1AD and FB Regulation 385-10

Safety

Fort Bliss Installation Safety Program

Headquarters

1st Armored Division

Fort Bliss, Texas

15 August 2015

Unclassified

DEPARTMENT OF THE ARMY
HQ, 1st Armored Division
Fort Bliss, TX 79916
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* HQ, 1st AD and FB Reg. 385-10

Safety

FORT BLISS INSTALLATION SAFETY PROGRAM

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

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

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.

Proponent and exception authority. The proponent of this publication is the Fort Bliss Safety Office.

Army management control process. This publication does not contain management control provisions.

Supplementation. Supplementation of this publication is prohibited without prior approval from the Records Management Division, Publications and Forms Manager (FMO).

Suggested Improvements. Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) to DHR/RMD, Fort Bliss Texas 79916.

(IMBL-HRA)

FOR THE COMMANDER:

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Distribution.
This publication is only available in electronic media.

SUMMARY of CHANGE

1AD and Fort Bliss Regulation 385-10, Fort Bliss Installation Safety Program

This major revision, dated 15 August 2015—

- o Updates and prescribes Army policy on safety standards (throughout)
- o Makes administrative changes (throughout).
- o Updates Army accident categories (A through E).
- o Expands Occupational Safety and Health Program (Workplace Safety).
- o Incorporates Radiation Safety Management

Contents (Listed by paragraph and page number)

Chapter 1
Introduction

1-1 Purpose
This regulation prescribes the United States Army Fort Bliss Safety and Occupational Health (SOH) program policy, responsibilities, and procedures to safeguard and preserve resources against accidental loss. It establishes risk management (RM) as the Army's risk reduction methodology and assures regulatory and statutory compliance. It provides for public safety incident to Army operations and activities. 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.

1-2 References
Required and related references and prescribed and referenced forms are identified in appendix A.

1-3 Responsibilities
a. The Senior Mission Commander (SMC) Safety Director and Garrison Safety Director:

(1) Are the primary persons responsible for planning, developing, coordinating, evaluating, and providing technical consultation for assuring implementation of the command safety program for the Installation.

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

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

(4) They have unimpeded access to the senior commander for reporting status of safety programs and providing safety technical assistance.

(5) They advise, plan, develop, coordinate, and evaluate the safety program IAW AR 385-10 within their respective commands.

(6) They report and give advice to their respective commanders on Safety and Occupational Health (SOH) issues/policy.

(7) They assist all elements of the command in the implementation of the Strategic Safety Plan (SSP) in implementing their specific tasks.

(8) They manage and provide technical oversight of the safety programs within their commands, including identifying the metrics that best measure progress on implementing the SSP and achieving SMC safety goals.

(9) They develop policy and procedures for integration of SOH, Risk Management (RM), and accident prevention activities.

(10) They ensure the safety organizational functions are an extension of the commander in the area of SOH.

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

b. The Director of Health Services William Beaumont Army Medical Center (WBAMC):

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

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

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

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

(5) Provides training for commanders and supervisors on specific occupational health hazards, as required.

(6) Surveys work areas to recognize, evaluate and provide control recommendations for occupational health hