crossings without electric signal lights or road guards and check the clearance in both directions before crossing.

(13) Before lowering or raising a ramp, check the rear area for clearance. Sound the horn twice. On ACV having ramps, defective ramps must be marked "Free Fall Ramp" on the ramp and sides of the vehicle. Use a safety tow cable to secure a free fall ramp.

(14) Tracked vehicle speed limits; Max 25 MPH or unless otherwise posted/10 MPH when passing troops and at night. Refer to FBTC Range SOP for specific speed limits on unimproved roads/trails, and driving wheeled AMV's, POV/GSA within/outside the base camps.

(15) Whenever possible, tracked vehicles will only be operated on tank trails and unpaved roads. When tracked vehicles move on paved roads or into cantonment areas, units must provide escort vehicles front and rear. On short stretches of paved road, road guards to slow and warn approaching traffic may be used in place of escort vehicles. Escort vehicles will be AMVs.

(16) When tracked vehicles must move on heavily traveled main thoroughfares, notify the Provost Marshal, in advance, of the date, hour, roads, and the type and number of vehicles.

(17) When driving on paved roads, tracked vehicle drivers must use extreme caution to prevent damage to the road surface. They must avoid highly accelerated starts and sharp turns.

(18) Drivers must keep both tracks fully on the pavement. Having one track on and one track off the pavement or both on the road shoulder is very damaging to the roadway. It breaks off the road shoulder and causes erosion. Soft shoulders also contribute to rollovers.

(19) Tracked vehicles do not have the right of way at road or rail crossings. Trains always have the right of way.

(20) At unprotected (without signal lights) railroad crossings, single tracked vehicles must come to a full stop. Vehicle personnel must check for clear track in both directions before crossing. Tracked vehicles in convoy may cross a railroad crossing without stopping if road guards are positioned to watch for oncoming trains.

(21) Pipeline crossings. Vehicles operating in local maneuver areas will cross pipeline right-of-ways only at authorized crossings. Stopping or turning on pipelines is prohibited.

(22) All re-fueling operations will be conducted IAW FM 10-67-1, Petroleum Operations.

c. Rollover drills and emergency procedures.

(1) Personnel riding in ACVs will be trained in crew rollover, fire, and emergency egress drills. The drills will be conducted prior to gunnery, field training exercises, or combat missions.

(2) Rollover drills will be conducted prior to every tactical training or actual deployment cycle.

d. Bivouac and Assembly Areas.

(1) Commanders will ensure sleeping area perimeters are designated and marked. Select sleeping areas protected by natural obstacles when possible.

(2) Where access to bivouac or an assembly area is restricted to road entry, a guard should be posted to warn vehicle crews that there are troops on the ground.

- (3) Prior to leaving a motor pool or assembly area in tactical environments, the TC or VC will walk completely around the vehicle to check for personnel or other hazards in the vicinity of the vehicle.
- (4) Operators will move ACVs in motor pools, parking areas, cantonments, assembly and sleeping areas only when a dismounted ground guide(s) assists. When visibility is reduced, guides will use flashlights to direct vehicles. The TC or VC, driver, and dismounted ground guide will maintain visual contact at all times.
- (5) Operators of combat vehicles will stop at railroad crossings without electric signal lights or road guards and check both directions before crossing.

## **Chapter 6**

### **Composite Risk Management**

#### 6-1. Risk Analysis/Risk Assessment

- a. Commanders will ensure that a risk assessment IAW FM 5-19 is made prior to conducting any training event on Fort Bliss or local training area.
- b. Commanders, directors, and other supervisors, as appropriate, will ensure that a risk analysis is completed and recorded for all potentially hazardous operations within their organizations. This analysis will include personnel, equipment, facilities, and the environment.
- c. Commanders, directors, and other supervisors, as appropriate, will ensure that their personnel understand the risks associated with each hazardous operation.

#### 6-2. Composite Risk Management

- a. Composite Risk Management (CRM) is a smart decision-making process. The process of managing risks makes operations safer without compromising mission accomplishment. Experience indicates that mission-stopping accidents occur when —
  - (1) Soldiers are unaware of, or do not recognize hazards.
  - (2) Standards or countermeasures are ignored.
  - (3) Training is deficient.
- b. The key to risk management is to not accept unnecessary risk. Preventable risk is a risk that can be reduced or eliminated by setting operational limits. Good mission analysis makes it possible to systematically and objectively put safety into the operational process without sacrificing training or mission accomplishment.
- c. Force Protection must be included in the initial operational process. To be effective, risk management must be included in planning. Force Protection payoff comes in increased readiness as a result of safer, smarter, more realistic training. The payoff also comes in increased survivability on the battlefield.
- d. The greatest effort, therefore, should be in hazard identification, development, and enforcement of standards.
- e. Leaders at all levels must ensure that safety requirements/risk management are integrated in all aspects of training and not an add-on. Risk Management techniques should be utilized in the planning and executing of training to ensure it is realistic, yet does not exceed an acceptable level of risk for a non-combat situation. Risk decisions must then be at the appropriate level of command based on the level of risk, hazard involved, exposure and worst-case scenario.

### 6-3. Basic Rules

The following four rules guide the risk management process.

- a. Accept no unnecessary risk. The leader who has the authority to accept a risk also has the responsibility to protect his or her soldiers from unnecessary risk. An unnecessary risk is one that, if eliminated, still allows mission accomplishment.
- b. Make risk decisions at the proper level. Make risk decisions at a level consistent with the commander's guidance. The leader responsible for the mission should make the risk decisions.
- c. Accept risks only if the benefits outweigh the potential costs. Leaders must take necessary risks to accomplish the mission. Leaders must understand that risk taking requires a decision making process that balances mission benefits with cost.
- d. Identify and manage risk in the concept and planning stage of operations.
- e. Leaders and managers are responsible for integrating risk management into all Army processes and operations IAW AR 385-10 and FM 5-19 Composite Risk Management. Sample risk management work sheets with instructions are found in FM 5-19.

### 6-4. Leader Responsibility

- a. Detect hazards and associated risks. Determine the risk associated with each operation. Risk identification involves a close look at each phase of an operation to determine which actions involve risk and which do not.
- b. Assess the risks. To determine risk implications, two questions must be answered. What is the likelihood of a mishap? What degree of injury or equipment damage is possible? A low likelihood of happening with a high probability of minor injuries equals a low risk. A high (or even moderate) likelihood of happening with a high probability of fatal injury equals a high risk. Good understanding of the facts is the foundation of good risk decisions.
- c. Make decisions and develop controls.
  - (1) Make risk acceptance decisions by balancing risk benefits against risk assessments. Then, eliminate unnecessary risks. Reduce the extent of mission essential risks through the application of controls.
  - (2) Controls range from hazard awareness to developing detailed operational procedures. Risk control measures can be in the form of new or revised task standards, operational procedures, or training requirements.
  - (3) Be sure controls do not jeopardize mission accomplishment. Involve the chain of command if necessary risks or controls prevent assigned mission requirements.
- d. Implement controls. Integrate specific controls into plans, orders, SOPs, training performance standards, and rehearsals. Knowledge of controls down to the individual soldier is essential.
- e. Supervise. Enforce controls and standards. This is the key. Evaluate mission progress and then begin appropriate corrective actions. After mission completion, evaluate risk decisions and controls for inclusion in lessons learned.

### 6-5. Risk Assessment Process

- a. Different missions involve different elements that can affect mission safety. However, the following seven elements are central to safe completion of any mission. Using matrices that assign a risk value to each of the elements is one way of quickly gaining an appreciation of overall risks. Keep in mind that these are subjectively weighed factors, and they, like each element may need to be modified to accommodate particular missions, terrain and units.

- (1) Planning. Planning is measured by comparing guidance to preparatory time. Specific guidance from established operation plans and optimum preparatory time are usually safer operations.
  - (2) Mission control. Mission control is measured by comparing the training event to task organization. Support, day tactical, and night tactical are seen as increasingly difficult mission parameters. Support includes routine non-tactical missions conducted by the unit in garrison. Command and control range from organic control to the unit being placed under the operational control of external organizations. The attached relationship is viewed as one in which multiple units are involved in a venture that requires extensive lateral coordination.
  - (3) Soldier endurance. Soldier endurance is measured by comparing the length and quality of the mental and physical preparation of the soldiers before the event with adjustment (acclimation) to the area of operation. Highly trained, physically fit soldiers who have adjusted to the climate are less likely to get hurt than fatigued soldiers who are concentrating on the effects of the environment.
  - (4) Soldier selection. Soldier selection is measured by comparing the level of difficulty to the soldier's training and experience. The level of experience is determined by the subjective judgment of the leader.
  - (5) Weather. Weather is measured by comparing temperature with moisture/visibility conditions.
  - (6) Terrain. Terrain is measured by comparing the physical features of the land with the difficulty of traversing that terrain (road networks, forest, etc.)
  - (7) Sustainability. Sustainability is measured by considering the type of system against personnel fill. Undermanned crews will attempt to achieve the same standard as fully manned crews, creating dangerous shortcuts.
- b. After all risks have been assessed, the values would be totaled and a risk assessment assigned of either Extremely High (EH), High (H), Medium (M), or Low (L). All EH assessments must be reviewed by the Installation Safety Office. After this review, a risk decision must be made at the appropriate level of command, based on the level of risk, hazard involved, exposure and worst-case scenario.
- c. Following are definitions of Risk Assessment Matrix "Probability" and "Severity". These definitions must be applied to fit local conditions and requirements with common sense. Do not stretch to fit or disregard obvious application.

(1) Probability

- (a) Level A – Frequent. Likely to occur frequently in the life of the system, item, facility, etc.
- (b) Level B – Reasonably Probable. Will occur several times in the life of an item.
- (c) Level C – Occasional. Likely to occur sometimes in the life of an item.
- (d) Level D – Remote. Unlikely but possible to occur in the life of an item.
- (e) Level E – Improbable. So unlikely it can be assumed occurrence may not be experienced.

(2) Severity

- (a) Category I. Catastrophic. Death, total impairment of mission capability, serious injury (permanent total disability), or loss of an entire facility or system.
- (b) Category II. Critical. Serious injury (permanent partial or temporary total disability), serious impairment of mission capability, serious damage to critical facility or system.
- (c) Category III. Marginal. Relatively minor injury (lost workday accident), injury or illness that can be compensated, minor impairment of mission, or minor damage to equipment or systems.



(d) Category IV. Negligible. First aid injury or minor supportive medical care, minor or no mission impairment, or minor facility or systems impairment.

d. Use of the risk management process described above will enable leaders to make informed decisions on risk acceptance instead of gambling as they train.

#### **6-6. Risk Assessment Approval Authority**

a. Safety in military training and operation is crucial to preserving combat power; it is a product of enforced standards, good discipline and standardization. Military operations and training involve exposure to hazards and require risk acceptance. Applying and using the risk assessment process to effectively control or reduce the level of risk can be used to safely execute realistic training and military operations.

b. Commanders must be personally involved in the review and approval process of the risk assessment. This is the risk assessment signature authority for activities operating on Fort Bliss:

(1) For all TRADOC/IMA activities (partner and transient):

(a) Extremely High Risk: Installation Commander.

(b) High Risk: First colonel (O-6) in the chain of command or director.

(c) Moderate Risk: Battalion commander or equivalent LTC and CSM serving as a NCO Academy Commandant.

(d) Low Risk: Battery/company commander, division chief, branch chief, or senior instructor ADA School, USASMA, NCO Academy).

(2) For FORSCOM units and activities:

(a) Extremely High Risk: The first General Officer in the chain of command.

(b) High Risk: Brigade commander (O-6).

(c) Moderate Risk: Battalion commander (O-5).

(d) Low Risk: Battery or company commander.

(3) For WBAMC activities:

(a) Extremely High Risk: For Bliss Commanding General. (In CG's absence, DCG can approve).

(b) High Risk: WBAMC Chief of Staff.

(c) Moderate Risk: Department managers.

(d) Low Risk: Hospital maintenance engineer & supervisors.

(5) For JTF-6 units and activities: Use the above TRADOC guidance when operating on Ft. Bliss. In CG's absence, CG, JTF-N approves extremely high risk operations IAW established procedures on and off Bliss.

(6) For 204<sup>th</sup> MI Battalion; 1<sup>st</sup> Battalion (Tng Spt) (ADA), 363d Regiment; National Guard & Reserve units and activities:

(a) Extremely High Risk: Fort Bliss Commanding General. (in CG's absence, DCG can approve).

(b) High Risk: Fort Bliss Chief of Staff or Brigade commander (located at Ft. Bliss).

(c) Moderate Risk: Battalion commander.

(d) Low Risk: Company/battery/detachment commander.

## **Chapter 7**

### **Special Emphasis Areas**

#### 7-1. General

Areas of emphasis in units and activities vary depending on the mission, degree of hazard, and operational difficulties. Such potential loss areas should be identified so effective controls can be instituted. This chapter identifies special safety emphasis areas identified by the Installation Safety Office and established by this command.

#### 7-2. Motor Pool Operations and Maintenance Safety

a. Prepare, publish, and post SOPs in the work areas. SOPs will cover each potentially hazardous operation, such as, but not limited to—

- (1) Use of grease racks and pits.
- (2) Tire changing and repair.
- (3) Battery shops.
- (4) Maintenance shops.
- (5) Welding operations.
- (6) Servicing brake linings and clutch pads.
- (7) Painting operations.
- (8) Re-fueling operations
- (9) Hazardous Materiel Storage (POL, other flammables)

b. Carefully plan traffic flow in and around buildings. Emphasize eliminating points of traffic conflict, blind corners, and close clearances. Post and enforce speed limits. Carefully evaluate parking areas before putting them into use. When possible, avoid parking and/or storing vehicles on sloping ground, inclines, and ramps.

c. Locate storage and dispensing stations for gasoline and oil products away from heavily traveled areas. Also locate them so that fuel will not spread or be carried to adjacent buildings in the event of a fire or rupture of a fuel tank. Enclose above ground tanks with a dike capable of containing 110 percent of the tank volume.

d. When not in use, protect grease pits with chain or rope barriers around the area or by pit covers. All installed and extension lights used in pits must meet the requirements for National Electrical Code (NEC), Class I, Group D, Hazardous Environment.

e. All lights and electrically operated equipment used in pits or within 18 inches of the floor of any indoor vehicle servicing area must conform with the requirements of OSHA standards and the NEC.

f. Containers used to hold oil and grease soaked rags will be emptied daily. Keep oily mops in racks on the outside of the building except when in use.

g. Do not use gasoline to clean parts, floors, pits, or any other materials. Only use solvents approved by the Installation Safety Office; the Fire Prevention and Protection Division and the Environmental Management Office, Directorate of Installation Support, and the Industrial Hygiene Section, Directorate of Health Services. Equip solvent tanks with a self-closing lid or fusible link. Keep lids closed when tanks are not in use.

h. Air used for cleaning purposes must not exceed 30 pounds per square inch when the nozzle is dead-ended. Effective chip guarding (a cone of air which directs debris forward) must be provided. Use eye protection.

- i. Operate vehicle motors in confined areas only when necessary repairs or adjustments are being made. Provide adequate ventilation by —
  - (1) Opening building doors.
  - (2) Using exhaust fans.
  - (3) Using a tailpipe exhaust extension system, which exhausts to the outside.
- j. Block vehicles jacked up or suspended by chain hoists with jack stands. Do not get under vehicles supported only by jacks.
- k. Only trained and qualified personnel will operate cranes and hoists.
- l. Use the following safeguards when inflating tires with split/locking rims.
  - (1) Use tire inflation safety cages.
  - (2) Use a lock-on air chuck with an extension air hose at least 10 feet long. The pressure gauge located in the air hose must be at least 10 feet from the cage. (The stock number of the hose and gauge assembly is NSN 4910-00-441-8686. The male end of the lock-on chuck stock number is NSN 4730-00-729-7076. The stock number of the female end of the chuck is NSN 4370-00-277-6948.)
- m. Servicing brake linings and clutch pads may pose a serious hazard from airborne asbestos fibers. The Directorate of Health Services will evaluate all such operations. The directorate will recommend protective measures. These measures must be followed.
- n. All lifting devices (hoists, cranes, jacks, forklifts) must be inspected, marked, load tested (when needed), and maintained per TB 43-0142 and OSHA standards.
- o. Spray painting is prohibited inside buildings unless approved ventilation systems and/or paint spray booths are installed. The Installation Safety Office, in consultation with the Industrial Hygiene Section and the Environmental Management Office, will approve all systems.
- p. Eye Wash stations will be inspected weekly per OSHA requirements.

### 7-3. Precautions Against Carbon Monoxide Poisoning

Carbon monoxide is produced by incomplete fuel combustion. It is serious hazard in areas where fuel-burning devices are used with insufficient ventilation. To prevent carbon monoxide injuries, take the following measures and precautions.

- a. As applicable, commanders and other supervisors will request surveys from the Directorate of Health Services to determine if a carbon monoxide hazard exists in any of their areas of responsibility. Surveys should be made in the following areas just before cold weather season:
  - (1) Shops.
  - (2) Warehouses.
  - (3) Classrooms.
  - (4) Heating plants.
  - (5) Other closed areas where combustible fuel is used.
- b. The interiors of Army vehicles, aircraft, cranes, construction equipment, or any other closed equipment using a combustible fuel should be checked for carbon monoxide. Inspections should be made for defective exhaust systems.
- c. A carbon monoxide testing device must be used to determine the concentration in areas where it is determined a hazard may exist. The Directorate of Health Services will perform these tests as requested. The directorate will recommend corrective action when the maximum allowable concentration is exceeded.
- d. Commanders and other supervisors must ensure that all personnel are oriented on carbon monoxide hazards before the cold weather season arrives.

- e. Take precautions at all times to safeguard personnel against carbon monoxide poisoning from engine exhaust while operating or servicing –motor vehicles or while being transported in motor vehicles.
- f. Vehicles will not be parked and left running to keep the vehicle or driver warm. If engine operation is required for radio operations or other tactical reasons, vehicles must be ventilated. Operators must be required to dismount periodically.
- g. Building occupants should ensure areas around furnaces, water heaters, ranges and room heating engine powered equipment are clear for proper circulation. Such areas should be inspected periodically and especially before starting heating units for the winter season. The use of locally purchased carbon monoxide detectors is encouraged.

#### **7–4. Pedestrian and Bicycle Safety**

a. Pedestrian safety. Pedestrian safety shall be an integral part of each installation traffic safety program. The program shall include—

- (1) Separation of pedestrian and motor vehicle traffic to the maximum extent possible.
- (2) Posting regulatory speed limit signs at all vehicle entrances to military installations. In concentrated troop areas (for example, company areas, billeting areas) and along all routes of troop march, regulating signs will be posted that limit vehicle speed to 10 MPH.
- (3) Sidewalks, pedestrian crossings, handicap access ramps, and bicycle paths must be constructed in accordance with Manual on Uniform Traffic Control Devices for Streets and Highways.
- (4) Educational programs that will assist leaders promote use of paths or sidewalks along roadways and wearing reflective outer garments during periods of reduced visibility.
- (5) Special emphasis on the protection of children walking to and from school, entering and leaving school buses, and playing in DOD housing areas.
- (6) Individuals are not authorized to skate, jog, run, or walk on roadways during high traffic density and peak traffic periods. Installation commanders shall designate which roadways and times that apply. Installation commanders shall establish designated routes for organized physical training formations that will limit exposure of troops to motor vehicle traffic.
- (7) Personnel running, not in troop formation, will wear reflective vests or belts during hours of limited visibility.
- (8) The wearing of portable headphones, earphones, ear or other listening devices while jogging/running, bicycling, or skating/skateboarding on or adjacent to roadways or roadway intersections on DOD installations is prohibited.
- (9) Approved protective headgear will be worn while using powered and non–powered scooters, skateboards, roller skates, and roller blades. Hand, elbow, and knee protection is highly recommended for these type activities.

b. Running/marching safety

- (1) Foot columns must march or run on the right shoulder and off the roadway, when possible. Otherwise, they march or run on the extreme right-hand side of traveled streets, avenues, and roads in columns of four (when practicable).
- (2) The officer in charge or noncommissioned officer in charge (NCOIC) must be positioned to effectively control the movement of soldiers and not impede traffic. Road guards must be sent to all intersections the column approaches. They will be sent in sufficient time to allow vehicular traffic to halt without endangering the lives of soldiers or creating traffic hazards.

- (3) All foot columns will comply with traffic signals. Road guards must use extreme caution by looking to the right, left, and front before entering an intersection. After traffic is halted, soldiers will double-time across the intersection.
- (4) Place road guards 50 meters behind and ahead of all formations. Road guards will wear reflective vests at all times.
- (5) The only personnel allowed outside of the formation are the cadence caller, the NCOIC, and the commander. These three personnel will never run across the highway centerline.
- (6) Safeguard personnel unable to remain with the formation (stragglers) by one of the following methods.
  - (a) Units may provide extra cadre, safety equipment, and road guards for a straggler formation.
  - (b) Trail vehicles may immediately pick up stragglers.
  - (c) Stragglers may be equipped with safety gear, such as a reflective vest. Such safety gear must conform to all requirements for individual runners.
- (7) When soldiers are required to march or run during the hours of darkness or during periods of limited visibility, the front and rear of the column must be equipped with a light.
- (8) At night, equip road guards with reflective equipment and flashlights. Position them 50 meters to the front and rear of the column to warn approaching motorists.
- (9) For additional protection, all personnel in the front and rear ranks, as well as the cadence caller, the NCOIC, and the commander, may wear reflective vests. Do not conceal vests with a pack, poncho, or any other equipment or clothing.
- (10) If unit commanders see their personnel causing traffic congestion, they will give a flanking order that places the soldiers off the roadway. This will permit resumption of traffic. Motorized traffic when permitted may cautiously proceed past a formation at a speed of not more than 10 miles per hour. Persons seeing a violation of this speed limit will take down the license plate and/or post registration number of the vehicle. They will turn in the information to the Provost Marshal Office.
- (11) Marching/running soldiers in formation have the right-of-way over all other traffic except emergency vehicles.
- (12) All personnel taking part in police call will wear reflective vests at all times. Police call will not be performed near heavily traveled roadways during rush hour.
  - b. Restrictions on unit running. Runners in unit formation are a common sight on the installation, especially during early morning. Running can be extremely hazardous during the early morning because of heavy traffic and reduced visibility. To ensure safety, while still fully supporting physical training programs, the following restrictions must be imposed.
    - (1) Units must not attempt to close installation gates or emplace any roadblocks. Units may block staging areas by obtaining prior approval from the Traffic Branch, Provost Marshal Office.
    - (2) Units will not run in formation more than four abreast. Unit's leaders must exercise caution to not block the other lanes of traffic. This will allow vehicles to pass the formation safely. One unit formation will never attempt to pass another.
    - (3) Units will not run in housing areas. Routes bordering housing areas are designated "quiet run" areas. No cadence will be sounded.
    - (4) Do not use SSG Sims Road, east of Biggs Street on Biggs Army Airfield, for unit physical training, running, or jogging.
    - (5) Formation runs are prohibited on Sheridan Road. Exceptions are reserved for the Commanding General and Chief of Staff.

(6) If a unit uses a follow vehicle, the driver must comply with all traffic laws. The driver will not proceed through traffic control devices (stop signs and red lights) with the formation.

(7) If two units approach an intersection at the same time of intersecting paths, the smaller element will yield to the larger element. The smaller element will slow down, mark time, or turn to avoid collision. If the units appear to be the same size, the unit on the right will be given the right-of-way by the other unit.

c. Restrictions on individual runners.

(1) Run on sidewalks or the shoulder of the road where available. In other areas, run on the extreme left side of the roadway. Face oncoming traffic. Yield to vehicles when necessary. Avoid streets with heavy traffic.

(2) Run in single file when jogging with others. Do not run two or more abreast.

(3) Cross roadways at intersections or crosswalks. Stop for red traffic signals and stop signs. Observe all other official traffic control devices.

(4) At uncontrolled intersections, anticipate danger and check traffic before crossing.

(5) Wear light-colored clothing, especially when running in the early morning, at dusk, or at night.

(6) Do not wear earphones or headphones when running. These instruments close the listener off to the surrounding environment and its warning noises. Runners must have the full use of their hearing to stay aware of traffic sounds, vehicle horns, and other audible warning signals. Runners must also have the full use of their hearing to all of them to be aware of vehicles approaching from outside the field of vision.

(7) Do not run on SSG Sims Road, east of Biggs Street on Biggs Army Airfield.

(8) Individual runners or informal groups of runners must yield the right-of-way over vehicles only at roadway locations guarded by crosswalks.

(9) Runners who violate traffic laws and safety principles not only endanger themselves but also impede the safe movement of traffic. Both motorists and runners must be alert and courteous at all times.

(10) Wearing of reflective vest/belt during hours of limited visibility or darkness is required on the installation for all runners.

c. Bicycle Rollerblades, Skates, Skateboard, and Scooter Safety

(1) Bicycle safety shall be an integral part of each installation traffic safety program.

(2) Helmets, approved by the Consumer Product Safety Commission (CPSC) will be worn by all personnel including Family members who ride bicycles, skate, skateboards, or scooters on Army Fort Bliss. Previously purchased helmets certified by the American Society for Testing and Materials may also be worn but when purchasing a new helmet, riders should look for the CPSC certification.

(3) For Government-owned 3-wheeled bicycles that are operated within "operational work areas," commanders may use CRM procedures to determine exceptions to the helmet requirement.

(4) The wearing of headphones, earphones, or other listening devices while bicycling, skating, skateboarding, or riding a scooter or adjacent to roadways on Fort Bliss is prohibited.

(5) When bicycling on roadways on DOD installations during hours of darkness or reduced visibility, bicycles will be equipped with operable head and taillights, and the bicyclist will wear a reflective upper outer garment.

(6) Wear other appropriate safety equipment such as knee/elbow pads when skating/skateboarding.

- (7) Do not skate or skateboard at night.
- (8) Skate/skateboard on smooth and paved surfaces without traffic.
- (9) Avoid skating/skateboarding on streets, driveways, or surfaces with water, sand, gravel, or dirt.

c. Issued personal protective equipment.

- (1) Fluorescent or reflective PPE shall be provided to and used by all personnel who are exposed to traffic hazards as a part of their assigned duties, for example, marching/running/jogging troops, road guards, traffic control personnel, road construction crews, police call, electricians, or telephone repair personnel working on outside overhead lines.
- (2) Troop formations, during periods of reduced visibility, will post front and rear guards 50 meters in front and to the rear with reflective vests.
- (3) Troop formations moving on roadways during periods of darkness will be provided flashlights with wand or luminescent chemical lights.

#### 7-5. Sports and Recreation Safety

a. Sports and recreation play a key role in maintaining the Army as a premier fighting force. Physical exertion, discipline, teamwork, and mental processes necessary to excel exercises and displays leadership. The competitiveness that is a natural part of sports contributes the physical and mental growth of Soldiers. Improvements in morale result from well-designed and executed sports and recreational programs.

b. Recreational safety programs focus attention on the risk associated with many recreational and sport activities, both on and off duty, that are significant contributors to injury and sometimes to death. These risks encompass the gauntlet of possible accidents, from falls to being struck by various objects, to accidents involving various means of transportation. Most injuries from sports and recreational activities are relatively minor: bruises, cuts and strains. However, even these minor injuries may contribute to the temporary loss of manpower and less effective on-job performance. The term "sports and recreation" will include sports, physical training and recreational activities. Recreational activities include nonphysical related activities as well as physical (that is, recreation centers, arts and crafts, library activities, and so on).

c. Many recreational activities involve athletic or sporting events of some kind. Recreational activities frequently involve varying degrees of risk. Activities involving frequent contact with other players or equipment significantly contribute to accidents.

(1) Football (tackle followed by flag football) leads the way with injuries, (followed by baseball/softball and basketball).

(2) When a sport is unsupervised, the number of injuries tends to increase (that is, street basketball, pickup baseball).

(3) Sporting activities involving individual participation (boating, fishing, hunting, and so on) tend to have more fatal injuries than those that are supervised. Examples of single sports include hiking, boating, and hunting, among others.

(4) Most sports injuries can be attributed to five basic causes, or a combination thereof—

- (a) Not following the rules.
- (b) Lack of skill and ability for the sport being played.
- (c) Not using proper personal protective equipment.
- (d) Not in condition for the activity being pursued.
- (e) Inadequate warm up/cool down.

- (5) The most effective means of preventing sports and recreational accidents is through the coordinated, unified effort of all involved, Army agencies, units, and individuals. The commander has to take the lead to meld the separate organizations together in the pursuit of safety.
- (6) The “weekend player” syndrome is typical of the person who is not in condition for the activity at hand. By not participating in physical activity that prepares the body for sport/play activities the person risks over-stressing muscles, heart and other body parts to the point that injury may occur.
- (7) Commanders, directors, supervisors should encourage personnel (through advertising, chain of command, and other appropriate means) of the importance to precondition for sports and recreational activities.
- (8) Prior to participating in physically demanding sports or physical training, a physical examination should be performed by medical personnel (preferably a medical officer) to ensure there are no unknown factors that might place the participant at higher risk of injury.
- (9) For some activities, such as football, the installation commander may require a medical examination each year to ensure that each participant is physically able to take part.
- (10) Physical conditioning should be built into the recreational program to bring all participants to a similar level of physical readiness.
- (11) Commander, directors and supervisor of sports and recreational activities and operations are responsible for ensuring that recreational areas are safe and are maintained to the extent required for safe use. The facility manager will ensure that recreational areas are safe and are maintained to the extent required for safe use.
- (12) Planning for sports activities should include deciding what equipment and facilities are required. Equipment available for use by Soldiers and dependents, and perhaps the public needs to meet applicable OSHA, DOD, and Army safety standards. This applies to swimming equipment, equipment used for activities (baseball, volleyball, softball, football, and so on). Safety equipment at recreational locations must meet these standards and be present when the facility is being used. Examples of this are—
- (a) Rescue equipment (rings and poles) at swimming pools and areas.
  - (b) Proper bats for baseball/softball (that is, bats not made of titanium, approved head gear for batters).
  - (c) Rental equipment that is well maintained and conforms to safety standards.
  - (d) Inspections should be conducted of recreational equipment (for example, equipment - bats, pads, helmets; boats; bikes; off-road vehicles and similar devices) used on the installation.
- (13) The commander will establish and encourage a practice rule against alcohol being used by participants of motor sports (including boating, off road racing, and so on). Alcohol use by participants in any recreational activity should be monitored.
- (14) SOH staff will assist leaders supervising sports and recreational activities integrate CRM in—
- (a) Identifying hazards.
  - (b) Assessing the hazard.
  - (c) Determining the risk associated with each hazard.
  - (d) Implementing controls.
  - (e) Supervising implementation of the controls.



(f) Verifying that the rules for each recreational activity have been established and that all participants (players and coaches) will be trained on the rules. Rules will be enforced to promote safety during each event.

(15) The commander should ensure that the schedules for sporting activities are reasonable in that teams and players are evenly matched. This reduces the chances for one primary source of injury, the scheduling of two teams with wide variation in athletic ability. When one team overpowers another, the opportunity for injury increases dramatically. Scheduling should also allow for sufficient practice and conditioning time to get the players in good physical shape for playing and to ensure that they know how to play the game, including the rules and proper use of safety equipment.

(16) Component officials who enforce the rules are vital to safety. The proper application of rules serves to reduce hazards and injuries. After the coaches and supervisors have set the precedent for following the rules and playing accordingly it is the officials who have the responsibility for making sure that this occurs on the playing field.

(17) Should an accident occur—

(a) The first priority is to render the appropriate first aid to the injured person. Coaches and supervisors should be trained in first aid and appropriate procedures to be followed should an accident occurs.

(b) Accidents will be reported through formal channels.

(c) At the local level, accident information will be used to determine if there are ways to prevent the situation in the future. Accident records should be used in the analysis of sports activity to identify trends and determine where action is required to correct a problematic situation.

Accident history should be used when stressing the importance of safety to participants.

## **7-6. Other Activities /Recreational Safety**

a. Activities in this category fall into indoor and outdoor categories. Outdoor activities are exemplified by horseshoes,volleyball, badminton, tennis, and shuffleboard. Indoor activities cover such areas as table tennis, darts, billiards,and air hockey. Other recreational activities also include shops where Soldiers can work on their motor vehicles, wood working shops, and ceramic kilns. Examples of hazards are—

(1) Lifting of heavy material.

(2) Respiratory hazards (air contaminants (dust, mists from paints)).

(3) Objects dropped on the hands or feet or other part of the body.

(4) Noise.

(5) Flying objects.

(6) Hazardous materials (that is, chemical, acids, and so on).

(7) Sharp tools.

(8) Weather conditions.

b. Staff personnel will develop risk assessments for each activity and participants will be trained in applicable safety measures. Staff personnel monitoring and/or supervising the area has to take responsibility for ensuring the safe operation of equipment and conduct of the activity. To counter the hazards that are present during recreational activities it is necessary to—

(1) Establish understandable rules that are posted and available for review by all participants.

(2) Post operational instructions for machinery and games, ensuring safety warnings, and cautions are prominently posted.

(3) Train staff personnel on all equipment and tools in their area.

- (4) Do not allow use of power machinery and tools until the operator has been instructed on proper operation and use of appropriate safety equipment (such as goggles for sanders).
- (5) Enforce the use of PPE.
- (6) Inspect all machinery, tools, and recreational items prior to use and required daily maintenance will be performed prior to use.
- (7) Remove all defective equipment from service until repairs have been accomplished.
- (8) Require personnel use the appropriate PPE to use equipment, tools and game items. This equipment has to be suitable for the activity and the environment in which it is being used. For example, hearing protection may not be required to operate a particular piece of machinery, but if that item is to be used in an area where noise from other sources is in the range that requires protection then the person operating the item that is within safe hearing limits must also wear hearing protection.
- (9) Inspect, regularly, the activity area to provide guidance on—
  - (a) The safe operation of equipment and tools.
  - (b) The proper use of personal protective equipment.
  - (c) The removal of personnel using equipment in an unsafe manner.
  - (d) The personnel following and adhering to facility standing operating procedures (SOPs).
- (10) Upon cessation of activities, tools, machinery, and game equipment will be cleaned if necessary and returned to the proper storage area. Any problems or failures encountered will be reported to the staff for corrective action and maintenance as required.

#### 7-7. Bleacher Safety

- a. All bleachers located on the installation (wood or metal, fixed or real property) will be inspected semiannually by the unit commander or civilian supervisor having jurisdiction and property accountability.
- b. Bleachers will be visually inspected to ensure that —
  - (1) They are level.
  - (2) There are no broken or missing cross braces.
  - (3) There are no loose bolts, nuts, seat boards, or footboards.
  - (4) All end caps are in place and riveted.
- c. Stencil the due date of the next periodic inspection in bright paint on bleachers certified as safe for use. Bleacher markings will be ½-inch thick or larger letters. Place markings on the first seat board on the right-hand side of each bleacher set.
- d. Immediately place off-limits to all personnel any bleachers identified as unsafe until repairs are accomplished. Users will coordinate repairs with the DPW Work Order Section.
- e. Install new bleachers per the manufacturer's instructions and guidance from DPW maintenance inspectors. Do not use newly installed bleachers until a safety inspection has been conducted and the bleachers are date stamped.
- f. Do not use bleachers moved or relocated to another area until a safety inspection has been conducted.
- g. The Installation Safety Office will inspect bleachers, which fall into the categories in e and f above. Users will coordinate these inspections telephonically with the Installation Safety Office at 568-2510/7819.

## 7-8. Electrical Hazards

- a. Only trained and qualified personnel may perform work on electrical transmission lines or electrically powered equipment. Defective electrical wiring, downed wires, and other electrical hazards should be reported to the DPW Work Order section for correction.
- b. The possibility of accidental contact with electrical power lines must be evaluated before commencing any operations. Necessary action must be taken to prevent such contact.
- c. Antennas will not be erected or dismantled where the possibility of contact with energized electrical lines exists.
- d. Commanders, directors, and other supervisors will analyze material handling operations and the electrocution potential of the equipment involved. They will apply the following safeguards as appropriate.
  - (1) De-energize power lines, if feasible, when equipment is being used close to electrical lines.
  - (2) Notify the Directorate of Installation Support when cranes will be used in close proximity to energized power lines.
  - (3) Position and block cranes to ensure that no part of the equipment, slings, or load can come in contact with an energized line.
  - (4) If a crane must be placed where any part of it can be brought within 10 feet of an energized power line, the major unit or activity safety officer must be notified. He or she must ensure that competent personnel are directing the operations. The safety officer will also ensure that all possible safeguards are used.
- e. DPW must approve any signs or communication lines attached to electrical utility poles.
- f. Do not string field communications wire over utility lines.

## 7-9. Machinery and Other Equipment Safety

- a. Do not operate any machinery or other equipment unless properly trained and assigned by proper authority. Use adequate protective clothing and equipment.
- b. Machines must have guards installed per OSHA standards.
- c. Do not operate machines during inspection, adjustment, lubrication, or any repair that presents a safety hazard.
- d. Do not elevate machines or other equipment without adequate support to ensure stability.
- e. Do not wear rings and other jewelry, loose clothing, and long hair unbound —
  - (1) When working around moving machinery.
  - (2) During vehicle maintenance.
  - (3) During other hazardous industrial operations.
- f. Jewelry, especially rings, is discouraged for personnel operating or riding in the cargo area of vehicles. Finger rings may catch on tailgates and other parts of trucks while dismounting.
- g. Use the following safeguards with abrasive wheels.
  - (1) Only operate abrasive wheels —
    - (a) At speeds prescribed by the manufacturer.
    - (b) When properly mounted.
    - (c) With the perimeter guards and tool rests secured in the proper positions.
    - (d) With the user protected by safety goggles.
  - (2) Grind on the sides of wheels only on wheels specifically designed for side grinding.
  - (3) Immediately mark and remove from service any wheels containing cracks or other flaws.
  - (4) Properly store un-mounted wheels to protect them from damage.
- h. Use the following safeguards with compressed air equipment.

(1) Do not direct compressed air and other gases at any person or the clothing of any person. Working pressures (pressure actually being released at nozzle) will not exceed 30 pounds per square inch when used for cleaning purposes.

(2) When using compressed air equipment for cleaning or painting, operators will use adequate eye and respiratory protection. This will prevent injuries or unfavorable health conditions.

(3) Secure full and empty pressure bottles with chains or clamps to prevent damage. Do not expose full or empty pressure bottles to the elements or extreme heat. Keep caps on bottles – when gauges are not attached.

(4) Drain condensation from air compressor tanks at least weekly. Drain more frequently during high humidity and heavy use. Do not operate compressors at pressures in excess of the permissible pressure stated on the instruction plate.

i. Use the following safeguards during welding operations.

(1) Use adequate protective equipment for the operator and all others within the area of operation when performing welding and cutting operations (acetylene or electric).

(2) All personnel in organizations where welding or cutting operations are performed will comply with OSHA Standard 1910.252.

(3) Equip all acetylene welding apparatus with backflow check valves between the work and the regulator.

j. Electric fans will normally be operated at least 7 feet above the floor. This will prevent injury to personnel. If fans must be operated at a lower height, they must have auxiliary guards adequate to prevent contact of blades with hands, fingers, or clothing.

k. Use the following safeguards with gas-powered lawn mowing equipment

(1) Riding mowers. Operators must be trained or licensed before operating this equipment. Wear sturdy shoes (leather, not fabric) and hearing protection.

(2) Push mowers (electric or gas). Hearing, eye, and foot protection is required. Do not lift the machine while operating.

(3) Gas-powered weed eaters. Hearing, eye, and foot protection is required. Never attempt to add fuel or make engine adjustments while the engine is running or the equipment is strapped to the operator.

#### 7-10. Tripping Hazards

Keep all aisles, passageways, stairs, sidewalks, and other walking surfaces free of tripping hazards.

#### 7-11. Painting Stairs and Walkways

Do not paint stairways and walkways unless non-skid treads are applied over the painted surface.

#### 7-12. Prevention of Accidents during the Summer Season

During April, commanders, directors, and supervisors will conduct briefings for all personnel on the hazards of the summer season. Topics to be discussed, as a minimum, will include —

a. Swimming and boating.

b. Mountain climbing.

c. Motorcycle riding.

d. Prevention of heat injuries.

e. Lightning.

f. Snakes.

- g. Insects.
- h. The use of sunscreens.
- i. Hanta-Virus.

#### 7-13. Severe Weather Precautions

- a. Each organization must be prepared to deal effectively with the hazards associated with inclement weather. Such hazards include slippery walkways due to rain, snow, or ice and hazards associated with high winds. A plan of action must be prepared to handle these hazards. Each organization will ensure that all personnel are familiar with the plan.
- b. When hazardous, icy or snowy driving conditions develop after regular duty hours, all personnel will monitor local television and radio stations for reporting instructions.

#### 7-14. Water Safety

Water activities should be conducted IAW AR 385-10. Water activities are a leading cause of accidental deaths to soldiers across the Army. If swimming lessons are needed then contact local Red Cross Chapter for information. Some precautions that should be taken to prevent water-related accidents will include–

- a. Not overestimating swimming ability.
- b. Swim in designated areas only.
- c. Never swim alone.
- d. Never dive into lakes and rivers.
- e. Don't mix alcohol and swimming.

#### 7-15. Railhead Safety Operations

- (1) A railhead safety officer and safety NCO will be appointed for the duration of the operation and no other duties will be assigned.
- (2) Commanders shall implement a railhead certification program for units assigned to rail loading operations, with assistance of local movement control or rail personnel. Units can request railhead safety training thru Installation Unit Movement Coordinator at 568-9754/6088.

#### 7-16. Port Safety Operations

- (1) A port operations safety officer and safety NCO will be appointed for the duration of the operation and no other duties will be assigned.
- (2) Personnel involved in port operations shall be trained in their respective duties and the hazards involved in the operating area.

### Chapter 8

#### Workplace Inspections and Protective Equipment

##### 8-1. Inspections

Safety inspections identify unsafe practices and physical conditions. They are essential to a successful accident prevention program. To properly direct efforts to remove the cause of accidental injuries and property damage, safety inspections must be conducted at all levels. Minimum requirements for safety inspections are as follows.

- a. All personnel will, while performing their normal duties, survey their operations, activities, facilities, equipment, and procedures for safety hazards. They will take or recommend the necessary action to remove any hazard.
- b. Supervisory personnel will conduct safety inspections of their assigned work areas. They must be observant at all times to note and correct unsafe acts and conditions.
- c. Collateral duty safety officers/representatives will conduct scheduled or unannounced inspections based upon the type of activity and degree of hazard involved. They will conduct quarterly inspections of hazardous operations facilities. Other less hazardous activities will be inspected annually. Collateral duty safety officers representatives will forward inspection reports to their appointing supervisors for corrective action. The safety officers/representatives will also make followup inspections to ensure that unsafe practices or conditions have been eliminated or corrective action applied. The inspected activity will maintain records of all such inspections at the activity for 2 years. The safety officer/representative conducting the inspection will forward a copy of the report to the Installation Safety Office.
- d. Installation Safety Office personnel will inspect high-hazard worksites at least annually, They will use the Standard Army Safety and Occupational Health Inspection procedures per AR 385-10. Inspecting personnel may conduct these inspections with or without prior notification. Management will notify employee/union representatives when it receives prior notice of an inspection.
  - (1) At the end of the inspection, inspecting personnel will provide a hand-written report of deficiencies noted during the inspection to the supervisor of the organization inspected.
  - (2) Inspecting personnel will forward an official inspection report to the head of the organization inspected. The report will cite hazards, the safety standard referenced, and recommended corrective action.
  - (3) The head of the organization inspected will respond, in writing, to the Installation Safety Office on the corrective action taken for each cited deficiency. The organization head must respond within the time frame indicated on the inspection report (usually 30 calendar days). The organization head should establish follow-up procedures, including a suspense file, to ensure that each deficiency is corrected. A record of uncorrected deficiencies should remain in an active file. The organization head should review this file periodically until all deficiencies are corrected.
  - (4) DPW will route all DA Forms 4283 that result from safety inspections to the Installation Safety Office for review, ranking, and assignment of a risk assessment code.
  - (5) The Installation Safety Office will maintain a record/log of all safety and occupational health deficiencies identified. It will maintain this log for 5 years following the year of correction.

## 8-2. Reports of Unsafe or Unhealthful Working Conditions

- a. Each person within this command will identify to his or her supervisor any unsafe or unhealthful working condition that is observed. The immediate supervisor will investigate such reports promptly and take appropriate corrective action. The Installation Safety Office will provide technical assistance when requested.
- b. If the supervisor assesses the hazard severity as likely to occur immediately and cause death, severe injury, severe occupational illness, or major property damage, he or she will immediately stop the operation or ensure that the hazard is immediately eliminated. The supervisor will then notify the Safety Director. If the Safety Director finds that the corrective action taken is inadequate, he or she will secure approval of the head of the organization involved for measures to be taken to prevent worker exposure to the hazard.

c. Reports of unsafe or unhealthy conditions should be handled at the operational level whenever possible. This will ensure timely correction of the problem. Personnel should use the following means to report these conditions:

- (1) Oral reports directly to the super-visor or collateral duty safety officer representative.
- (2) Reports through operational channels.
- (3) Telephone calls to the Installation Safety Office.
- (4) Use of the Army Hazard Reporting System as described below.

d. If the individual is dissatisfied with the corrective action taken by the immediate super-visor or chain of command, a written report can be submitted directly through the Army Hazard Reporting System to the Safety Director. This system provides a route for personnel to bring complaints directly to the attention of the Installation Safety Office, supplementing reports to supervisors.

- (1) Whenever possible, reports of hazards will be submitted on DA Form 4755 (Employee Report of Alleged Unsafe or Unhealthful Working Conditions). Supervisors will ensure that blank DA Forms 4755 are readily available at the operating level. Copies can also be obtained at the Installation Safety Office.
- (2) All reports must include the name of the person making the report. The identity of persons requesting anonymity will not be revealed by the Safety Director or the director's staff. Within 10 working days of the receipt of a report, the Safety Director or the director's representative will conduct an onsite inspection of the alleged hazard. The originator of the hazard report must receive a written response within this 10-day time frame. This response will contain the results of the investigation. If a hazard exists, the reply will include a summary of the actions to be taken and the anticipated date for corrective action. If a hazardous condition does not exist, the reply will include the basis for that determination.
- (3) All Department of the Army personnel, both military and civilian, reporting safety violations per AR 385-10 and 29 CFR 1910 will not be subjected to coercion, discrimination, or reprisals for reporting safety violations. Any person who hinders, coerces, discriminates against, or takes reprisals against any person making such reports shall be subject to administrative and/or punitive disciplinary action.

e. Supervisory personnel will post DD Form 2272 (DOD Occupational Safety and Health Protection Program (Poster)) on all unit/activity bulletin boards to help people obtain information on how to report job safety and occupational health hazards.

### **8-3. Protective Clothing and Equipment**

When individuals are exposed to specific hazards, personal PCE is provided without cost to personnel. Safety shoes or boots and glasses are issued to personnel as non-recoverable property. Organization SOPs will list the authorized PCE required for a job. Work situations requiring the use of PCE not covered by approved SOPs should be documented. Refer them to the Installation Safety Office for evaluation.

a. Authority for purchase and issue

- (1) Section 7903, title 5, United States Code and authorize the purchase and maintenance of PCE.
- (2) Table 8-1 authorizes the issue of generic types of PCE. Supervisors must evaluate exact PCE requirements, with help from the Installation Safety Office or the Industrial Hygiene Section, Preventive Medicine Service.

(3) The Installation Safety Office will determine the need for PCE for any military occupational specialty, job title, or activity not covered in table 8-1.

b. Purchase, maintenance, and use

(1) The unit or activity will furnish PCE at no cost to personnel.

(2) PCE will be maintained in a sanitary and reliable condition.

(3) Wearing specified PCE is an absolute requirement. Commanders and civilian supervisors will initiate disciplinary action against military or civilian personnel under the Uniform Code of Military Justice or civilian personnel regulations for failure to use their PCE, as appropriate.

c. Protective clothing and equipment table

(1) Table 8-1 prescribes the clothing and equipment for use by USAG military and civilian personnel to protect them from hazards inherent in their jobs. This table does not cover all jobs requiring PCE. Supervisors are responsible for contacting the Installation Safety Office to determine PCE requirements for activities not listed.

(2) Commanders, directors, and other supervisors, as appropriate, may prepare their own PCE table for convenience of their personnel provided it meets the standards in table 8-1 and .

d. General use

(1) Supervisors, with help from the Installation Safety Office, analyze each operation to determine the need for specific kinds of special clothing, personal protective clothing, or equipment.

(2) Protective clothing is provided to personnel who may be exposed to toxic material or equipment. The following criteria govern the need for protective clothing.

(a) Special purpose protective and personal protective clothing and accessories are issued when conducting toxic operations in contaminated or potentially contaminated areas.

(b) Special articles of personal protective clothing and equipment are authorized and provided, by pertinent regulation, to lessen possible exposure or personal injury.

e. The following factors are considered when determining the need for protective equipment:

(1) Specific exposure.

(2) Individual habits and unsafe acts.

(3) Accident experience.

(4) Individual suggestions.

(5) Appropriate standards and regulations.

f. The Installation Safety Office will approve all items of special personal protective clothing and equipment before procurement. This will assure compliance with applicable standards and avoid duplication.

g. Supervisory personnel must monitor operations for unauthorized wear of special clothing. Supervisory and safety personnel must monitor work locations for proper wear of required protective clothing. They must conduct periodic inspections to verify proper maintenance of PCE.

h. The purchase of personal PCE is funded by the organization needing them. Supervisors must maintain a record of the personal PCE issued to each individual.

i. Personnel are authorized to wear individually procured PCE as long as the Installation Safety Office approves such PCE. This will assure compliance with applicable standards.

j. Eye protection

(1) Eye protection must be used in all operations and areas determined to be hazardous to eyes.



- (2) All civilian employees who need eye protection should be screened to determine visual efficiency. This screening should occur within 30 days after employment and every 2 years thereafter.
  - (3) Contact lenses will not be worn in a dusty or chemical environment.
  - (4) When required, plano or prescription-ground safety eyewear is issued to military personnel and civilian employees as non-recoverable property.
  - (5) Each individual will safeguard, store, clean, and maintain all PCE, including safety glasses.
  - (6) Personnel should not use any PCE that is unsafe or not properly maintained.
  - (7) If civilian employees choose to procure safety glasses privately, they may do so. The glasses purchased must meet all requirements of ANSI Standard Z87. When the Occupational Health Clinic determines the need for a new or changed prescription during occupational health examinations or special need, the eye exam will be provided at Government expense. Military personnel may obtain prescriptions from William Beaumont Army Medical Center (WBAMC).
  - (8) This regulation approves safety glasses for operations or activities listed in table 8-1 under protection required for the eyes. There is no need for FB Form 100 (Request for Safety Shoes/Safety Glasses) to be approved by the Installation Safety Office. This regulation is the approving authority. The supervisor can sign in the approved box for the safety officer and, under the remarks section, refer to table 8-1, Fort Bliss Regulation 385-10. Only those military personnel and civilian employees whose job operations/activities are not listed in table 8-1 will require justification. The Installation Safety Office must approve the FB Form 100.
  - (9) Photo-chromatic lenses (photogray) are not used for industrial safety lenses. Photo-chromatic lenses permit a high transmission of near ultraviolet and infrared light. They have a rather slow recovery time to maximum transmission of visible light. They also darken when exposed to many fluorescent lamps.
  - (10) Other organizations that have employees working in areas hazardous to eyes may submit requirements for safety glasses per the procedures listed in this chapter. A fund citation must be included in the request.
  - (11) Supervisors will consult with the Installation Safety Office to determine the adequacy and appropriateness of other types of protective eyewear; that is, full face shield for acid and so forth.
- k. Foot protection
- (1) All safety footwear must comply with ANSI Standard Z41-1983. Footwear must also meet the specific requirements of the task involved.
  - (2) The Central Issue Facility (CIF) will issue safety shoes/boots to military personnel as non-recoverable property.
  - (3) Civilian employees may obtain commercially designed safety footwear at their own expense. The footwear must meet ANSI –Standard Z41-1983. The Installation Safety Office must also approve footwear.
  - (4) Supervisors will fill out an FB Form 100 to request safety footwear for their personnel. Approved safety footwear is listed in table 8-1 under protection for the feet. Supervisors can approve and sign the request for the safety officer. They will state in the remarks section that the footwear is authorized per table 8-1, this regulation. This regulation is the approving authority for standard safety footwear. The following types of safety footwear are considered standard issue for personnel:
    - (a) Shoes, leather, steel toe (low-quarter).
    - (b) Shoes, leather, nonconductive, steel toe (low-quarter).
    - (c) Boots, rubber, steel toe.

- (d) Boots, leather, laced, steel toe.
- (e) Boots, leather, laced, nonconductive, steel toe.
- (5) For nonstandard safety footwear, the supervisor will fill out an FB Form 100. The supervisor will attach a written justification –to support the type of safety footwear required. Requests must be submitted to the Safety Director for review and evaluation.
- (6) If nonstandard footwear is required for medical reasons, the civilian employee can secure a prescription for orthopedic footwear at his or her expense. Alternately, the employee can make an appointment at the Occupational Health Clinic for an examination of his or her feet. The clinic will issue a prescription for specialized orthopedic footwear at the Government’s expense.
- (7) Other organizations that have employees working in areas hazardous to feet may submit requirements for safety shoes per the procedures listed in this chapter. A fund citation must be included in the request.
- (8) The individual must safeguard the safety footwear issued to him or her. The individual will replace any safety footwear lost or destroyed through negligence.
- l. Head protection. Personnel exposed to injury from falling or flying objects will wear protective headgear. Examples of jobs requiring head protection include—
  - (a) Working in construction areas.
  - (b) Working around cranes.
  - (c) Working under scaffolds.
  - (d) Working in warehouses storing objects above head level.
  - (e) Working around power lines.
- m. Hearing protection. Personnel employed in areas that have noise hazards will wear earplugs, muffs, or both to protect them from high levels of noise. Exact requirements for hearing protection are determined by a workplace evaluation by the Director of Health Services. Workplaces will be posted with hearing protection requirements as noted by Industrial Hygiene Section surveys. Hearing tests will be conducted during an employee’s annual physical or when needed.

**Table 8-1  
Protective clothing and equipment**

**Table 8-1**

Operation/Activity	Head and Face		Eyes			Respiratory		Body				Hands		Feet		Miscellaneous										
	Hard hat	Blast hood, sand	Ear plugs or muffs	Goggles	Goggles, chemical	Glasses, safety, spectacle	Glasses, safety, cup-type	Face shield, light duty	Respirator, air-supplied	Respirator, other	Apron, plastic or rubber	Apron, heavy canvas	Suit, slicker	Uniform, sand blast	Coveralls	Safety vest	Gloves, rubber	Gloves, leather, palm	Armbands or sleevelet	Shoes, safety, steel toe	Shoes, safety, nonconductive, steel toe	Boots, rubber, steel toe	Boots, laced, steel toe	Belt, safety	Cream, protective	Flashlight with wand
Acid/chemical handling				X		X		•		X						X					X					
Battery handling							X		•	X						X					X					
Battery charging																					X					
Barbed wire handling					X												X	X				X				
Boiler plant operations			X		X											X	X					X				
Buffing/burnishing (metal)					X	X		•									X					X				
Carpentry	X	X			X	X										X	X					X				
Chipping/scaling					X	X										X	X					X				
Cleaning with caustics					X	X				X						X						X				
Cleaning with steam			X	X	X	X				X	X					X						X				
Air hose (max 30psi)					X																	X				
Solvents					X					X						X						X				
Cleaning boilers			X		X											X	X					X				
Cleaning paint booths					X			•									X					X		•		
Debanding, head					X											X	X					X				
Decreasing vapor				X		•	•		X						X						X					
Drilling concrete brick, tile			X		X	X												X				X				
Drilling metal			X		X	X												X				X				
Electrical installation	X				X															X						
Electrical repair																				X						

Legend:

X - Use of equipment is mandatory

• - Specific information on hearing and respiratory protection must be obtained from the Directorate of Health Services.

**Table 8-1  
Protective clothing and equipment — Continued**

Operation/Activity	Head and Face			Eyes			Respiratory		Body					Hands			Feet			Miscellaneous							
	Hard hat	Blast hood, sand	Ear plugs or muffs	Goggles	Goggles, chemical	Glasses, safety, spectacle	Glasses, safety, cup-type	Face shield, light duty	Respirator, air-supplied	Respirator, other	Apron, plastic or rubber	Apron, heavy canvas	Suit, slicker	Uniform, sand blast	Coveralls	Safety vest	Gloves, rubber	Gloves, leather palm	Armbands or sleevelet	Shoes, safety, steel toe	Shoes, safety, nonconductive, steel toe	Boots, rubber, steel toe	Boots, laced, steel toe	Belt, safety	Cream, protective	Flashlight with wand	
Excavating	X		X		X														X		X						
Forklift operations					X												X		X		X						
Grass cutting					X																X						
Grinding, dry			X	X															X		X						
Grinding, wet			X	X																							
Housekeeping																X											
Loading/unloading																	X		X		X						
Trash/sawdust and so forth					X												X				X						
Machinist			X		X														X		X						
Maintenance/mechanics			X		X												X		X		X						
Sewing machine operations					X																						
Soldering					X																	X					
Spray painting					X			X														X					
Sheet metal	X		X		X												X		X		X						
Refrigerant equipment inspection and maintenance					X														X		X						
Workers exposed to traffic					X									X								X					
Welding				X	X			X									X				X						
Heavy equipment operator			X		X												X		X		X						
Vehicle, aircraft			X		X																	X					
Materials, handling					X												X		X		X						
Operation of cranes and other heavy equipment	X				X												X		X		X						

**Table 8-1  
Protective clothing and equipment — Continued**

Operation/Activity	Head and Face			Eyes			Respiratory	Body				Hands		Feet			Miscellaneous									
	Hard hat	Blast hood, sand	Ear plugs or muffs	Goggles	Goggles, chemical	Glasses, safety, spectacle	Glasses, safety, cup-type	Face shield, light duty	Respirator, air-supplied	Respirator, other	Apron, plastic or rubber	Apron, heavy canvas	Suit, slicker	Uniform, sand blast	Coveralls	Safety vest	Gloves, rubber	Gloves, leather palm	Armbands or sleevelet	Shoes, safety, steel toe	Shoes, safety, nonconductive, steel toe	Boots, rubber, steel toe	Boots, laced, steel toe	Belt, safety	Cream, protective	Flashlight with wand
Packing operations					X														X			X				
Painters, hand					X				X													X				
Plumbing					X												X		X			X				
Power mowers, trimmers			X	X	X																	X				
Sand blasting		X	X	X	X							X					X					X				
Sanding, power			X	X	X																	X				
Saws, power			X	X	X																	X				
Overhead operations	X				X														X			X				

## **Chapter 9**

### **Workplace Safety Programs**

#### **9–1. Introduction**

- a. This chapter prescribes guidelines and procedures for implementing major work place safety programs to protect Army military and civilian personnel working in nonmilitary unique operations. These guidelines should also be integrated in military unique operations to minimize risk as commanders conduct CRM.
- b. Workplace safety programs should be modified to fit local operations as determined by commanders and SOH staff to provide maximum safety and reduction of the risk of accidental loss.

#### **9–2. Hazard Communication Program**

- a. Hazardous Communication (HAZCOM) Program is established to ensure that hazardous information on all hazardous chemicals in the workplace is transmitted to affected employers and exposed employees. Policies and procedures of this program are established in accordance with 29 CFR section 1910.1200 and AR 700–141.
- b. Commanders and directors, safety, environmental, health, logistics, training, operations, personnel offices, and supervisory personnel at all levels who share responsibility for implementation of the Army HAZCOM Program should—
  - (1) Provide chemical specific training to trainers.
  - (2) Maintain the health hazard inventory.
  - (3) Maintain a central master file of MSDSs.
  - (4) Provide copies of MSDSs as needed.
  - (5) Interpret MSDS data as needed.
  - (6) Determine employees to be trained through field surveys.
- c. Commanders and directors will—
  - (1) Ensure a written comprehensive HAZCOM Program is developed, implemented, and maintained at each level of activity.
  - (2) Ensure all employees who use or are exposed to hazardous chemicals receive DOD HAZCOM training.
  - (3) Ensure all employees who use or are exposed to hazardous chemicals are trained on specific hazards of each chemical.
  - (4) Ensure supervisors maintain MSDS for each hazardous chemical that is used or stored.
  - (5) Ensure MSDSs are obtained from vendor for directly purchased items.
  - (6) Ensure hazardous material inventory is maintained and updated monthly in each work section.
  - (7) Ensure a copy of updated hazardous material inventory is forwarded to local Safety Office and Preventive Medicine.
  - (8) Ensure hazardous material containers are labeled in compliance with 29 CFR 1910–1200(f).
  - (9) Ensure employees have access to MSDSs.
- d. Supervisors will—
  - (1) Develop, implement, and maintain a written comprehensive hazardous communication program.
  - (2) Ensure all employees who use and are exposed to hazardous chemicals receive DOD HAZCOM training.

- (3) Ensure all employees who use and are exposed to hazardous chemicals are trained on specific hazards of each chemical.
- (4) Maintain MSDS for each hazardous chemical.
- (5) Obtain MSDS from vendor for directly purchased hazardous chemicals.
- (6) Maintain and update hazardous material inventory.
- (7) Label, tag, and mark hazardous material containers in compliance with 29 CFR 1910.1200(f).
- (8) Ensure employees have access to MSDSs.
- e. Units/directorates can coordinate with Installation Safety Office for HAZCOM training support. In addition, HAZCOM trained additional duty/collateral duty safety officers can conduct this training at the unit/directorate level.
- f. Supervisors will maintain rosters of Soldiers receiving HAZCOM training in their local training files.

### **9–3. Lockout/Tagout**

- a. Purpose. The purpose of this program is to establish minimum requirements for the lockout or tagout of energy isolating devices. It will be used to ensure that the machine or equipment is isolated from all potentially hazardous energy, and locked or tagged out before employees perform any servicing or maintenance activities where the unexpected energization, start up, or release of stored energy could cause injury. This program establishes minimum performance requirements for the control of such hazardous energy.
- b. Procedures.
  - (1) When applicable, supervisors will appoint a principle staff adviser and technical consultant to conduct periodic inspections to ensure each activity is in compliance with this regulation and other Army and Federal policies governing lockout/tagout of machines or equipment.
  - (2) When applicable, supervisors will ensure lockout/tagout safety plans are developed, established, and implemented in each workplace as required, ensuring that consultation and bargaining obligations with the local union are met prior to implementation.
  - (3) Ensure authorized personnel responsible for performing lockout/tagout procedures are identified in activity safety plans (supervisors, line supervisors, operators, maintenance personnel).
  - (4) Ensure all machinery and equipment is listed in each section lockout/tagout safety plan.
  - (5) Establish lockout/tagout safety plan isolating equipment and machinery at the energy source.
  - (6) Annually train affected employees and new employees in the purpose and use of the lockout/tagout procedures.
  - (7) Train authorized employees in performing lockout/tagout procedures.
  - (8) Ensure authorized employees perform lockout/tagout procedures as required.
  - (9) List all machinery and equipment in the lockout/tagout safety plan.
  - (10) Obtain required lockout/tagout devices needed to isolate equipment and machinery in the workplace. Installation Safety Office can assist in determining requirement.
  - (11) Assign required lockout/tagout devices to authorized personnel.
- c. Requirements. Appropriate lockout or tagout devices will be affixed to energy isolating devices, and to otherwise disable machines energization, start up, or release of stored energy in order to prevent injury to employees.
  - (1) Directors, commanders, and supervisors responsible for machinery and equipment will establish a lockout/tagout safety plan. Procedures will be developed for each type of equipment.

(2) Appropriated employees will be instructed in the safety significance of the lockout/tagout procedure. Each new or transferred affected employee and other employees whose work operations are (or maybe) in the area will be instructed in the purpose and use of the lockout or tagout procedure of affected employees (operators of equipment).

(3) Authorized (line supervisors, maintenance personnel) personnel will be trained on the lockout/tagout procedures to isolate energy from the machinery and equipment.

(4) Equipment and machinery will be locked/tagged out while in unoperational condition.

(5) Inventory of equipment that requires lockout/tagout procedures will be included in lockout/tagout safety plan.

(6) Make a survey to locate and identify all isolating devices to be certain which switches, valves, or other energy isolating devices apply to the equipment to be locked or tagged out. More than one energy source (electrical, mechanical, or others) may be involved.

d. Sequence of lockout or tagout system.

(1) Notify all affected employees that a lockout or tagout system is going to be utilized and the reason thereof. The authorized employee will know the type and magnitude of energy that the machine or equipment utilizes and will understand the hazards thereof.

(2) If the machine or equipment is operating, shut it down by normal stopping procedures (depress stop button, open toggle switch, and so on).

(3) Operate the switch, valve, or other energy isolating devices so that the equipment is isolated from its energy source. Stored energy (such as that in springs, elevated machine members, rotating flywheels, hydraulic systems, and air, gas, steam or water pressure, and so on) must be dissipated or restrained by methods such as repositioning, blocking, bleeding down, and so on.

(4) Lockout and or tagout the energy isolating devices with assigned individual locks or tags.

(5) After ensuring that no personnel are exposed, and as a check on having disconnected the energy sources, operate the push button or other normal operating controls to make certain the equipment will not operate. Caution: Return operating controls to "neutral" or "off" after the test.

(6) The equipment is now locked or tagged out.

e. Restoring machines or equipment to normal production operations.

(1) After the servicing and/or maintenance is complete, and equipment is ready for normal production operations, check the area around the machines or equipment to ensure that no one is exposed.

(2) After all tools have been removed from the machine or equipment, guards have been reinstalled and employees are in the clear, remove all lockout or tagout devices. Operate the energy isolating devices to restore energy to the machine or equipment.

f. Procedures involving more than one person. In the preceding steps, if more than one individual is required to lockout or tagout equipment, each will place their own personal lockout device or tagout device on the energy isolating device. When an energy isolating device cannot accept multiple locks or tags, a multiple lockout or tagout device (hasp) may be used. If lockout is used, a single lock may be used to lockout the machine or equipment with the key being placed in a lockout box or cabinet which allows the use of multiple locks to secure it. Each employee will then use their own lock to secure the box or cabinet which allows the use of multiple locks to secure it. As each person no longer needs to maintain their lockout protection, that person will remove their lock from the box or cabinet.

g. Basic rules for using lockout or tagout system procedure. All equipment will be locked out or tagged out to protect against accidental or inadvertent operation when such operation could cause



injury to personnel. Do not attempt to operate any switch, valve, or other energy isolating device where it is locked or tagged out.

#### **9-4. Confined Spaces**

In order to prevent injury and possible death, Army personnel, DOD Civilians, and contractors will not enter a permit-required confined space without any approved permit, personal protective clothing, monitoring equipment, or use of isolation/lockout/tagout procedures.

a. A confined space is a space that is large enough and configured for an individual to enter and perform work, has limited or restricted means to enter and perform work, has limited or restricted means for entry or exit, and is not designed for continuous employee occupancy.

b. A permit-required confined space is a confined space that has any one of the following characteristics:

(1) Contains or has the potential to contain, a hazardous atmosphere.

(2) Contains a material which has a potential for engulfing an entrant.

(3) Is internally configured such that an entrant could be trapped or asphyxiated.

(4) Contains any other recognized serious safety or health hazard.

c. Confined spaces are, but are not limited to, boilers, cupola, degreasers, furnaces, pipelines, pits, pumping stations, septic tanks, sewage digesters, sewers, manholes, silos, storage tanks, utility, vaults, vats, tunnels, cells, ducts, or similar type enclosures.

d. Procedures for working in confined spaces include—

(1) Installation Safety Offices in conjunction with preventive medicine will inventory all confined space annually to identify all permit-required confined spaces, develop a confined space training program, and evaluate confined space work sites to ensure proper protective equipment is used where mechanical ventilation sufficient to maintain nonhazardous atmosphere is not provided. This evaluation should include—

(a) Respiratory equipment.

(b) Protective clothing.

(c) Safety line.

(d) Body harness.

(e) Communication equipment.

(f) Air monitoring equipment.

(g) Air testing equipment.

(2) Confined space firefighter rescue team will—

(a) Appoint a confined space firefighter rescue team.

(b) Ensure personnel assigned to the confined space rescue team are provided with and trained to properly use the personal protective equipment, including respirators and rescue equipment necessary for making rescues from the installation's permit spaces.

(c) Ensure the rescue team is trained to perform the assigned rescue functions and has received the training required for authorized entrants.

(d) Ensure rescue teams practice making permit space rescues at least once every 12 months, by means of simulated rescue operations in which they remove dummies, mannequins, or personnel through representative openings and portals whose size, configuration, and accessibility closely approximate those of the permit spaces from which rescues may be required.

(3) Personnel working in confined space will observe the following guidelines:

(a) Do not enter a confined space without proper protective equipment where known explosive or oxygen deficient atmosphere exists.

- (b) Establish confined space entry procedures.
- (c) Develop warning signs and post at confined space areas needing a permit in accordance with 29 CFR 1910.
- (4) Emergency procedures and training are provided for personnel assigned to a confined space entry job.
- (5) Confined spaces are evaluated and analyzed by local preventive medicine before entry is permitted.
- (6) Confined space entry permit are developed locally to be posted by each confined space that poses a hazardous condition so that all personnel can read it.
- (7) Supervisors of employees working in confined spaces will—
  - (a) Ensure the confined space is identified and evaluated by the Installation Safety Office and Preventive Medicine Service.
  - (b) Initiate and post confined space entry permit at each confined space that poses a hazardous condition where all personnel can read it.
  - (c) Know the hazards that may exist during entry, including information on the mode, signs or symptoms, and consequences of the exposure.
  - (d) Verify, by checking that the appropriate entries have been made on the permit, that all tests specified by the permit have been conducted and that all procedures and equipment specified by the permit are in place before endorsing the permit and allowing entry to begin.
  - (e) Terminate the entry and cancel the permit upon completion of job.
  - (f) Verify that rescue services are available and that the means for summoning them are operable.
  - (g) Remove unauthorized individuals who enter or who attempt to enter the permit space during entry operations.
  - (h) Determine, whenever responsibility for a permit space entry operation is transferred and at intervals dictated by the hazards and operations performed within the space, which entry operations remain consistent with terms of the entry permit and that acceptable entry conditions are maintained.
  - (i) Ensure safety precautions (proper respiratory equipment, protective equipment, safety line, safety harness) are taken in accordance with the preventive medicine service and installation safety office's evaluation.
  - (j) Establish confined space entry procedures and train employees on procedures.
  - (k) Provide emergency procedures and training for personnel assigned to a confined space entry job.
  - (l) Ensure confined space is monitored continuously in areas where authorized entrants are working to determine if acceptable entry conditions are being maintained during the course of the entry operations.
- (8) Authorized entrants will—
  - (a) Know the hazards that may be faced during entry, recognize the signs and symptoms of exposure to the hazards, and understand the consequences of exposure to a hazard.
  - (b) Communicate with the attendant as necessary to enable the attendant to monitor entrant status and to enable the attendant to alert entrants of the need to evacuate the space.
  - (c) Properly use the following equipment:
    1. Testing and monitoring equipment.
    2. Ventilating equipment needed to obtain acceptable entry conditions.
    3. Communications equipment.

4. Personal protective equipment (insofar as feasible engineering and work practice controls do not adequately protect employees).
  5. Lighting equipment needed to enable employees to see well enough to work safely and to exit the space quickly in an emergency.
  6. Barriers and shields as required.
  7. Equipment, such as ladders, needed for safe ingress and egress by authorized entrants.
- (d) Exit the permit space, unless it is physically impossible to do so, when either the attendant orders evacuation, the automatic alarm is activated, or the entrants perceive that they are in danger.
- (9) Attendants will—
- (a) Continuously maintain an accurate count of all persons in the confined space.
  - (b) Know the hazards that may be faced during entry, including information on the mode, signs, or symptoms, and consequences of the exposure.
  - (c) Be aware of possible behavioral effects of hazard exposure in authorized entrants.
  - (d) Remain outside the permit space during entry operations until relieved by another attendant.
  - (e) Communicate with authorized entrants as necessary to monitor entrant status and to alert entrants of the need to evacuate the space.
  - (f) Monitor activities inside and outside the space to determine if it is safe for entrants to remain in the space, and order the authorized entrants to evacuate the permit space immediately under any of the following conditions:
    1. The attendant detects a prohibited condition.
    2. The attendant detects the behavioral effects of hazard exposure in an authorized entrant.
    3. The attendant detects a situation outside the space that could endanger the authorized entrants.
    4. The attendant cannot effectively and safely perform all the duties.
  - (g) Summon rescue and other emergency services as soon as the attendant determines that authorized entrants may need assistance to escape from permit space hazards.
- (10) Take the following actions when an unauthorized person approaches or enters a permit space while entry is under way:
- (a) Warn the unauthorized person(s) that they must stay away from the permit space.
  - (b) Advise the unauthorized person(s) that they must exit immediately if they have entered the permit space.
  - (c) Inform the authorized entrant(s) and the entry supervisor if the unauthorized persons have entered the permit space.
  - (d) Perform non-entry rescues as specified by the activity's rescue procedure.
  - (e) Perform no duties that might interfere with the attendant's primary duty to monitor and protect the authorized entrant(s).
- d. All individuals working with confined spaces will—
- (1) Use protective equipment, respirators, safety line, and safety harness as required.
  - (2) Read posted confined space permits before entry into confined space.
  - (3) Not enter any permit-required confined space that does not have a confined space permit posted.
- e. The following requirements will be followed in accordance with Part 1910.146, Title 29, Code of Federal Regulations (29 CFR 1910.146):
- (1) An entry supervisor will verify that appropriate entries have been made before entry into a permit-required confined space.
  - (2) Permits will be completed and posted at entry of confined space.

f. Personnel who are required to work in a permit-required confined space or in support of those working in a permit required confined space will have additional training in the following areas:

- (1) Emergency entry and exit procedures.
- (2) Use of respirators, as required.
- (3) Current certification in basic first aid and cardiopulmonary resuscitation (CPR) skills for personnel performing rescue service.
- (4) Lockout procedures are specific to the confined space in which they operate
- (5) Safety equipment use.
- (6) Rescue and training drills designed to maintain proficiency will be given initially to new employees, and thereafter at least annually or at lesser intervals as determined necessary by the supervisor. A record of this training will be made available upon request.
- (7) Permit system — what the permit says and what it means.
- (8) Recommended work practices.

g. Training will be provided to each affected employee—

- (1) Before the employee is first assigned duties under this regulation.
- (2) Before there is a change in assigned duties.
- (3) Whenever there is a change in permit space operations that present a hazard for which an employee has not previously been trained.
- (4) Whenever the employer has reason to believe that there are either deviations from the permit space entry procedures or that there are inadequacies in the employee's knowledge or use of these procedures.

h. Testing and monitoring will be performed in the following manner:

- (1) The tests performed will be conducted in the following order; oxygen content, flammability, and toxic materials.

These tests will include upper explosion limit (UEL) and lower explosion limit (LEL) readings.

- (2) Entry into a confined space for any type of hot work will be prohibited when tests indicate the concentration of flammable gases in the atmosphere is greater than 10 percent of the lower flammability limit (LFL).

- (3) Equipment for continuous monitoring of gases and vapors will be explosion-proof and equipped with an audible alarm or danger signaling device that will alert employees when a hazardous condition develops.

- (4) The percentage of oxygen for entry into a confined space will be no less than 19.5 percent nor greater than 23.5 percent at 760 mmHG.

i. Labeling and posting will be done in the following manner:

- (1) All warning signs will be printed in both English and in the predominant language of the workers who do not read English.

- (2) All entrances to any confined space will be posted; signs will include but not necessarily be limited to the following information: DANGER CONFINED SPACE ENTRY BY PERMIT ONLY.

- (3) When a specific work practice is performed or specific safety equipment is necessary, an applicable statement will be added (for example, RESPIRATOR REQUIRED FOR ENTRY, LIFELINE REQUIRED FOR ENTRY, HOT WORK PERMITTED).

- (4) Emergency procedures, including phone numbers of local fire department and emergency medical services, will be posted conspicuously within the immediate area of the confined space, or by telephone from which help would be summoned.

j. Safety equipment and clothing should take in consideration the following, in accordance with the appropriate required regulations:

- (1) Eye and face protection.
- (2) Head protection.
- (3) Foot protection.
- (4) Body protection—gloves, aprons, and over-suits.
- (5) Hearing protection.
- (6) Respiratory protection—the use of respiratory protection will be determined by the supervisor.
- (7) Hand protection.
- (8) A safety belt with "D" rings for attaching a life line will be worn at all times.

k. The combination of a body harness with life line will be used when—

- (1) An employee is required to enter to complete the gas analysis.
- (2) An employee is working in an area where entry for the purpose of rescue would be contradicted.
- (3) Any failure to ventilation would allow the build-up of toxic or explosive gases within the time necessary to evacuate the area.
- (4) The atmosphere is immediately dangerous to life and health.

l. If the exit opening is less than 18 inches (45 centimeters) in diameter, a wrist type harness will be used.

m. Work practices are as follows:

(1) Purging and ventilating include—

- (a) Blower controls will be a safe distance from the confined area, and audible alarm will be installed in all equipment to signal when there is a ventilation failure.
  - (b) Air flow measurements will be made before each work shift to ensure adequate ventilation is being maintained. Where continuous ventilation is not part of the operating procedure, the atmosphere will be tested until continuous acceptable levels of oxygen and contaminants are maintained for three tests at 5 minute intervals.
  - (c) Local exhaust will be provided when general ventilation is inadequate due to the restrictions in the confined space or when high concentrations of contaminants occur in the breathing zone of the worker.
- (2) Isolation/lockout/tagging include—
- (a) The isolation procedures will be specific for each type of confined space.
  - (b) Confined spaces will be completely isolated from all other systems by physical disconnection, double block, and/ or blanking off all lines.
  - (c) Where complete isolation is not possible (sewers and utility tunnels), specific written safety procedures approved and enforced by the supervisor will be used.
  - (d) Shut-off valves serving the confined space will be locked in the closed position and tagged for identification.
  - (e) Electrical isolation of the confined space will be accomplished by locking circuit breakers and or disconnects in the open (off) position with a key-type padlock.
  - (f) Mechanical isolation can be achieved by disconnecting linkages or removing drive belts or chains.
- (3) Medical. Workers who enter a confined space will be provided physical examination by their own physicians at no expense to the employees. The physical examination will—

- (a) Include a demonstration of the workers' ability to use negative and positive pressure respirators.
- (b) Include a demonstration of the workers' ability to see and hear warnings (flashing lights, buzzers, or sirens).
- (c) Place emphasis on several evaluations of the employees' ability to carry out their assigned duties and the detection of anything that may preclude confined space work.
- n. Entry and rescue procedures are as follows:
  - (1) Entry procedures include—
    - (a) The internal atmosphere will be tested prior to an employee entering the space.
    - (b) Testing will be conducted with a calibrated direct-reading instrument.
    - (c) Confined space entry permit will be completed.
    - (d) Adequate ventilation or protective equipment will be implemented to ensure atmosphere is free of hazard to entrants.
  - (2) Rescue procedures, specifically designed for each entry, include—
    - (a) A trained person with a fully charged, positive pressure, self-contained breathing apparatus (SCBA) will be on standby during a confined space entry.
    - (b) The standby person will maintain unprotected life lines and communications to all workers in the confined space.
    - (c) Under no circumstances will the standby person enter the confined space until the first person is relieved and is assured that adequate assistance is present.
    - (d) Before workers enter the confined spaces, the fire department will be notified.
  - (3) First aid provisions include—
    - (a) There must be someone readily available in the area of the confined space who is currently trained in CPR and basic first aid procedures.
    - (b) Before workers enter the confined spaces, the fire department must be notified.

## **9–5. Fall Protection**

- a. Purpose. To prescribe policies, procedures, and responsibilities for protecting personnel working in operations that involve the risk of an accidental fall of four feet or more.
- b. Roles.
  - (1) Directors and or commanders.
    - (a) Will develop and implement a fall protection plan for all operations that require fall protection.
    - (b) Will ensure supervisors are trained in fall protection procedures and requirements.
    - (c) Will ensure supervisors train personnel in fall protection procedures and requirements.
    - (d) Will provide adequate fall protection in accordance with this regulation and Army and Federal safety standards.
  - (2) Supervisors.
    - (a) Will train personnel on proper fall protection procedures and requirements in accordance with the activity fall protection plan.
    - (b) Will ensure adequate fall protection is provided in accordance with this regulation, Army, and Federal safety standards.
    - (c) Will evaluate areas of responsibilities and ensure personnel comply with proper fall protection procedures and requirements as required.
  - (3) All individuals. All individuals working in operations which require fall protection will comply with the fall protection procedures and requirements as required.

c. Procedures.

(1) All supervisors conducting training are competent in the following areas:

(a) Nature of fall hazards in the work area.

(b) Correct procedures for erecting, maintaining, disassembling, and inspecting the fall protection systems to be used.

(c) Use and operation of guardrail systems, personal fall arrest systems, safety net systems, warning line systems, safety monitoring systems, controlled access zones, and other protection to be used in accordance with Part 1926.502, Title 29, Code of Federal Regulations (29 CFR 1926.502) and Part 1910.23, Title 29, Code of Federal Regulations (29 CFR 1910.23).

(d) The role of each employee in the safety monitoring system when this system is used.

(e) Limitations on the use of mechanical equipment during the performance of roofing work on low-sloped roofs.

(f) The correct procedures for the handling and storage of equipment and materials and the erection of overhead protection.

(g) The role of employees in the activities fall protection plan.

(2) Activity fall protection plan and training includes all areas in paragraph 16–4a of this regulation and 29 CFR 1926.502 as required in each operation.

(3) Risk assessments will be conducted on all operations prior to start of work.

(4) Risk assessments will be included in fall protection plan and training.

(5) The following fall protection systems are used in compliance with 29 CFR 1926.502 to protect personnel from falls.

(a) If the employer chooses to use guardrail systems to protect workers from falls, the systems must meet the following criteria; top rails and midrails of guardrail systems must be at least 1/4 inch (0.6 centimeters) nominal diameter or thickness to prevent cuts and lacerations; if wire rope is used for top rails, it must be flagged at not more than 6 feet intervals (1.8 meters) with high-visibility material; and steel and plastic banding cannot be used as top rails or midrails.

1. Manila, plastic, or synthetic rope used for top rails or midrails must be inspected as frequently as necessary to ensure strength and stability.

2. The top edge height of top rails, or (equivalent) guardrails must be 42 inches (1.1 meters) plus or minus 3 inches (8 centimeters), above the walking and working level. When workers are using stilts, the top edge height of the top rail, or equivalent member, must be increased an amount equal to the height of the stilts.

3. Screens, midrails, mesh, intermediate vertical members, or equivalent intermediate structural members must be installed between the top edge of the guardrail system and the walking, and/or working surface when there are no walls or parapet walls at least 21 inches (53 centimeters) high. When midrails are used, they must be installed at a height midway between the top edge of the guardrail system and the walking and or working level. When screens and mesh are used, they must extend from the top rail to the walking and or working level and along the entire opening between top rail supports. Intermediate members, such as balusters, when used between posts, will not be more than 19 inches (48 centimeters) apart.

4. Other structural members, such as additional midrails and architectural panels, will be installed so that there are no openings in the guardrail system and more than 19 inches (48 centimeters).

(b) The guardrail system must be capable of withstanding a force of at least 200 pounds (890 newtons) applied within 2 inches of the top edge in any outward or downward direction. When the 200-pound (890 newtons) test is applied in a downward direction, the top edge of the

guardrail must not deflect to a height less than 39 inches (1 meter) above the walking and or working level.

(c) Mid-rails, screens, mesh, intermediate vertical members, solid panels, and equivalent structural members will be capable of withstanding a force of at least 150 pounds (667 newtons) applied in any downward or outward direction at any point along the mid-rail or other member.

(d) Guardrail systems will be surfaced to protect workers from punctures or lacerations and to prevent clothing from snagging.

(e) The ends of top rails and mid-rails will not overhang terminal posts, except where such overhang does not constitute a projection hazard.

(f) When guardrail systems are used at hoisting areas, a chain, gate, or removable guardrail section will be placed across the access opening between guardrail sections when hoisting operations are not taking place.

(g) At holes, guardrail systems will be set up on all unprotected sides or edges. When holes are used for the passage of materials, the hole will have not more than two sides with removable guardrails sections. When the hole is not in use, it must be covered or provided with guardrails along all unprotected sides or edges.

(h) If guardrail systems are used around holes that are access points (such as ladderways), gates must be used or the point of access must be offset to prevent accidental walking into the hole.

(i) If guardrails are used at unprotected sides or edges of ramps and runways, they must be erected on each unprotected side or edge.

#### d. Systems.

(1) Personal fall arrest systems. These consist of an anchorage, connectors, and a body harness and may include a deceleration device, lifeline, or suitable combinations. If a personal fall arrest system is used for fall protection, it must do the following:

(a) Limit maximum arresting force on an employee to 1,800 pounds (8 kilonewtons) when used with a body harness; be rigged so that an employee can neither free fall more than 6 feet (1.8 meters) nor contact any lower level;

(b) Bring an employee to a complete stop and limit maximum deceleration distance an employee travels to 3.5 feet (1.07 meters); and

(c) Have sufficient strength to withstand twice the potential impact energy of an employee free fall a distance of 6 feet (1.8 meters) or the free fall distance permitted by the system, whichever is less.

(d) Personal fall arrest systems must be inspected prior to each use for wear damage and other deterioration. Defective components must be removed from service. Dee-rings and snaphooks must have a minimum tensile strength of 5,000 pounds (22.2 kilonewtons). Dee-rings and snaphooks will be proof-tested to a minimum tensile load of 3,600 pounds (16 kilonewtons) without cracking, breaking, or suffering permanent deformation.

(e) Snaphooks will be sized to be compatible with the member to which they will be connected, or will be of a locking configuration.

(f) Unless the snaphook is a locking type and designed for the following connections, they will not be engaged:

1. Directly to webbing, rope, or wire tope.
2. To each other.
3. To a dee-ring to which another snaphook or other connector is attached.
4. To a horizontal lifeline.



5. To any object incompatible in shape or dimension relative to the snap-hook, thereby causing the connected object to depress the snap-hook keeper and release unintentionally.
- (g) OSHA considers a hook to be compatible when the diameter of the dee-ring to which the snap hook is attached is greater than the inside length of the snap hook when measured from the bottom (hinged end) of the snap hook keeper to the inside curve of the top of the snap hook. Thus, no matter how the dee-ring is positioned or moved (rolls) with the snap hook attached, the dee-ring cannot touch the outside of the keeper, thus depressing it open. As of January 1, 1998, the use of non locking snap hooks will be prohibited.
- (h) On suspended scaffolds or similar work platforms with horizontal lifelines that may become vertical lifelines, the devices used to connect to a horizontal lifeline will be capable of locking in both directions on the lifeline.
- (i) Horizontal lifelines will be designed, installed, and used under the supervision of a qualified person, as part of a complete personal fall arrest system that maintains a safety factor of at least two. Lifelines will be protected against being cut or abraded.
- (j) Self-retracting lifelines and lanyards that automatically limit free fall distance to 2 feet (0.61 meters) or less will be capable of sustaining a minimum tensile load of 3,000 pounds (13.3 kilonewtons) applied to the device with the lifeline or lanyard in the fully extended position.
- (k) Self-retracting lifelines and lanyards that do not limit free fall distance to 2 feet (0.61 meters) or less, ripstitch lanyards, and tearing and deforming lanyards will be capable of sustaining a minimum tensile load of 5,000 pounds (22.2 kilonewtons) applied to the device with the lifeline or lanyard in the fully extended position.
- (l) Ropes and straps (webbing) used in lanyards, lifelines, and strength components of body belts and body harnesses will be made of synthetic fibers.
- (m) Anchorages will be designed, installed, and used under the supervision of a qualified person, as part of a complete personal fall arrest system that maintains a safety factor of at least two, (that is, capable of supporting at least twice the weight expected to be imposed upon it). Anchorages used to attach personal fall arrest systems will be independent of any anchorage being used to support or suspend platforms and must be capable of supporting at least 5,000 pounds (22.2 kilonewtons) per person attached.
- (n) Lanyards and vertical lifelines must have a minimum breaking strength of 5,000 pounds (22.2 kilonewtons).
- (2) Positioning device systems. These r body harness systems are to be set up so that workers can free fall no farther than 2 feet (0.6 meters). They will be secured to an anchorage capable of supporting at least twice the potential impact load of an employee's fall or 3,000 pounds (13.3 kilonewtons), whichever is greater. Requirements for snaphooks, deerings, and other connectors used with positioning device systems must meet the same criteria as those for personal fall arrest systems.
- (3) Safety monitoring systems.
- (a) When no other alternative fall protection has been implemented, the employer will implement a safety monitoring system. Employers must appoint a competent person to monitor the safety of workers and the employer will ensure that the safety monitor is competent in the recognition of fall hazards; is capable of warning workers of fall hazards dangers and in detecting unsafe work practices; is operating on the same walking and or working surfaces of the workers and can see them; and is close enough to work operations to communicate orally with workers and has no other duties to distract from the monitoring function.

(b) Mechanical equipment will not be used or stored in areas where safety monitoring systems are being used to monitor employees engaged in roofing operations on low-sloped roofs.

(c) No worker, other than one engaged in roofing work (on low-sloped roofs) or one covered by a fall protection plan, will be allowed in an area where an employee is being protected by a safety monitoring system.

(d) All workers in a controlled access zone will be instructed to promptly comply with fall hazard warnings issued by safety monitors.

(4) Safety net systems.

(a) Safety nets must be installed as close as practicable under the walking and or working surface on which employees are working and never more than 30 feet (9.1 meters) below such levels. Defective nets will not be used.

1. Safety nets will be inspected at least once a week for wear, damage, and other deterioration.

2. The maximum size of each safety net mesh opening will not exceed 36 square inches (230 square centimeters) nor be longer than 6 inches (15 centimeters) on any side, and the openings, measured center-to-center, of mesh ropes or webbing, will be secured to prevent enlargement of the mesh opening.

3. Each safety net or section will have a border rope for webbing with a minimum breaking strength of 5,000 pounds (22.2 kilonewtons).

4. Connections between safety net panels will be as strong as integral net components and be spaced no more than 6 inches (15 centimeters) apart.

(b) Safety nets will be installed with sufficient clearance underneath to prevent contact with the surface or structure below.

(c) When nets are used on bridges, the potential fall area from the walking and or working surface to the net will be unobstructed.

(d) Safety nets will be capable of absorbing an impact force of a drop test consisting of a 400-pound (180 kilogram) bag of sand 30 inches (76 centimeters) in diameter dropped from the highest walking and or working surface at which workers are exposed, but not from less than 42 inches (1.1 meters) above that level.

(e) Items that have fallen into safety nets, including (but not restricted to) materials, scrap, equipment, and tools, will be removed as soon as possible and at least before the next work shift.

(5) Warning line systems.

(a) Warning line systems consist of ropes, wires, or chains, and supporting stanchions and are set up as follows:

1. Flagged at not more than 6-foot (1.8 meters) intervals with high-visibility material.

2. Rigged and supported so that the lowest point (including sag) is no less than 34 inches (0.9 meters) from the walking and or working surface and its highest point is no more than 39 inches (1 meter) from the walking and or working surface.

3. Stanchions, after being rigged with warning lines, will be capable of resisting, without tipping over, a force of at least 16 pounds (71 newtons) applied horizontally against the stanchion, 30 inches (0.8 meters) above the walking and or working surface, perpendicular to the warning line and in the direction of the floor, roof, or platform edge.

4. The rope, wire, or chain will have a minimum tensile strength of 500 pounds (2.22 kilonewtons) and after being attached to stanchions, must support without breaking, the load applied to the stanchions; and will be attached to each stanchion in such a way that pulling on one section of the line between stanchions will not result in slack being taken up in the adjacent section before the stanchion tips over.

(b) Warning lines will be erected around all sides of roof work areas.

1. When mechanical equipment is being used, the warning line will be erected not less than 6 feet (1.8 meters) from the roof edge parallel to the direction of mechanical equipment operation, and not less than 10 feet (3 meters) from the roof edge perpendicular to the direction of mechanical equipment operation.

2. When mechanical equipment is not being used, the warning line must be erected not less than 6 feet (1.8 meters) from the roof edge.

e. Fall protection. Fall protection will be used all times for the following conditions:

(1) Excavations. Each employee at the edge of an excavation 6 feet (1.8 meters) or more deep will be protected from falling by guardrail systems, fences, barricades, or covers. Where walkways are provided to permit employees to cross over excavations, guardrails are required on the walkway if it is 6 feet (1.8 meters) or more above the excavation.

(2) Formwork and reinforcing steel. For employees, while moving vertically and or horizontally on the vertical face of rebar assemblies built in place, fall protection is not required when employees are moving. OSHA considers the multiple hand holds and footholds on rebar assemblies as providing similar protection as that provided by a fixed ladder. Consequently, no fall protection is necessary while moving point to point for heights below 24 feet (7.3 meters). An employee must be provided with fall protection when climbing or otherwise moving at a height more than 24 feet (7.3 meters), the same as for fixed ladders.

(3) Hoist areas. Each employee in a hoist area will be protected from falling 6 feet (1.8 meters) or more by guardrail systems or personal fall arrest systems. If guardrail systems (or chain gate or guardrail) or positions thereof must be removed to facilitate hoisting operations, as during the landing of materials, and a worker must lean through the access opening or out over the edge of the access opening to receive or guide equipment and materials, that employee must be protected by a personal fall arrest system.

(4) Holes. Personal fall arrest systems, covers, or guardrail systems will be erected around holes (including skylights) that are more than 6 feet (1.8 meters) above lower levels.

(5) Leading edges. Each employee who is constructing a leading edge 6 feet (1.8 meters) or more above lower levels will be protected by guardrail systems, safety net systems, or personal fall arrest systems. If the employer can demonstrate that it is infeasible or creates a greater hazard to implement these systems, he or she must develop and implement a fall protection plan that meets the requirements of 29 CFR 1926.502(k).

(6) Overhand bricklaying and related work. Each employee performing overhand bricklaying and related work 6 feet (1.8 meters) or more above lower levels will be protected by guardrail systems, safety net systems, or personal fall arrest systems, or will work in a controlled access zone. All employees reaching more than 10 inches (25 cm) below the level of a walking and or working surface on which they are working will be protected by a guardrail system, safety net system, or personal fall arrest system.

(7) Precast concrete erection and residential construction. Each employee who is 6 feet (1.8 meters) or more above lower levels while erecting precast concrete members and related operations, such as grouting of precast concrete members, and each employee engaged in residential construction will be protected by guardrail systems, safety net systems, or personal fall arrest systems. Where the employer can demonstrate, however, that it is infeasible or creates a greater hazard to use those systems, the employer must develop and implement a fall protection plan that meets the requirements of 29 CFR 1926.502(k).

- (8) Ramps, runways, and other walkways. Each employee using ramps, runways, and other walkways will be protected from falling 6 feet (1.8 meters) or more by guardrail systems.
- (9) Low-slope roofs. Each employee engaged in roofing activities on low-slope roofs with unprotected sides and edges 6 feet (1.8 meters) or more above lower levels will be protected from falling by guardrail systems, safety net systems, personal fall arrest systems or a combination of a warning line system and guardrail system, warning line system and safety net system, warning line system and personal fall arrest system, or warning line system and safety monitoring system. On roofs 50 feet (15.24 meters) or less in width, the use of a safety monitoring system without a warning line system is permitted.
- (10) Steep roofs. Each employee on a steep roof with unprotected sides and edges 6 feet (1.8 meters) or more above lower levels will be protected by guardrail systems with toeboards, safety nets systems, or personal fall arrest systems.
- (11) Wall openings. Each employee working on, at, above, or near wall openings (including those with chutes attached) where the outside bottom edge of the wall opening is 6 feet (1.8 meters) or more above lower levels and the inside bottom edge of the wall opening is less than 39 inches (1.0 meter) above the walking and or working surface must be protected from falling by the use of a guardrail system, a safety net system, or a personal fall arrest system.
- (12) Inspection and maintenance. All fall protection equipment is inspected frequently. Visual inspections are conducted prior to each use.

**Table 9–1**  
**Safety net extension**

Safety nets must extend outward from the outermost projection of the work surface as follows:

Vertical distance from working level to horizontal plane of net.	Minimum required horizontal distance of outer edge of net from the edge of the working surface.
Up to 5 feet (1.5 meters)	8 feet (2.4 meters)
More than 5 feet (1.5 meters) up to 10 feet (3 meters)	10 feet (3 meters)
More than 10 feet (3 meters)	13 feet (3.9 meters)

### **9–6. Bloodborne Pathogen**

a. Purpose. This regulation establishes responsibilities, and procedures for the installation Bloodborne Pathogen Exposure Control Program (BBPECP). This program will reduce occupational exposure to Hepatitis B Virus (HBV), Human Immunodeficiency Virus (HIV), and other bloodborne pathogens (BBP) that employees may encounter in their workplace and in accordance with Part 1910.1030, Title 29, Code of Federal Regulations (29 CFR 1910.1030).

b. General. The BBPs are microorganisms in human blood that can cause disease in humans. Exposure to blood or certain other body fluids infected with a BBP can result in transmission of the infection to another person (considering the lethal effects of some BBPs, it is necessary that every possible measure to prevent exposure). At this time, the greatest bloodborne risk to healthcare and emergency service personnel is posed by the HBV. Fortunately, the risk of infection can be greatly reduced through the use of appropriate workplace practices and the administration of the Hepatitis B vaccine.

c. Procedure.

(1) The Exposure Control Plan (ECP) must—

- (a) Identify the tasks and procedures as well as the job classifications where occupational exposure to blood occurs without regard to personal protective clothing or equipment.
  - (b) Outline the mechanisms for implementing this regulation and specify procedure for evaluating circumstances surrounding exposure incidents.
  - (c) Be accessible to employees. Employers must review and update the plan annually and more often if necessary to accommodate workplace changes.
  - (d) Provide guidance and requirements for engineering and workplace controls in accordance with 29 CFR 1910.1030(d)(2).
- (2) Information and training.
- (a) All identified employees are to be trained upon assignment and annually thereafter.
  - (b) The training must include making accessible a copy of the regulatory text of the standard and explanation of its content, general discussion of bloodborne diseases and their transmission, the ECP, engineering and work practices, response to emergencies involving blood, how to handle exposure incidents, the post-exposure evaluation and follow-up program, and signs, labels, and color-coding. There must be opportunity for questions and answers, and the trainer must be knowledgeable in the subject matter.
- (3) Methods of compliance.
- (a) Mandate universal precautions and emphasizes engineering workplace practice controls.
  - (b) "In general, the use of universal precautions means that all blood, body fluids, or other materials contaminated (or reasonable anticipated to be contaminated) with blood or other potentially infectious materials are treated as if known to be infectious for HIV, HBV, and other BBPs." The terms "engineering controls" and "workplace practices" refer to implementing procedures which will minimize the risk of exposure such as splashing or needle sticks. For example, this includes the use of gloves, gowns, face masks, protective eyewear, puncture-resistant sharps containers, and the bagging of contaminated materials. This also includes the provisions of adequate hand-washing facilities and the cleaning and repair of reusable equipment.
- (4) HAZCOM. Biohazard warning labels will be affixed to containers of regulated waste and refrigerators, freezers, and other containers which are used to store or transport blood or other potentially infectious materials. Red bags or containers may be used instead of labeling. Also, labeling is not required if a facility uses universal precautions in the handling of all specimens or for containers of blood which have been tested and found to be free of HIV or HBV and released for clinical use. Labeling of containers in facilities using universal precautions will comply with 29 CFR 1910(d)(2)(xiii)(A).
- (5) Hepatitis B vaccination.
- (a) Employees, including trainees, volunteers, and other temporary staff, with duties involving direct patient contact, who were hired or began activity on or after 1 January 1997 will be covered on a MANDATORY basis. (Covered means they must complete a series of three immunizations against hepatitis B, or show evidence of prior completion of the three immunizations unless they meet any of the three exemption requirements.) This condition of employment must be made clear in job announcements, job descriptions, and contracts.
  - (b) The vaccination series and any booster recommended by medical authorities will be provided at no cost to the employee.
  - (c) Employees must sign a declination statement if they choose not to have blood tested, in accordance with 29 CFR 1910.1030, App A (see para J-1).

(6) Post-exposure evaluation and follow-up.

(a) All employees who experience an exposure incident will be provided with medical evaluation and treatment as indicated by the situation.

(b) Follow-up will include a confidential medical evaluation documenting the circumstances of exposure, identifying and testing the source individual if feasible, testing the exposed employee's blood if they consent, post-exposure prophylaxis, counseling, and evaluation of reported illnesses.

(c) Health care professionals will be provided specific information to facilitate their evaluation of the exposure incident and their determination of indicated treatment. All diagnoses must remain confidential.

(7) Recordkeeping.

(a) Medical records for each employee with an occupational exposure will be kept for the duration of employment plus 30 years.

(b) The record is to remain confidential and include the following information: name, social security number, Hepatitis B vaccination status (including dates), results of any examinations, medical testing and follow-up procedures, a copy of the health care professional's written opinion, and a copy of information provided to the health care professional.

(c) Training records are maintained for three years and include the following information: dates, contents of the training program or a summary, trainer's name and qualifications, and names and job titles of all persons attending the sessions.

(d) Medical records must be made available to the subject employee, OSHA, or anyone with the written consent of the employee.

(8) Functions. WBAMC, Health Services has the overall responsibility for management of the Bloodborne Pathogens Program (BBPP) and will ensure that medical elements and activities fulfill their respective roles as follows:

(a) Chief of Pharmacy. The Chief of Pharmacy will provide the vaccines and or medications necessary for compliance with the BBPP.

(b) Installation medical personnel will—

1. Perform evaluations of blood and body fluid exposures as indicated in the evaluation packets provided by the Infection Control Department.

2. Administer injections and immunizations as indicated for compliance with the BBPP.

3. Provide education regarding BBPPs.

4. Maintain training records of individuals.

5. Maintain the medical records for active duty employees regarding pre-exposure and/or post-exposure evaluation and treatment regarding BBP.

6. Assist the local Exposure Control Officer (ECO) in the development of a local ECP which specifically addresses the circumstances unique to that particular office.

7. Support the local ECO in the implementation of the local ECP.

8. Provide direct oversight and support to local offices in the implementation of the BBPP.

9. Provide the local ECO with the framework of an ECP which can be completed with the specific information unique to the local office.

10. Assist the local ECO in determining which job classifications and tasks are at risk of exposure to BBPs and which employees should be included in the BBPP.

11. Assist the local ECO in determining which materials pose BBP hazards and the appropriate use of hazard labels and or specialized containers for transport or disposal.

12. Assist the local ECO in determining what engineering controls and workplace practices are appropriate to eliminate or minimize employee exposure.
  13. Support the local ECO in providing education and training regarding BBPs.
  14. Perform the pre-exposure evaluation of employees and determine if they are eligible to receive the Hepatitis B vaccine.
  15. Coordinate the administration of Hepatitis B vaccinations and any other medications necessary to comply with the OSHA standard for BBPs.
  16. Perform the post-exposure evaluation, treatment, and follow-up as required by the OSHA standard for BBP.
  17. Maintain the medical records for civilian employees regarding pre-exposure and/or post-exposure evaluation and treatment for BBPs.
  18. Coordinate with the Installation Safety Office during inspections by OSHA or other responsible regulatory agencies.
  19. Provide guidance in the appropriate revising and updating of the installation BBPP.
  20. Know the current medical requirements regarding BBP.
  21. Determine and identify worksites at risk of exposure during regular Industrial Hygiene and Occupational Health worksite evaluations.
- (c) Commanders and supervisors—
1. Assure compliance with the Installation BBPECP.
  2. Assure that personnel assigned to their section comply with the requirements of the BBPP and the local BBP.
  3. Assure that engineering controls and workplace practice controls are implemented and adhered to in order to minimize or eliminate exposure to BBP.
  4. Ensure personnel enrolled in BBPECP will attend birth month scheduled training.
- (d) The local ECO will—
1. Become familiar with the requirements of the BBPP and the requirements of 29 CFR 1910.1030.
  2. Develop a local ECP, in coordination with PM and SOH.
  3. Determine which materials pose a BBP hazard, in coordination with PM and SOH.
  4. Assure the proper use of hazard labels and or specialized containers for the transport or disposal of hazardous materials.
  5. Provide education and training regarding BBP to employees in the local section, in coordination with PM and SOH.
  6. Refer employees at risk of exposure to BBP to PM and SOH for pre-exposure medical screening and Hepatitis B vaccination.
  7. Refer the employee and, if available, the source of the blood or body fluid to the installation medical treatment facility (MTF), for post-exposure evaluation and treatment, in the event of a possible exposure to a BBP.
  8. Assist MTF, PM, and SOH in the evaluation of exposures to BBP.
- (e) Installation Safety officials will—
1. Assure overall compliance with the installation BBPP.
  2. Provide guidance in the appropriate revision and updating of the installation BBPP.
  3. Maintain OSHA standards and guidelines which pertain to BBP.
  4. Determine and identify worksites at risk of exposure to BBP during standard Army SOH inspections.
  5. Act as facility liaison during inspections by OSHA or other appropriate regulatory agencies.

## **9-7. Ergonomics**

a. Purpose. This program establishes responsibilities, and procedures for implementing ergonomics, the science of fitting the work environment to the people who do the work.

b. Functions—

(1) Installation Safety Office—

(a) Evaluates workplace for ergonomic problems. This includes equipment testing requirements.

(b) Advises directors, commanders, and supervisors in resolution of ergonomic related issues.

(c) Coordinates train the trainer workshops as required.

(d) Develops and disseminates ergonomic awareness materials.

(e) Maintains and reviews injury and illness records related to ergonomic problems to develop trend analysis.

(2) Installation medical authority/Industrial Hygiene—

(a) Assists in evaluating the workplace for ergonomic problems.

(b) Assists in conducting ergonomic training as needed.

(c) Assists in identifying personnel with ergonomic related injuries.

(d) Provides technical assistance in identification and resolution of ergonomic issues.

(3) Commanders and directors—

(a) Establish ergonomic plan.

(b) Ensure supervisors are trained on ergonomic factors that apply to their area of responsibility.

(c) Ensure area of responsibility is periodically evaluated for identification of ergonomic deficiencies and take appropriate corrective action.

(d) Ensure ergonomics are implemented in all job safety analysis, as appropriate.

(4) Supervisors—

(a) Develop ergonomic plan applicable to the area of responsibility.

(b) Train employees on reporting procedures for reporting ergonomic related disorders and the importance of early reporting.

(c) Include ergonomic considerations in job safety analysis.

(d) Evaluate the area of responsibility to ensure ergonomic standards are met.

(e) Provide protective equipment to reduce potential ergonomic injury or illness while engineering controls are implemented.

(f) Ensure ergonomic considerations are integrated into the purchase of new furniture.

(5) Individuals—

(a) Assist supervisors in identifying ergonomic hazards.

(b) Report symptoms of possible ergonomic related injuries or illnesses.

(c) Use protective devices or equipment as required.

(6) CPAC. Assist in coordination of required training as needed.

(7) Directorate of Contracting. Assist activities in the selection of ergonomic furniture and equipment.

(8) Directorate of Public Works. Ensure ergonomic considerations are integrated into facility modifications and construction.

c. Ergonomic task force. The task force will assist in the implementation of the Installation Ergonomics Program. The task force will oversee and participate in gathering and evaluating injury, lost work time, trends, compliant data on work sites and work processes, and recommending corrective action. The task force will consist of Installation Safety, Industrial Hygienist, Occupational Health Nurse, and a DPW representative.



(1) Procedures. Ergonomic considerations will be integrated in the job safety analysis process. Work site analysis implementation of ergonomic hazard control measures are performed in conjunction with the job safety analysis.

(2) Work site analysis. Problem or hazard identification and detailed analysis are essential steps in conducting work site analysis.

(3) Problem or hazard identification. Identification of jobs or work sites with ergonomic risk factors is the first step in the prevention of ergonomic hazards. This is accomplished by direct observation, case referrals and incident reports.

(a) Direct observation is conducted by trained personnel or by workers who can identify tasks or situations which are uncomfortable and may indicate ergonomic risks.

(b) Case referrals from CPAC, the occupational health nurse, the industrial hygienist, or the safety office may be used to identify a work area with potential ergonomic risk. For example, a laboratory technician seeks medical care for hand or wrist pain and provides an occupational history which indicates possible work site risk factors. In this situation, the referral would be from the occupational health nurse to the supervisor.

(c) Specific health or performance events such as wrist pain, back pain, or increased mishaps may be indicative of ergonomic risks.

(d) Incident reports such as accident reports, occupational and health reports, and supervisor monthly surveys are used to help identify ergonomic risk factors.

(e) The following are risk factors that contribute to ergonomic related disorders that should be considered in identifying ergonomic problems or hazards:

1. Repetitive motions (especially during prolonged activities).
2. Sustained or awkward postures.
3. Excessive bending or twisting of the wrist.
4. Continued elbow or shoulder elevation (for example, overhead work).
5. Forceful exertions (especially in an awkward posture).
6. Excessive use of small muscle groups (for example, pinch grip).
7. Acceleration and velocity of dynamic motions.
8. Vibration.
9. Mechanical compression.
10. Restrictive work station (for example, inadequate clearances).
11. Improper seating or support.
12. Inappropriate hand tools.
13. Machine-pacing and production based incentives.
14. Extreme temperatures.
15. Extended exposure to noise.

(f) The combined effect of several risk factors in a job workstation may lead to a higher probability of causing an ergonomic disorder.

(4) Detailed analysis. Detailed analysis is necessary for further evaluation of those jobs or work sites. Personnel conducting analysis should systematically—

(a) Consider the concept of multiple causation.

(b) Look for trends, including age, gender, work task, and time of injury.

(c) Identify the work task or portions of the process which contain risk factors.

(5) Prevention and control of ergonomic hazards. The primary method of preventing and controlling exposure to ergonomic hazards is through effective design (or redesign) of a job or

work site. The following are intervention methods in order of priority for preventing and controlling ergonomic hazards.

(6) Process elimination. Elimination of the ergonomically demanding process essentially eradicates the hazard. For example, eliminating a meat wrapper's need to use a manual tape dispenser and label applicator by providing an automatic label and tape dispenser.

(7) Engineering controls. Ergonomic engineering controls redesign the work site or equipment to fit the limitations and capabilities of workers. Equipment of work site redesign typically offers a permanent solution. For example, the provision of a visual display terminal (VDT) workstation that is adjustable over a wide range of anthropometric dimensions.

(8) Substitution. Substituting a new work process or tool (without ergonomic hazards) for a work process with identified ergonomic hazards can effectively eliminate the hazard. For example, replacing hand tools that require awkward wrist positions (extreme wrist flexion, extension, and or deviation) with tools that allow a neutral wrist posture.

(9) Work practices. Practices that decrease worker exposure to ergonomic risks include changing work techniques, providing employee conditioning programs, and regularly monitoring work practices. Also included are equipment maintenance, adjustment, and modification of current equipment or tools, as necessary.

(10) Proper work techniques. Proper work techniques include methods that encourage correct posture, use of proper body mechanics, appropriate use and maintenance of hand and power tools, and correct use of equipment and workstations.

(a) Trained ergonomic personnel in consultation with occupational health should identify those jobs that require a break-in period. Occupational health should evaluate those employees returning from a health-related absence and define the break-in period for each individual employee.

(b) Regular monitoring of operations helps to ensure proper work practices and to confirm that the work practices do not contribute to cumulative trauma injury or hazardous risk factors.

(c) Effective schedules for facility, equipment, and tool maintenance, adjustments, and modifications will reduce ergonomic hazards. This includes ensuring proper working condition, having sufficient replacement tools to facilitate maintenance, and using effective housekeeping programs. Tool and equipment maintenance may also include vibration monitoring.

(11) Administrative controls. Administrative controls can be used to limit the duration, frequency, and severity of exposure to ergonomic hazards. Examples of administrative controls include, but are not limited to—

(a) Reducing the number of repetitions by decreasing production rate requirements and limiting overtime work.

(b) Reducing the number of repetitions by reducing line and or production speed or by having worker input into production speed (for example, using worker-based rather than machine-based production speed).

(c) Providing rest breaks to relieve fatigued muscle-tendon groups. The length of the rest break should be determined by the effort required, total cycle time, and the muscle-tendon group involved.

(d) Increasing the number of employees assigned to the task (for example, lifting in teams rather than individually).

(e) Instituting job rotation as a preventive measure, with the goal of alleviating physical fatigue and stress to a particular set of muscles and tendons. Job rotation should not be used in response to symptoms of cumulative trauma, as this can contribute to symptom development in all

employees involved in the rotation schedule rather than preventing problems. Analysis of the jobs used in the rotation schedule should be conducted by trained ergonomic and health care personnel.

(f) Providing light or restricted duty assignments to allow injured muscle-tendon groups time to rest, assisting in the healing process. Light or restricted duty assignments should be provided when physical limitations (as identified by a health care provider) allow the worker to return to work performing less than their normal work requirements. Every effort must be made to provide light or restricted duty assignments. In regard to light or restricted duty assignments.

(12) PPE. PPE is not necessarily recommended for controlling exposure to ergonomic hazards, because little research has been conducted to support claims of their usefulness.

(a) Ergonomic appliances such as wrist rests, back belts, back braces, and so on are NOT considered to be PPE. Consultation with trained ergonomic personnel on the effectiveness of such devices should be made prior to purchase.

(b) Ergonomic hazards should be considered when selecting PPE. PPE should be provided in a variety of sizes, should accommodate the physical requirements of workers and the job, and should not contribute to ergonomic hazards.

(13) Health care management. Early recognition and medical management of ergonomic disorders are critical to reduce the impact of injury on both the employee and employer.

(a) Common symptoms of musculoskeletal ergonomic disorder can include, but are not limited to pain, tingling, numbness, stiffness, and weakness in the neck, shoulders, arms, hands, back, and legs. Other symptoms can include headaches, visual fatigue, and increased errors.

(b) Soldiers and employees with symptoms of ergonomic disorders should report to medical personnel for an evaluation. Active duty Soldiers should report to their primary care provider. Civilians have the right to choose a civilian source of care. Civilians should report to the Occupational Health Nurse even if they are being treated by their own physician.

(c) Supervisors should ensure that symptomatic Soldiers and employees report for a medical evaluation in a timely manner.

d. Training and education. Installation Safety Office in conjunction with MEDDAC will conduct train the trainer ergonomic education for additional duty/ collateral duty safety officers and supervisors as needed. Collateral duty safety officers will train supervisors and supervisors will train employees.

(1) Training curriculum. Training will consist of but not be limited to the following:

(a) The potential risk of ergonomic disorders.

(b) The possible causes and symptoms.

(c) How to recognize and report symptoms.

(d) The means of prevention.

(e) The sources of treatment.

(2) Types of training.

(a) General. Employees who are potentially exposed to ergonomic hazards should receive formal instruction on hazards associated with their jobs and equipment. This training could be conducted at the initial orientation and annually thereafter. (b) Specific training. New employees and reassigned workers should receive an initial orientation and hands-on training prior to being placed in a full production position. The initial orientation should include: a demonstration of the proper use, care, and operating procedures for all tools and equipment; use of safety equipment; and the use of safe and proper work procedures such as proper lifting techniques.

## **9-8. Respiratory Protection Program (RPP)**

- a. This section prescribes policies and procedures for the selection, use, maintenance, and disposal of commercial respirators per AR 11-34. It applies to both military and civilian personnel. This regulation does not cover military protective masks used with toxic chemical agents.
- b. The Fort Bliss RPP is established per 29 CFR 1910.134 and AR 11-34, Chapter 3. Any issue not specifically covered by this chapter will be dealt with as prescribed by either of the above documents.
- c. The Fort Bliss RPP is a de-centralized program. The IRPD will develop and publish a respiratory protection regulation. He or she will provide guidance to commanders, supervisors, and IRPSs. IRPSs will be appointed from specific shops or organizations. IRPSs duties will be assigned in addition to regularly assigned duties.
- d. Only National Institute for Occupational Safety and Health or Mine Safety and Health Administration approved RPE is authorized for purchase and wear.
- e. The process for including personnel in the RPP follows a logical sequence as indicated below:
  - (1) Supervisors or Installation Safety Office inspections will identify personnel requiring respiratory protection. Personnel will not perform tasks requiring the use of RPE until they have been trained and fitted.
  - (2) The IMA will give a fitness for duty physical examination to identified personnel. The IMA will ensure that they are included in the medical surveillance program. Personnel will not wear RPE without medical clearance. Per 29 CFR 1960, this physical is at Government cost.
  - (3) IRPSs will fit-test identified personnel per appropriate regulations (29 CFR 1910.134, AR 11-34, and so forth).
  - (4) IRPDs will train identified personnel in the use, care, and storage of issued RPE.
- f. Disposable respirators will be used only when approved by the IRPD. All reusable respirators are included in a maintenance program.
- g. Respirators require a good face seal to be effective. Do not wear RPE when individual conditions (for example, beard, sideburns, or eyeglass temple pieces) prevent such a seal.
- h. Contact lenses may not be worn with full face-piece respirators or hoods. Corrective lenses will be provided to fit the facepiece of full-face respirators.
- i. Personnel will not use RPE until properly trained. Both qualitative and quantitative fit-testing is required to ensure the correct respirator is selected, issued and used.
- j. Installation Respiratory Protection Specialists duties. IRPS duties are in addition to normally assigned duties. Personnel are appointed from selected work sites where respirator use is required. An IRPS will —
  - (1) Be trained per 29 CFR 1910.134 and AR 11-34.
  - (2) Perform a preliminary evaluation of all exposures to potential airborne contaminants. This evaluation will determine possible requirements for respiratory protection. If the IRPS determines that there may be an airborne hazard requiring respiratory protection, the IRPS will contact the IRPD for further evaluation.
  - (3) Ensure that all areas requiring RPE are posted.
  - (4) Fit-test and issue RPE to all personnel requiring RPE within their area of responsibility.
  - (5) Select, procure, and stock proper replacement parts and filters.
  - (6) Inspect, clean, disinfect, and repair RPE upon turn-in, before reissue.
  - (7) Coordinate with the Environmental Management Division for proper disposal of respirators and cartridges contaminated with hazardous by-products.

- (8) Provide respirator training to appropriate supervisors and employees on the use, limitation, and proper care of respirators.
  - (9) Ensure the RPP SOP is current.
  - (10) Maintain a close working relationship with the IRPD. The IRPS will advise the IRPD of RPP problems and recommend corrective actions. He or she will also recommend changes to the RPP training program, as required.
  - (11) Maintain a file of each employee trained and fitted with respiratory protection. This file will contain —
    - (a) The date the employee was trained.
    - (b) The date fitted.
    - (c) The type of RPE issued.
    - (d) The date of medical clearance to wear RPE.
- k. Program requirements
- (1) The commander supervisor will request a survey from the Installation Safety Office whenever they suspect that an operation, new or existing, has a potential respiratory hazard. Based on the results of the initial survey, the Installation Safety Office will request that the Industrial Hygiene Section, WBAMC, perform an in-depth evaluation of the operation. This evaluation will determine exactly what type of respiratory protection is required. The Industrial Hygiene Section will advise the Installation Safety Office of its recommendations for respiratory protection.
  - (2) The survey is the basis for choosing a respirator. It is also the basis for entering personnel into training and medical evaluation programs.
  - (3) A respirator maintenance program is required for all re-usable respirators. The program must comply with AR 11-34, TB Med 502, 29 CFR 1910.134, ANSI2882, and respirator manufacturer manuals.
  - (4) SOPs will, as a minimum, include instructions for the use, care, and cleaning of respirators. Supervisors should contact the IRPD for further guidance.
  - (5) Supervisor will not permit personnel, DA civilians or military, to perform tasks requiring the use of respiratory protection until all requirements of this regulation have been met.
  - (6) Employees will be issued RPE by their servicing IRPS. RPE will not be procured from any other source. IRPS will procure RPE through normal supply channels.
  - (7) Breathing air or oxygen systems for airline respirators will meet air quality specifications for Grade D breathing air as described in the Compressed Gas Association commodity specification G-7-1-1966.

## **Chapter 10**

### **Explosives Safety Program**

#### **10-1. Responsibilities**

a. The Safety Director will—

- (1) Serve as the Garrison Command point of contact to the Garrison Commander or his appointed installation Explosive Safety Specialist.
- (2) Serve as the alternate member of the Installation Explosives Safety Council (IESC).

b. The Garrison Commander will—

- (1) Execute the applicable responsibilities IAW ARs 75-1, 385-10, 385-61, 385-63, 385-64, and TRADOC Reg 700-2.

- (2) Ensure explosive safety program complies with provisions of DA Pam 385-64.
- (3) Develop and implement appropriate safety procedures for receiving, storing, issuing, handling, transporting, and disposing of ammunition.
- (4) Ensure knowledgeable and qualified safety personnel review installation site plans, safety submissions and facilities designs before submission to HQ, IMA.
- (5) Ensure requests for waivers, exemptions, and certificates of compelling reason are submitted when compliance with explosive safety standards in DA Pam 385-64, and this regulation (as appropriate) cannot be achieved. Requests for waiver/exemption requires Installation Base Safety Office (IBSO) to determine the hazard involved, identify exposure and actions taken or program to correct hazard/exposure. Prepare waiver/exemption IAW DA Pam 385-64. Submit requests for waivers/exemptions to Commander, IMCOM-WEST, ATTN: SFIM-SW-ZS 2450 Stanley Road, Suite 101 BLDG. 1000, Fort Sam Houston, TX 78234-7517.
- (6) Ensure established quantity-distance (Q-D) arcs on installation master planning maps. An installation map with all locations of ammunition and explosives must be provided to the Fire Department.
- (7) Ensure explosive site plans and/or explosive storage licenses are submitted IAW DA 385-64.
- (8) Approve pyrotechnic displays and use of explosives in connection with public demonstrations, exhibitions, and celebrations will be submitted to the Installation Safety Office along with a copy of the Risk Assessment.
- (9) Ensure ammunition and explosive accidents/mishaps are reported IAW DA Pam 385-40.
- (10) Request guidance from Commander, IMCOM-WEST, ATTN: SFIM-SW-ZS 2450 Stanley Road, Suite 101, BLDG. 1000, Fort Sam Houston, TX 78234-7517 for circumstances not specifically addressed in this regulation or applicable AR/DA Pam. Submit a detailed map (or aerial photo) of the ammunition and explosives operations site and surrounding area. Include a narrative description of the conditions requiring resolution.
- (11) Ensure ordnance and explosives (OE) site safety submissions are submitted for the removal of OE when land known or suspected to contain OE hazards before lease, transfer out of DOD or disposal.
- (12) Appoint an individual with a job series of GS-0018 to chair the Explosives Safety Board for the installation.

c. Installation Explosives Safety Specialist will—

- (1) Monitor all installation operations for compliance with explosives safety standards.
- (2) Assist units in determining Q-D requirements with assistance from Ammunition Supply Point (ASP) personnel or Quality Assurance Specialist Ammunition Surveillance (QASAS).
- (3) Evaluate and make recommendations for approval of requests for explosives safety waivers, exemptions and Certificate of Compelling Reasons.
- (4) Review explosives safety actions before forwarding to HQ Commander, IMCOM-WEST, ATTN: SFIM-SW-ZS 2450 Stanley Road, Suite 101, BLDG. 1000, Fort Sam Houston, TX 78234-7517 to ensure operational needs and safety implications are clearly defined and projected requirements are stated.
- (5) Inspect ASP facilities and operations for special hazards.
- (6) Ensure arms rooms are inspected by a QASAS with applicable explosive safety requirements annually and a copy of the report/inspection will be forwarded to the Installation Safety Office.
- (7) Assist tenant units and site commanders regarding explosives safety program requirements.
- (8) Review QASAS magazine inspection reports. Track abatement actions on explosives safety deficiencies.

(9) Participate in preparation of site plans/safety submissions for explosives operations and facilities. After review, forward to Commander, IMCOM-WEST, ATTN: SFIM-SW-ZS, 2450 Stanley Road, Suite 101, BLDG. 1000, Fort Sam Houston, TX 78234-7517 at least 90 days prior to desired construction start date or modification of facilities.

(10) Maintain records of annual review of waivers/exemptions approved by Garrison Commander IAW AR 25-400-2 DTD 18 March 2003, The Army Records Information Management System (ARIMS).

(11) Ensure safety professionals attend an approved explosives safety course as required to support installation/tenant unit missions. At least one member of the Installation Base Safety Office (IBSO) should be a course graduate. Approved explosives courses are available from U.S. Army Defense Ammunition Center (USADAC).

(12) Evaluate and make recommendations for approval of use of explosives and pyrotechnics in public demonstrations, exhibitions, and celebrations.

(13) Submit an explosive accident report on DA Form 285 or 285-AB-R to appropriate agencies based on criteria set forth in DA Pam 385-40. Provide a copy of all explosive accidents and mishaps reports to Command Safety Office, ATTN: Commander, IMCOM-WEST, ATTN: SFIM-SW-ZS, 2450 Stanley Road, Suite 101, BLDG. 1000, Fort Sam Houston, TX 78234-7517.

d. Commanders of ammunition storage sites will—

(1) Coordinate with the IBSO, conditions that require DOD Explosives Safety Boards (DDESB) site plans/safety submission.

(2) Initiate and forward requests for waivers/exemptions to IBSO.

(3) Provide the following items for review during explosives safety inspections:

(a) A complete inventory by storage facility showing Department of Defense Ammunition Code (DODAC), nomenclature, quantity, and total net explosives weight.

(b) Maintain the latest lightning protection system inspection report furnished by Directorate of Public Works (DPW).

(c) Copy of work orders submitted for corrections of safety deficiencies.

e. QASAS personnel supporting MACOMs, installations/ASGs, and units will provide technical assistance to Safety Directors and Managers in the following areas:

(1) Development of explosives licenses and explosives safety site plans/submissions and explosives licenses.

(2) Explosives safety waiver and exemption requests and certificates of compelling reasons.

(3) Reviewing designs for explosive production, manufacture, testing, storage, surveillance, maintenance, demilitarization, and disposal facilities for compliance with explosive safety standards.

(4) Conducting safety inspections of ammunition and explosives handling, storage, use, maintenance, and disposal areas at least annually.

(5) Monitoring ammunition uploads and other activities that involve the transportation and storage of ammunition in other than authorized and licensed storage areas to ensure that pertinent requirements are met.

(6) Reviewing quantity-distance compliance of existing and planned facilities both prior to and after construction.

(7) Reviewing SOPs and directives for compliance with explosive safety requirements and make recommendation to ISO for changes.

(8) Assisting in the installation master planning process and reviewing, annually, the installation master plan to ensure construction is not planned inside explosive safety arcs.

- (9) Monitoring operations involving ammunition and explosives to ensure that Army units understand and comply with explosive safety standards.
- (10) Monitoring and evaluating explosives activities, including the following:
  - (a) Explosive production, storage, handling, maintenance, operating, demilitarization, and disposal sites.
  - (b) Explosives transportation.
  - (c) Explosives disposal and demilitarization.
  - (d) Weapon systems modifications, special exercises, and test programs.
  - (e) Contingency planning.
  - (f) Combat load and reload operations.
  - (g) Explosives safety training for unit personnel and safety officers.
- (11) Investigating ammunition and explosives accidents and report incidents to ISO.

#### 10-2 Use of Explosives and Pyrotechnics in Public Demonstrations, Exhibitions, and Celebrations

- a. Use of pyrotechnic displays and/or explosives in connection with public demonstrations, exhibitions, and celebrations requires HQ, TRADOC (ATCS-S) approval. Compliance is required for all applicable laws and regulations. Prior to forwarding to Commander, IMCOM-WEST, ATTN: SFIM-SW-ZS, 2450 Stanley Road, Suite 101, BLDG. 1000, Fort Sam Houston, TX 78234-7517 for approval, the ISBM will coordinate the action with Staff Judge Advocate (SJA) and PAO. Annex A outlines procedures for evaluating use of explosives and pyrotechnics in public demonstrations.
- b. Participation of personnel. DA policy is that U.S. Army military or civilian personnel will not handle, transport, store, set up, fire, detonate, or police up military and/or commercial explosives or pyrotechnics for public demonstrations, exhibitions, and celebrations conducted by the public. Use of military explosives and/or pyrotechnics by U.S. Army military or civilian personnel to include handling, transporting, storing, setting up, firing, detonating, or policing up, on other than military property, even if such events are conducted by the military, is discouraged. Use of antique weapons not routinely fired is prohibited, including their use for saluting. Routine saluting will be interpreted as rendering of explosive salutes using artillery in conjunction with formal military events following military protocol on military property. Saluting at public events on other than military property should only be granted in those rare instances when such an exception is clearly warranted.
- c. Garrison Commander may approve Army personnel to handle or activate certain items involved in contractor demonstrations. Approval will be based upon waiver requirements in DA Pam 385-64.
- d. There is no requirement for Commander, IMCOM, to approve civilian contractor (defense contractor) use of explosives or pyrotechnics in connection with public demonstrations, exhibitions, and celebrations.

#### 10-3. Transportation and Field/Temporary Storage of Ammunition

- a. Observe special requirements for transportation of explosives as specified in DA Pam 385-64, DODI 4500.9-R, part II, Department of Transportation (DOT) Regulations, and other applicable Army, Federal, State, and Local Regulations, concerning mechanical condition, refueling, placarding, and marking of vehicles.



b. Quantity-Distance (Q-D) requirements apply to field/temporary storage of ammunition and explosives.

#### 10-4. Unit Arms Rooms Licensing

a. Ammunition storage in unit arms rooms requires an approved explosive storage license. The Installation Explosives Safety Specialist is the approving authority. Question regarding explosive storage licensing will be addressed by calling 569-9373.

b. Unit Commanders wishing to store ammunition in their arms room will-

(1) Prepare a memorandum requesting authorization for storage of authorized ammunition items in an arms room to be forwarded to Installation Safety Office. Questions regarding this memorandum may be addressed by calling 568-2510.

(2) Prepare a risk assessment for the arms room approved by the unit commander.

(3) Have a current Surveillance Checklist Form from QASAS.

(4) Have a current Security Construction Statement Form 4604. This document is valid for five years from the date of issue. Questions regarding Form 4605 may be addressed by calling 568-5944.

(5) Have current Physical Security documentation from the Office of the Provost Marshal. Questions regarding this inspection may be addressed by calling 568-5151.

(6) Have current Fired Department inspection documentation. Question regarding this inspection may be addressed with The Fire Prevention Supervisor by calling 744-6082 or 568-8194.

(7) Post all documentation with the license in the arms room and personnel will be briefed annually on the best safety practices applicable to the storage and handling of ammunition.

(8) An arms room must have two fire extinguishers, rated at least 10 BC.

(9) Units will not display fire symbols if no ammunition is present.

(10) Ammunition Handlers must be appointed on orders by their commander and meet all training requirements outlined in Annex B.

#### 10-5. Storing Operational, Training, and Ceremonial Ammunition in Arms Rooms

a. Storage of limited quantities of HD 1.2.2, HD 1.4 and HD 1.3 ammunitions in troop buildings, hangars, and operating buildings without regard to quantity distance (QD) requirements. However, to reduce risk for explosives incidents, HD 1.2.2 ammunitions and explosives are not authorized to be stored in units' arms rooms.

b. Utilized Terms- Defined-

(1) Limited Quantities. Limited quantities is defined as the minimum amount of ammunition required to support operational missions (i.e., security guard forces, military police, etc.) or the immediate training requirements of the unit owning the facility.

(2) Operational Necessity. Operational necessity is defined as a mission associated with war or peacetime operations in which the consequences of a major creditable event (MCE) justify the loss of personnel and equipment. The qualifier "operational necessity" is intended to provide commanders flexibility in providing readily available operational necessity munitions without exposing personnel and equipment to unnecessary explosives risks. Key justification for storing ammunitions and explosives in arms rooms is "operational necessity," not "convenience."

c. Ceremonial Ammunition. Storage of ceremonial ammunition is not considered an operational necessity. However, limited quantities of HD 1.3 and HD 1.4 ceremonial ammunitions (e.g., 75 mm blank, 105 mm blank) may be stored in arms room providing there are no other practical alternatives. Storage of HD 1.3 ceremonial ammunitions in arms rooms is limited to units with

operational needs for such munitions. The total amount of HD 1.4 and HD 1.3 ceremonial ammunitions authorized for storage in arms rooms will not exceed the lesser of 100 pounds NEW or one full outer pack of ammunition.

d. McGregor Range Ammunition Supply Point and other approved ammunition holding areas are the primary explosive storage facilities for Fort Bliss unless such use would adversely impact training and contingency operations or result in an unnecessary commitment of resources (e.g. require unit personnel to provide 24 hour security or extended travel).

e. Composite Risk Management Integration. Commanders will ensure arms rooms risk assessments are properly coordinated through the Installation Safety Office (ISO), Physical Security, Fire Prevention, and Quality Ammunition Specialist Ammunition Surveillance (QASAS). The ISO is the designated agency for reviewing risk assessments for munitions stored in arms rooms. Armorers will ensure risk assessments are readily available inside arms rooms that store explosives. Commanders should ensure operations personnel (including newly assigned personnel) attend annual briefings on munitions safety, physical security, and review the unit's standing operating procedures (SOP) for handling, storing, and transporting ammunitions. Personnel responsible for managing arms rooms with explosives will have documentation on file for completing the required explosives safety and certification training.

f. Arms Room License. Each arms room storing munitions will be properly licensed and accurately identified with a site location (i.e. building number, grid coordinates, etc.). The owning organization will maintain inventory documentation of all stored munitions including the quantities, DODICs, and NSNs.

g. Ammunitions Packaging. Ammunitions stored in arms rooms will be stored in original containers and packaging. Unit arms rooms that support guard forces or military police may have more than one outer pack of each caliber of small arms ammunition open for mission use.

h. Storage Compatibility. Ammunitions stored in arms rooms will be stored in accordance with approved compatibility group mixing criteria.

i. Storage Buildings. Buildings used to store ammunitions in arms rooms will meet all explosive safety and physical security requirements. The use of metal storage containers or cabinets is mandatory. All munitions will be stored under the same criteria as an approved ammunition storage facility. Combustibles, solvents, petroleum products, or radioactive items will not be stored near ammunitions.

j. Safety Signs. Each arms room will display appropriate fire and/or chemical hazard signs. The signs will be posted conspicuously outside each arms room and on four sides of the storage building.

k. Storage Limitations for Army Components:

(1) Reserve Component and Reserve Officer Training Command (ROTC) units when conducting weapons qualifications during inactive duty training may, when required and under the conditions stated above, store limited quantities of HD 1.4 inside arms rooms for a period not to exceed 90 days.

(2) Active Component Units. Active component units that are not located in a region where ammunition supply points or ammunition holding areas are not readily available may, when required and under the conditions stated above, store HD 1.4 ammunitions in unit arms rooms for a period not to exceed 90 days. Limited quantities of HD 1.3 are authorized to support immediate training needs; however, the storage period will not exceed seven days. The total amount of HD 1.4 and HD 1.3 stored in arms rooms will not exceed 200 pounds NEW.

(3) Active Component Units. Active component units that are located within a region where approved ammunitions storage facilities are readily available may store limited quantities of HD 1.4 in arms rooms not to exceed 30 days.

l. Commanders should develop licensing and risk assessment strategies for implementing this standard. Storage license requests, risk assessments, and ammunition inventories will be sent to Garrison Command Installation Safety Office for review at 1733 Pershing Road (Bldg 515B), ATTN: IMWE-BLS-SO for review.

#### **10-6. Site Plans and Safety Submissions**

a. Prepare site plans and safety submissions IAW DA Pam 385-64.

b. Waivers will be submitted IAW DA Pam 385-64 to the Installation Safety Office for review.

c. Approval authority for waiver/exemption requests will be IAW AR 385-64. All locally approved waiver/exemption requests will be forwarded to Commander, IMA, Southwest Region Office, ATTN: SFIM-SW-ZS, 2450 Stanley Road, Suite 101, BLDG. 1000, Fort Sam Houston, TX 78234-7517 within thirty days.

d. Waivers, exemptions or CCR are not authorized for ammunition and explosives storage deemed as hazardous waste munitions. Hazardous waste munitions storage and transport shall be managed IAW DODI 6055.9-STD, chapter 14.

## ANNEX A

### **Evaluation Procedures for Use of Explosives and Pyrotechnics in Public Demonstrations, Exhibitions, and Celebrations**

#### A-1. Procedures

Installation commanders will ensure the requirements listed below are met prior to granting approval to use explosives and pyrotechnics in public demonstrations, exhibitions, or celebrations.

#### A-2. Approval

Functions conducted by military or DA civilian personnel, whether on or off post, require HQ TRADOC (ATCS-S) approval. Installations will request approval through command channels to Commander, TRADOC, ATTN: ATCS-S, Fort Monroe, VA 23651-1048, NLT 45 days prior to the event (RCS exempt: AR 335-15, para. 5-2i). Request will include review by ISBM and will comply with the following restrictions and constraints:

- a. Prepare written documents, to include risk assessment, specifying the responsibilities and procedures to be followed.
- b. Limit delivery of explosives or pyrotechnics to the morning of the demonstration. Do not store non-military explosives and/or pyrotechnics on the installation.
- c. Establish stringent guard and security controls for the material until it is expended or returned to home station.
- d. Establish controls to prevent spectators and other non-participants from entering the storage or demonstration area.
- e. Aim all directional fire away from personnel and structures. Attach a scaled diagram showing distances of personnel and structures from static firings.
- f. Adequate emergency medical evacuation and fire fighting personnel and equipment will be available in the immediate vicinity of the demonstration area during the period of the demonstration.
- g. Ensure the demonstration area is free of duds and hazardous residual material.

#### A-3. Contractor demonstrations

Functions conducted by civilian contractors will meet the following additional requirements.

- a. A properly executed contract will specify the type and quantity of explosives and pyrotechnics to be used in the demonstration.
- b. Risk assessment identifying hazards and risks to be eliminated, reduced, or accepted is reviewed by ISBM and approved by Garrison Commander.
- c. Liability insurance coverage, both bodily injury and property damage, will be required by the contractor.
- d. The handling and detonating of explosives or pyrotechnics will be accomplished by the contractor or his or her employees.
- e. No DA personnel will be permitted to handle or activate any of the items used in the demonstration.

**ANNEX B**  
**AMMUNITION HANDLER CERTIFICATION COURSES**

All personnel performing ammunition operations must have completed the following on-line classes:

- a. Introduction to Ammunition (Ammo 45).
- b. Explosives Safety (Ammo 63).
- c. Class V issue and Turn-In Procedures (Ammo 64, 1 and 2).
- d. HAZMAT Familiarization and Safety in Transportation (Ammo 67).
- e. Ammo 60. **This is a resident Course.** All supervisors/leaders must have completed the Technical Ammunition Course (Ammo 60) prior to the expiration of their interim certification. These courses are available from the Defense Ammunition Center, McAlester, OK.
- f. All personnel involved with the classification, preparation of items and/or bills of lading, inspection of vehicles and/or shipments, loading or unloading of carriers, driving, or other duties that directly involve the transportation of ammunition or explosives require training and certification in accordance with Department of Transportation (DOT) regulations CFR 49 and DA PAM 385-64, Ammunition and Explosives Safety Standards.
- g. Hazardous cargo certifiers must successfully complete an initial 80-hour hazardous materials (HAZMAT) certification course from one of the Department of Defense (DOD) approved schools listed in DOD 4500.9-R, Part 11, Chapter 204, in accordance with 49 CFR 172.700 through 172.704 and DOD component regulations. Personnel must receive refresher training every 2 years in order to continue to certify shipments of hazardous materials for transportation. Employers will maintain certification training records in accordance with 49 CFR Part 172.
- h. Those personnel at unit levels who will directly handle or who are exposed to munitions during the distribution process (other than the actual consuming soldier or weapons crew) must obtain and maintain certification through the Installation Ammunition Handlers Certification Course. The above on-line courses must be completed before the Garrison Command Explosive Safety Council approves Ammunition Handler Certification. The certification is valid for 2 years from the date of certification. Unit commanders should post a copy of explosives handling/transport certifications along with the Soldiers DA Form 7281 (Command Oriented Arms, Ammunition, and Explosives (AA&E) Security Screening and Evaluation Record) in the Soldiers local file prior to allowing or assigning duties to handle AA&E.

## **Chapter 11**

### **Range Safety**

#### 11-1. Responsibilities

a. Commander, USACAS will establish a range safety program that will include—

- (1) The requirement that personnel are held accountable for range and explosive safety to the same extent that they are held accountable for mission accomplishment.
- (2) Integration of safety and risk management into planning and all subsequent phases of range operations.
- (3) Active and coordinated involvement of trained and qualified range control and installation safety professionals who—
  - (a) Routinely monitor units during training by range control, safety, and quality assurance specialist (ammunition surveillance) personnel.
  - (b) Establish an operational range control organization.
  - (c) Appoint a qualified Installation Range Control Officer (RCO).
  - (d) Develop an installation-level range regulation and/or standing operating procedure (SOP).
  - (e) Develop safety SOP for range clearance operations using the risk management process and the requirements of DODD 4715.11 and DODD 4715.12.
  - (f) Withdraw or suspend installation training complex privileges for willful violations of installation range requirements.
  - (g) Ensure that incidents of accidents involving weapons or ammunitions are reported and investigated IAW applicable regulations.
  - (h) Establish medical support SOP for all range operations.
  - (i) Establish a central POC for coordination and review for SDZs.
  - (j) Prohibit unauthorized persons from entering impact areas.
  - (k) For those individuals authorized access to areas known or suspected of containing UXO, provide appropriate explosives safety training, UXO identification, and procedures to be taken if UXO is encountered.
  - (l) Restrict authorized access to areas known or suspected of containing UXO to personnel trained in UXO identification and procedures to be taken when UXO is encountered. When access to areas known or suspected of containing UXO is required, provide personnel authorized access with qualified escorts, such as explosive ordnance disposal (EOD) qualified personnel.
  - (m) Maintain permanent records of all munitions expended, to include an estimated dud rate, by type, quantity, location, and using organization. Include all UXO clearance operations or EOD incidents conducted on the range.
  - (n) Ensure to the extent practical that targets placed on ranges do not contain hazardous materials (such as petroleum, oils, lubricants, radium dials, and batteries).
  - (o) Establish safe and practical methods for recycling or disposing of range residues, in accordance with DODI 4160.21–M.
  - (p) Ensure that range residues, to include cartridge cases, ordnance-derived waste, and targets, do not contain ammunition, explosives, or other dangerous articles prior to release from DOD control.
  - (q) Prohibit controlled burning of vegetation on ranges as a method to clear UXO. Controlled burns may be used to control dense brush or undergrowth or clear a range of vegetation to make UXO clearance operations safe for personnel conducting the clearance operation.

(r) Ensure procedures are in place that allow prompt response to a release of military chemical compounds, for example, chemical agent, chemical smoke, riot control agents, and so on, or other hazardous materials used for training, or to a substantial threat of a release on or off range when such a release poses an imminent and substantial threat to human health or the environment.

(s) Ranges or other areas known or suspected to contain ICMs or submunitions—

1. Before personnel access is granted to range impact areas, and in cooperation with the installation range operations office, determine whether actual or suspected ICM/submunitions contamination exists. Range operations, in coordination with Installation Safety Office (ISO) and EOD representatives, will determine if it is safe to permit personnel access and establish prerequisite precautions. Personnel permitted to enter any area known to contain or suspected of containing

ICMs or submunitions will be fully apprised of the potential dangers and the safeguards to be exercised.

2. Ensure DCS, G-3 (DAMO-TR), DASAF, and G-4 (DALO-AMA) are informed of any ranges or other areas known to contain ICMs or submunitions.

3. Ensure that ranges or other areas known or suspected to contain ICMs or submunitions are clearly marked and that entry to these areas is restricted and access is controlled.

4. Prohibit all activities on ranges or other areas known or suspected to contain ICMs or submunitions unless a waiver, approved by the DASAF and the DCS, G-3 (DAMO-TR), is obtained.

5. Follow the mandatory procedures contained in Chapter 3 of DA Pam 385-63 for controlling hazards and for requesting waivers to the restriction on maintenance, characterization, or clearance of ranges or other areas known or suspected to contain ICMs or submunitions.

(t) Establish and implement all feasible access controls to deter unauthorized access.

(u) ICW PAO and the ISO establish and conduct an aggressive education program for all installation personnel, their families, and the general public on the dangers of dud ammunition and other UXO.

b. Installation Commander—

(1) Ensures the Installation Public Affairs Office (PAO) and the Installation Safety Office are included in planning and executing the installation Range Safety Program. The PAO assists in the education of on-post and off-post personnel to include school children (kindergarten through 12th grade) in the dangers of trespassing on ranges and training areas and handling unexploded ordnance (UXO).

(2) Develops procedures to ensure all release of information to the public news media is made through the installation PAO and in accordance with AR 360-1.

(3) Ensures warnings are issued at least 24 hours in advance, through the installation PAO, to the public news media before firing operations that may involve possible hazards to the general public.

(4) Prohibits use of alcohol and controlled substances in the training complex and prohibit any individual under the influence of alcohol or controlled substance entrance into the training complex.

(5) Ensures ammunition and explosives not expended during training are returned to the ammunition supply point (ASP), in the original packaging, when firing is completed or as directed by local policy.

(6) Complies with Military Handbook (MIL–HDBK) 828A and DA Pam 385-63 in establishing firing ranges, training facilities, and maneuver areas for laser use within the installation training complex.

(7) Appoints a senior range safety officer for air defense artillery (ADA) guided missile and large rocket firing exercises.

(8) Ensures an aggressive education program on the dangers of dud ammunition and other items of UXO is implemented.

c. The Installation Safety Director —

(1) Provides oversight responsibility for all range safety matters.

(2) Evaluates the overall effectiveness of the Installation Range Safety Program annually to ensure the Range Safety Program is being implemented in accordance with AR 385–63 and local range regulations, policies and SOP’s.

(3) Inspects the installation training complex semi-annually and high-risk training operations quarterly to support safety in training missions.

(4) Reviews proposed local range safety policies and procedures.

(5) Reviews and comments on all high-risk and/or extremely high-risk assessments for training and operations on installation owned facilities and units.

(6) Assists the installation range control officer, PAO, and explosive ordnance disposal (EOD) officer as required in developing and implementing an on- and off-post range safety and dud awareness educational program targeted to children (kindergarten through 12th grade).

(7) Investigates or ensures range accidents are investigated by the appropriate command level and maintain records of accidents occurring within or originating from the installation training complex in accordance with DA Pam 385–40.

(8) Reviews all range modification and construction proposals, designs, and plans.

(9) Participates in final range acceptance inspections following construction, renovation, or modification of facilities prior to any firing on the range.

(10) Reviews all nonstandard range and training activities, to include the user-provided, risk-management documentation for those activities with high or extremely high residual risk.

(11) Reviews and make recommendations regarding the conduct of overhead fires.

(12) Monitors officer in charge (OIC) and range safety officer (RSO) training program effectiveness.

d. The Installation Range Control Officer —

(1) Serves as the central point for control and coordination for all activities conducted within the installation training complex to ensure safety and unified operations.

(2) Coordinates safety issues with the ISO staff including the Installation Safety Director.

(3) Withdraws or suspends installation training complex privileges from any person, organization, agency, or club that willfully violates this pamphlet or local range regulations and procedures; or from any person whose ability or conduct is incompatible with the safe use of Government range structures and facilities.

(4) Maintains and updates files of current and historical usage data on the installation training complex to include known hazards, type of ammunition expended on each range, dud accumulation and disposal records, and clearance status of temporary, dedicated and high hazard impact areas where available.

(5) Maintains original records of current and historical surface danger and airspace zone diagrams, weapon system safety data, firing limitations, and survey data for firing points and impact areas within the installation training complex boundaries.



(6) Approves, controls, and monitors personnel access into the installation training complex for both training and administrative activities. The RCO will be included in all range scheduling activities. The RCO is the final authority regarding the use of training facilities and will be directly involved in all live-fire activities.

(7) Before personnel access is granted to range impact areas, determines whether actual or suspected improved conventional munitions (ICMs)/submunitions contamination exists. The RCO, in coordination with ISO and EOD representatives, determines if it is safe to permit personnel access and establish prerequisite precautions. Personnel permitted to enter any area known or suspected to contain ICMs or submunitions will be fully apprised of the potential dangers and the safeguards to be exercised. Additional actions required for ranges or other areas known to be contaminated by ICMs or submunitions are specified in chapter 3 of DA Pam 385-63.

(8) Maintains current maps and overlays of training complex impact area boundaries, SDZ diagrams, and ground hazards for dissemination of information to installation training complex users.

(9) Establishes, maintains, and documents safety certification procedures for unit range OICs and RSOs. For artillery units, the commander provides the installation RCO a list of personnel who have successfully completed the unit certification program. The installation RCO ensures that all OICs and RSOs have received baseline education addressing the use of installation training complex facilities (for example, installation procedures for opening and closing facilities, communications requirements, MEDEVAC procedures, and so forth).

(10) Performs administrative and investigative duties related to the safe operation of ranges, training areas, and airspace.

(11) Assists the ISO and PAO in establishing and implementing an on- and off-post range safety and dud awareness educational program.

(12) Exercises oversight of unit range OIC and RSO training programs, and serve as the authority on suspension or termination of OIC/RSO certification.

(13) Exercises approval authority for the conduct of overhead fires. Approval is based on considering unit risk management documentation, maneuver plans, and the Installation Safety Manager's recommendation.

(14) Coordinates as required with installation facilities engineers for maintenance of ranges and training facilities to provide safe operating conditions.

(15) If required, participates as a member of the installation range accident investigation team, providing weapons information and scenario input to the installation safety manager.

(16) Coordinates with local EOD, environmental, installation safety, and other involved staff organizations for clearance of unexploded ordnance as needed.

(17) Monitors effectiveness of training programs for OICs and RSOs.

(18) Develops and publish an installation/community range regulation.

(19) Ensures that appropriate explosives safety site plans are submitted for permanent ammunition and explosive storage and distribution facilities (except for 1.4 small caliber ammunition) on ranges. Note that there is no requirement for a site plan unless the storage/distribution facility is improved, such as building, covered concrete pad, and is used on a recurring basis.

e. Quality Assurance Specialist and Ammunition Surveillance (QASAS)—

(1) Ensures only ammunition certified and cleared in accordance with Technical Bulletin (TB) 9-1300-385 is issued for overhead fire of unprotected personnel.

- (2) Ensures ammunition is stored, handled, and transported in accordance with applicable regulations, standards, and policies.
- (3) Investigates and forwards malfunction reports in accordance with AR 75-1 and AR 385-40 or MCO P8025.1D, as appropriate. Acts as installation's coordinator for ammunition malfunctions, explosive accidents, and ammunition investigations. Reports will be forward to the ISO and RCO within 30 days for their records and situational awareness.
- (4) Provides using units with technical assistance concerning all aspects of ammunition and explosives.
- (5) Provides ammunition liaison with range control office, installation safety office, logistics assistance office, EOD personnel, and training units.
- f. The Director, Community Activities (DCA) will —
  - (1) Operate the Rod and Gun (R & G) Club ranges IAW this regulation and DA Pam 385-63.
  - (2) Ensure that all plans for construction, modification, rehabilitation, or changes to R & G Club ranges are reviewed by the ISO.
- g. The Director, Directorate for Public Works and Logistics (DPWL) and the Director for Contracting (DOC) will ensure that plans for all construction, modification, rehabilitation, or changes to all ranges are reviewed by the ISO prior to letting any contract or beginning any work.
- h. Battalion/Squadron Commanders—
  - (1) Comply with the installation procedures for the certification of OIC/RSO/laser range safety officers (LRSOs).
  - (2) For commanders of field artillery battalions and larger field artillery units, establish and maintain an artillery safety training and certification program to train and qualify personnel in safety procedures for their specific areas of responsibility. Personnel who have not completed annual training and certification will not be appointed as OIC or RSO.
  - (3) Conduct risk management for all range operations.
- i. The unit commander—
  - (1) Ensures compliance with DA Pam 385-63, applicable technical manuals (TMs), field manuals (FMs), installation range guidance, and applicable SOPs for safe training and firing for each weapon system within the command.
  - (2) Ensures all personnel within the command are briefed on and comply with installation range procedures and safety requirements including required personal protective equipment.
  - (3) Designates an OIC and RSO for each firing exercise and or maneuver in accordance with table 1-1, DA Pam 385-63. (Except as designated in paragraph 1-6h(1)(a), DA Pam 385-63, the RSO may have no additional duties during the firing exercise.)
  - (4) Ensures personnel performing duties of OIC and RSO are certified in accordance with established installation safety certification program.
  - (5) Complies with range safety certification program guidance in paragraph 1-7, DA Pam 385-63 for OICs and RSOs to ensure they are—
    - (a) Competent and properly instructed in the performance of their duties.
    - (b) Knowledgeable in the weapon systems for which they are held responsible and in safe ammunition handling and use procedures.
  - (6) Develops SOPs for laser operations to include provision for immediate medical attention for personnel who incur eye or other overexposure to laser energy and reporting laser overexposure incidents in accordance with DA Pam 385-40, TB MED 524, and MIL-HDBK 828A.

(7) Applies composite risk management per FM 5-19 and develops controls and procedures for all phases of training events.

### **11-2. Deviations/Waivers**

a. Deviation authority is granted to the Installation Commander per TRADOC Reg 385-2 Para 6-3 and it shall not be further delegated. Deviations are limited to—

- (1) Reducing SDZ dimensions when terrain, artificial barriers, or other compensating factors make smaller SDZs safe.
- (2) Modifying prescribed firing procedures appropriate for a state of training of participating personnel to increase training realism, provided safety of personnel is not degraded.
- (3) Allowing personnel who are not directly participating in the actual conduct of training within the SDZ.

b. Deviations applied to SDZs extending beyond installation boundaries must be based on the ability to contain projectiles, hazardous fragments, laser beams and both vertical and horizontal ricochet sufficiently within the installation boundaries, and areas under military control (for example, leased land or training areas and facilities acquired through Memorandum of Understanding or Memorandum of Agreement.) Probability of hazardous fragment escapement must not present a greater hazard than 1:1,000,000 (10<sup>-6</sup>)(unlikely) to the public.

c. As a minimum, all deviation authorizations will contain the following, as appropriate:

- (1) Statement citing chapter, paragraph, and subparagraph of the specific condition requiring deviation, and the name and number of the firing range, training facility, or maneuver area involved.
- (2) Description of the existing condition and anticipated hazards, subsequent hazard analysis, and risk analysis.
- (3) Statement as to why a deviation is necessary and impact on training if not granted.
- (4) Control measures taken to eliminate hazards and/or minimize risk and residual risk level.
- (5) Installation and unit SOPs governing the specific firing range, training facility, or maneuver area for which the deviation applies.
- (6) Scaled topographical map depicting standard SDZ and requested deviation.
- (7) Map coordinates of the firing position, target location, and quadrant or elevation of fire, if required. The firing position, direction of fire, and SDZs will be plotted on the scaled map with distances shown in meters.
- (8) Terrain profiles through the gun target line (GTL) and left and right limits of fire showing the relative elevation of the weapon system to be fired, the target, and natural terrain backstop or artificial barrier. A cross-sectional terrain profile showing the natural terrain backstop downrange will also be submitted. Terrain profiles only need to be drawn for the condition(s) requiring deviation and if profiles truly support justification for the deviation. Automated SDZ (ASDZ) trajectory profiles may be submitted in lieu of developing terrain profiles through manual means. Risk-management principles will be applied in determining the applicability of alternate profiles.

d. Requests for deviation will originate from the unit or activity conducting the event, or the installation range control officer (RCO). Requests will be coordinated through the appropriate chain of command as needed and the Installation Safety Office, which will provide final review to ensure risk-management steps are accomplished. The Installation Range Control Officer makes the initial judgment regarding the suitability of a proposed deviation prior to submission to the approving authority per AR 385-63, Chapter 3.

- e. Deviations are valid for 1 year.
- f. Deviations will not be applied to other Federal agency directives such as airspace or water traffic requirements.
- f. MACOMs may communicate directly with the Army Training and Doctrine Command (TRADOC) command safety office or ISO for technical information and guidance on risk management.
- g. Any accident or incident occurring under an approved deviation will cause automatic termination of the approval until an investigation is completed and the deviation revalidated by the respective approving authority.
- h. Conflicts regarding level of risk determination will be resolved by the commander holding the deviation authority for the highest level of risk deemed in conflict.
- i. For live-fire training operations conducted under an approved deviation by nonresident units, the host installation commander must approve training at a host installation.
- j. Before waivers are granted- AR 385-63 and TRADOC Reg 385-2 current standards and requirements will be verified by RCO and Installation Safety.

#### 11-3. Accident/Incident Reporting

- a. All accidents/incidents involving weapons firing or other serious injury will be reported to the appropriate Range Control.
- b. If an accident/incident involving ammunition or weapons, or a fatal/serious accident the scene will be secured and undisturbed as much as possible. Following immediate action procedures (first aid, evacuating injured, etc.), the scene will be left undisturbed and protected until an investigation is completed. The senior person on the ground is responsible for securing and preserving the accident site.
- c. The Commander, USACAS ICW the Range Control Officer will ensure that all accidents /incidents are reported to the ISO during duty hours and to the IOC after duty hours. The IOC will immediately notify the on-call ISO representative. The ISO will notify the TRADOC Safety Office and the U.S. Army Safety Center, as necessary.
- d. Malfunctions of Ammunition/Explosives will reported and investigated IAW AR 75-1.

#### 11-4. Weapons/Ammunitions Safety

Commanders will take the following minimum actions to establish and maintain effective control over weapons and ammunition. Commanders will —

- a. Publish SOPs on the proper storage to include security, issue, handling, and use of weapons. Commanders will make frequent checks to ensure compliance.
- b. Ensure that weapons training emphasizes accident prevention to include negligent discharges. Particular emphasis will be —placed on the proper methods for loading, locking, clearing, safety mechanism position, placement of finger in relation to trigger and muzzle awareness of weapons.
- c. Ensure that weapons are not cleared or cleaned in areas where personnel congregate. Commanders will provide a separate area for this purpose.
- d. Strictly prohibit “quick draw” horseplay or pointing weapons at other soldiers.
- e. When training with blank and live ammunition, commanders will implement control measures to ensure ammunition is not mixed nor issued from the same locations. Control measures will be continuously monitored and integrated into risk assessments.

### **11-5. Use of Smoke**

The use of smoke in training poses special health and safety issues. The following precautions apply to all smoke training with fog oil, hexachloroethane (HC), red phosphorus, WP, plasticized WP, terephthalic acid (TA), and colored and diesel smokes.

- a. Personnel will carry a protective mask when participating in exercises that include the use of smoke. Personnel will mask—
  - (1) Before exposure to any concentration of smoke produced by M8 white smoke grenades, M83 smoke grenades (TA), smoke pots (HC & TA smoke), or metallic powder obscurants.
  - (2) When passing through or operating in dense (visibility less than 50 m) smoke such as smoke blankets and smoke curtains.
  - (3) When operating in or passing through a smoke haze (visibility greater than 50 m) and the duration of exposure will exceed 4 hours.
  - (4) Anytime exposure to smoke produces breathing difficulty, eye irritation or discomfort. Such effects in one individual will serve as a signal for all similarly exposed personnel to mask.
  - (5) When using smoke during military operations in urban terrain training or when operating in enclosed spaces.

The protective mask is not effective in oxygen deficient atmospheres. Care must be taken not to enter areas where oxygen may have been displaced.

- b. Clothing is to be laundered and personnel will shower after exercises involving exposure to smoke. Personnel exposed to smoke should reduce skin exposure by rolling down their sleeves.
- c. Special care must be taken when using HC and TA smoke to ensure that appropriate protection is provided to all personnel who may be exposed. When planning for the use of HC smoke in training, consideration must be given to weather conditions and the potential downwind effects of the smoke. Positive controls, (observation, control points, communications) must be established to prevent exposure of unprotected personnel. Detailed hazard information is available on appropriate materiel safety data sheet. Hazards and risks controls will be included in risk assessments. FS (sulfur trioxide-chlorosulfonic acid solution) and FM (titanium tetrachloride) smoke will not be used in training.
- e. Smoke will not be used in public demonstrations, displays, or ceremonies unless cleared thru the Installation Safety Officer and positive dissipation of the smoke can be assured and no exposure to the public or nonparticipating personnel is expected. A risk management plan will be developed by the agency conducting the public demonstration, in conjunction with the installation range control officer and safety director, for all uses of smoke in demonstrations, displays, or ceremonies.
- f. Use of smoke will be cleared thru the Range Control Officer before execution.

### **11-6. Use of Smoke Pots**

- a. Personnel manually firing HC and TA smoke pots will mask and keep their face turned away from the pots to prevent burn injuries. Once HC and TA smoke pots have ignited, personnel will quickly move away a minimum distance of 30 m.
- b. Precautions will be taken to prevent ground fires. HC and TA smokepots will not be fired inside buildings, tents, or other enclosed areas because of fire and health hazards from associated fumes. Exceptions are building or structures specially designed for smoke training, and only after conducting a thorough risk assessment, developing and implementing controls, and acceptance of the residual risk by the appropriate commander.

- c. HC and TA smokepots must be kept dry. Any addition of water to HC and TA smoke mixtures may cause it to burn erratically, explode, or result in spontaneous combustion. HC smoke pots will not be ignited during visible precipitation (snow or rain).
- d. The M4A2 smoke pot must be vented for at least 5 minutes in accordance with TB CML 100.
- e. When electrically firing the M5 HC smoke pot, at least 30 m of WD-1/TT wire will be used.
- f. Use of smoke pots will be cleared thru the Range Control Officer before execution.

### **11-7. Riot Control Agents**

- a. Except when prohibited by regulations or higher authority, commanders may use riot control agents (RCAs) in training, subject to the following:
  - (1) Use of RCAs in training is limited to CS, CSX, CS-1, CS-2, and CR. All other RCAs are prohibited for training use.
  - (2) Use of RCAs in training requires supervision by personnel specially trained in field behavior, individual protection, and first aid for RCAs. Personnel that meet these criteria are chemical officers (branch code 74), chemical NCOs (MOSC 74D), school trained NBC officers (SSI 3R) and NCOs (SQI C.)
  - (3) RCAs will not be used under conditions that are dangerous to life or property. Minimum safe distances to heavily traveled installation roads, railroad right of ways, airfields (including all aircraft landing areas), or inhabited areas are:
    - (a) CS chambers will be at least 100 m away from heavily traveled roads, 500 m from aircraft operations and inhabited areas, and 1,000 m from the nearest installation boundary.
    - (b) Field training exercises involving RCAs will be 500 m or more away from public traffic routes, the nearest inhabited buildings, and 1,000 m from installation boundaries.
  - (4) Prior to a scheduled RCA exercise, training supervisors must conduct a readiness evaluation of personnel. Before being exposed to RCAs, all personnel with respiratory ailments, open wounds, severe facial acne, or any active dermatitis, and pregnant soldiers must be referred to a medical officer for evaluation. The medical officer will evaluate the health records of these individuals and, when necessary, examine the soldiers to determine their readiness to undergo training without undue medical risk. The examination results (stating can/cannot participate in training with RCAs ONLY) will be documented in the soldiers' medical records.
  - (5) Commanders must ensure protective masks are available for all soldiers participating in training.
  - (6) When protective gear is worn, commanders will consider the additional heat stress placed on soldiers. When using the wet-bulb globe temperature to determine the heat category, add 10° if troops are in body armor mission oriented protective posture level four. High ambient temperatures, high humidity, and heavy workload are factors that increase the potential for heat injuries. To reduce the heat stress risk, commanders—
    - (a) Provide a water supply and encourage all soldiers to drink plenty of water. Supervisors will monitor personnel undergoing training to ensure personnel frequently drink water to replace lost fluids.
    - (b) Reduce the mission-oriented protective posture level under high heat stress conditions when possible.
    - (c) Schedule additional rest breaks during training to allow troops to cool off. These periods also can be used for critiques. Where possible, use vehicles to move personnel who are in a protective posture.

(d) Ensure subordinate commanders and leaders check their personnel for early signs of heat stress. Authorize frequent breaks while operating in a protective posture.

(7) Wearing of contact lenses while masked is prohibited. Soldiers who wear contact lenses must remove them and use standard prescription eyeglasses during chemical defense training that includes wearing the protective mask. Unnecessary eye irritation will occur if RCA particles are trapped under contact lenses. The lenses also may be lost due to excessive tearing. All individuals requiring corrective lenses must have masks with correctly fitted optical inserts.

(8) Unprotected personnel will not be exposed to RCAs longer than 15 seconds.

b. Personnel specified in paragraph 11-7a(2) will supervise the mask confidence course.

c. Firing of projectiles or dropping bombs containing chemical agents determined to be harmful to the environment or wildlife is not authorized. When a deviation is required, it will be approved only after conducting a through risk assessment, identifying associated long and short term hazards, establishing and implementing controls, and acceptance of residual risk.

d. Employment conditions.

(1) CS, CSX, CS-1, CS-2, and CR will be used in training only under the supervision of an NBC officer or NCO who has received formal training in the characteristics, capabilities, and training applications of these agents. Only CS in capsule form may be used in the CS chamber.

(2) RCAs will not be released when personnel located downwind will be affected, unless exposure to a controlled concentration is desired. CS agents will not be released within 50 meters of spectators.

(3) CS agents irritate the eyes, the respiratory tract, and moist skin areas of the body. A field protective mask, field clothing with collar, cuffs buttoned and trouser legs tucked into boots will protect against field concentrations of CS. Personnel handling or dispensing bulk CS will wear rubber gloves, hood, rubber boots, rubber apron, protective mask, and field clothing secured at neck, wrists, and ankles.

(4) Individuals affected by RCAs will move to fresh air and face into the wind for 5 to 10 minutes, avoid rubbing the eyes, and remain well spaced from other affected personnel. If accidentally exposed to an RCA, clothing will be removed from the affected skin as soon as possible. Flush the exposed area(s) with large volumes of cool water for not less than 15 minutes, and then seek prompt medical attention. If available, mild soap should be used to cleanse the contaminated skin.

(5) Hot water should not be used when showering as it will raise the vapor point of the CS resulting in further contamination and discomfort, especially to the eyes and respiratory system.

(6) When eyes are contaminated with a CS agent, treat them with a 1 percent solution of sodium bicarbonate (baking soda). If not available, hold the eyes open with fingers, flush with water not fewer than 15 minutes, then seek medical attention.

(7) Contaminated clothing will be removed from the area to prevent accidental contamination of unprotected personnel.

e. When riot control agents are transported in Army aircraft compliance with AR 95-1, AR 95-27 is required.

**11-8. Range Safety.** Additional Fort Bliss Range Safety specifics can be found in the Standard Operating Procedures for Weapons Firing and Training Area use at Fort Bliss Training Complex.

**Appendix A**  
**Section I**  
**References**

**AR 385–63** Range Safety

**DA PAM 385–10** Army Safety Program

**DA PAM 385–16** System Safety Management Guide

**DA PAM 385–24** The Army Radiation Safety Program

**DA PAM 385–40** Army Accident Investigation and Reporting

**DA PAM 385–61** Toxic Chemical Agent Safety Standards

**DA PAM 385–64** Ammunition and Explosives Safety Standards

**DA PAM 385–65** Explosives/Toxic Chemical Safety Site Planning

**DA PAM 385–69** Biological Defense Safety Program

**DA PAM 385–80** Hospital/Medical Safety Management

**AR 11–34** The Army Respiratory Protection Program

**AR 15–6** Procedures for Investigating Officers and Boards of Officers

**AR 20–1** Inspector General Activities and Procedures

**AR 27–20** Claims

**AR 40–5** Preventive Medicine

**AR 40–13** Medical Support–Nuclear/Chemical Accidents and Incidents

**AR 40–21** Medical Aspects of Army Aircraft Accident Investigation

**AR 40–57** Armed Forces Medical Examiner System

**AR 40–66** Medical Record Administration and Health Care Documentation

**AR 40–400** Patient Administration

**AR 40–501** Standards of Medical Fitness



**AR 50–5** Nuclear Surety

**AR 50–6** Chemical Surety

**AR 58–1** Management, Acquisition, and Use of Motor Vehicles

**AR 70–1** Army Acquisition Policy

**AR 73–1** Test and Evaluation Policy

**AR 75–1** Malfunctions Involving Ammunition and Explosives (RCS CSGLD–1961 (MI))

**AR 95–1** Flight Regulations

**AR 95–30** Participation in a Military or Civil Aircraft Accident Safety Investigation

**AR 190–5** Motor Vehicle Traffic Supervision

**AR 200–1** Environmental Protection and Enhancement

**AR 200–2** Environmental Effects of Army Actions

**AR 350–1** Army Training and Leader Development

**AR 360–1** The Public Affairs Program

**AR 385–55** Prevention of Motor Vehicle Accidents

**AR 385–63** Range Safety

**AR 420–90** Fire and Emergency Services

**AR 600–55** The Army Driver and Operator Standardization Program (Selection, Training, Testing, and Licensing)

**AR 750–6** Army Equipment Safety and Maintenance Notification System

**AR 750–10** Army Modification Program

**AR 750–43** Army Test, Measurement, and Diagnostic Equipment

**Code of Federal Regulation (CFR)**

Available from (<http://www.gpoaccess.gov/cfr/index.html>.)

**DA PAM 40–11** Preventive Medicine

**DA PAM 40–18** Personnel Dosimetry Guidance and Dose Recording Procedures for Personnel Occupationally Exposed to Ionizing Radiation

**DA PAM 40–173** Occupational Health Guidelines for the Evaluation and Control of Occupational Exposure to Mustard Agents H, HD, and HT

**DA PAM 40–501** Hearing Conservation Program

**DA PAM 50–5** Nuclear Accident or Incident Response and Assistance (NAIRA) Operations

**DA PAM 385–1** Small Unit Safety Officer/NCO Guide

**DA PAM 385–63** Range Safety

**DA PAM 385–90** Army Aviation Accident Prevention Program

**DA PAM 690–47** DA Civilian Employee Deployment Guide

**DA PAM 738–751** Functional Users Manual for the Army Maintenance Management System–Aviation (TAMMS–A)

**DA PAM 750–8** The Army Maintenance Management System (TAMMS) Users Manual

**DOD 4145.26–M** DOD Contractors’ Safety Manual for Ammunition and Explosives

**DOD 4500.36–R** Management Acquisition and Use of Motor Vehicles

**DOD 4500.9.R Part II** Defense Transportation Regulation-Cargo Movement

**DOD 6055.9** DOD Ammunition and Explosives Safety Standards

**DODD 6055.9E** DOD Explosives Safety Management and the DOD Explosives Safety Board

**DODI 6055.1** DOD Safety & Occupational Health (SOH) Program

**DODI 6055.4** DOD Traffic Safety Program

**DODI 6055.7** Accident Investigation, Reporting, and Record Keeping

**DODI 6055.11** Protection of DOD Personnel from Exposure to Radiofrequency Radiation and Military Exempt Lasers, Ch1

**DODI 6055.15** DOD Laser Protection Program

**DOT 218** Federal Motor Vehicle Safety Standards and Regulations **EM (Engineer Manual)**  
**385–1–1** USACE Title: Safety–Safety Health Requirements (Army Construction Safety Standards) (Available at [http://www.usace.Army.mil/publications/.](http://www.usace.Army.mil/publications/))

**EP (Engineer Pamphlet) 1130–2–500** Project Operations-Partners and Support (Work Management Guidance and Procedures) (Available at [http:// www.usace.Army.mil/publications/.](http://www.usace.Army.mil/publications/))

**ER 385–1–91**

U.S. Army Corps of Engineers Safety and Occupational Health EM 385 Safety and Health Requirements Manual

**EO (Executive Order) 12196**

Federal Civilian Personnel (Occupational Safety and Health Programs for Federal Employees) (Available from [http:// www.archives.gov/.](http://www.archives.gov/))

**EO (Executive Order) 13043** Increasing Seat Belt Use in the United States

**FAR (Federal Acquisition Regulation) 52.236–13** Accident Prevention (Available from [http://www.arnet.gov/far/.](http://www.arnet.gov/far/))

**FECA (Federal Employees’s Compensation Act)** (Available at U.S. Department of Labor, Worker’s Compensation [http://www.dol.gov/esa/.](http://www.dol.gov/esa/))

**FM 3–0** Operations

**FM 4–01.011** Unit Movement Operations

**FM 5–0** Army Planning and Orders Preparation

**FM 5–19** Composite Risk Management

**FM 10–67–1** Concepts and Equipment of Petroleum Operations

**FM 21–20** Physical Fitness Training

**FM 21–60** Visual Signals

**FM 21–305** Manual for the Wheeled Vehicle Driver

**FM 55 (Series)** Transportation

**FM 55–30** Army Motors Transport Units and Operations

**HSPG (Highway Safety Program Guidelines) Number 1, 4, 8, 20** (Available at <http://www.nhtsa.dot.gov>)

**IATA (International Air Transport Association)** Dangerous Goods Regulations, Restricted Articles Tariff 6–D, 47th Edition. (Available at [http://www.iata.org/index.htm.](http://www.iata.org/index.htm))

**Joint Commission on Accreditation of Healthcare Organizations (JCAHO)**

(Available at <http://www.jcaho.org/>.)

**Joint Publication 3–11** Joint Doctrine for Operations in Nuclear, Biological, and Chemical (NBC) Environments. Available from (Available at <http://www.dtic.mil/doctrine/>.)

**Leader Engagment**

(Available at <https://crc.army.mil/>.)

**MIL–HNBK–828A** Laser Range Safety in Ranges and in Other Outdoor Areas (Available at <http://assist.daps.dla.mil/quicksearch/>.)

**MIL STD 882D** System Safety (Available at <http://www.assist.daps.dla.mil/quicksearch/>.)

**MIL–STD–1180B(1) (Chg Notice 1)** Safety Standards for Military Ground Vehicles

**NFPA 101** Life Safety Code (National Fire Protection Code)

**NIMS (National Incident Management System)** (Available at <http://www.fema.gov/>.)

**NIOSH (National Institute for Occupational Safety and Health)** (Available at <http://www.cdc.gov/niosh/homepage.html>.)

**NRP (National Response Plan)** (Available at <http://www.dhs.gov/xprepresp/publications/>.)

**OSHAct (Occupational Safety and Health Act of 1970) Web site** (Available at <http://www.osha.gov/>.)

**PD TMDE Web site** Product Director Test, Measurement, and Diagnostic Equipment (Available at <http://www.redstone.Army.mil/>.)

**PL (Public Law) 91–596** Occupational Safety and Health Act, Amended 5 November 1990 (Available at <http://www.labtrain.noaa.gov/>.)

**PL (Public Law) 106–390** Robert T. Stafford Disaster Relief and Emergency Assistance Act, 30 October 2000

**TB 9–639** Passenger–Carrying Capacity of Tactical and Administrative Vehicles Commonly Used to Transport Personnel

**TB 43–0108** Handling, Storage and Disposal of Army Aircraft Components Containing Radioactive Materials

**TB 700–2** Department of Defense Ammunition and Explosives Hazard Classification Procedures

**TB 750–25** Maintenance of Supplies and Equipment: Army Test, Measurement and Diagnostic Equipment (TMDE) Calibration and Repair Support (C&RS) Program

**TB Med 521** Occupational and Environmental Health Management and Control of Diagnostic, Therapeutic, and Medical Research X-ray Systems and Facilities

**TB Med 524** Occupational and Environmental Health: Control of Hazards to Health from Laser Radiation

**TB Med 575** Swimming Pools and Bathing Facilities

**TC 21–306** Tracked Combat Vehicle Driver Training

**TED 8.4** OSHA VPP Policy and Procedures Manual. (Available from <http://osha.gov>.)

**The Life Safety Code 1910.35** NFPA 101–2000, Title: Occupational Safety and Health Standards

**TM 55** Transportability

**TM 55–607** Loading and Stowage of Military Ammunition and Explosives Aboard Breakbulk Merchant Ships

**TM 9–2610–200–14** Operators, Unit, Direct Support, and General Support Maintenance Manual for Care, Maintenance, Repair, and Inspection of Pneumatic Tires and Inner Tubes

**UFGS 01525 (Unified Facilities Guide Specifications)**  
Safety & Occupational Health Requirements (Available at <http://www.wbdg.org/>.)

**50 USC 1512** War and National Defense

**UCMJ, Art. 92** Failure to obey order or regulation

**56 FR 15510** Roof Crush Resistance, Federal Register (Available at <http://www.nhtsa.dot.gov/cars/rules/>.)

**ANSI (American National Standards Institute) Safety Code N13.30**  
Performance Criteria for Radio Bioassay (May be purchased online <http://www.ansi.org>.)

**ANSI (American National Standards Institute) Safety Code Z136.1**

**ANSI (American National Standards Institute) Safety Code Z87.1** Practice for Occupational and Educational Eye and Face Protection

## **Section II**

### **Forms**

**DA Form 2696** Operational Hazard Report

**DA Form 7305** Telephonic Notification of Aviation Accident/Incident

**DA Form 7306** Worksheet for Telephonic Notification of Ground Accident

**SF Form 91** Motor Vehicle Accident Report

**DA Form 1119–1** Certification of Achievement in Safety

**DA Form 285** US Army Accident Report

**DA Form 285-AB** Abbreviated Ground Accident Report

**DA Form 2397–AB** Abbreviated Aviation Accident Report (AAAR)

**DA Form 3946** Military Police Traffic Accident Report

**DA Form 4753** Notice of Unsafe or Unhealthful Working Condition

**DA Form 4754** Violation Inventory Log

**DA Form 4755** Employee Report of Alleged Unsafe or Unhealthful Working Conditions

**DA Form 5984–E** Operator’s Permit Record (EGA). Sample of ULLS–generated form available from (DA Pam 750–8, The Army Maintenance Management System (TAMMIS) Users Manual.)

**DA Form 7566** Composite Risk Management Worksheet

**DD Form 250** Material Inspection and Receiving Report

**DD Form 836** Dangerous Goods Shipping Paper/Declaration and Emergency Response Information for Hazardous Materials Transported by Government Vehicles

**DD Form 2272** Department of Defense Safety and Occupational Health Protection Program

**DD Form 2796** Post–Deployment Health Assessment

**OF Form 346** U.S. Government Motor Vehicle Operator’s Identification Card

**OSHA Form 300** Log of Work–Related Injuries and Illnesses

**OSHA Form 300A** Summary of Work–Related Injuries and Illnesses

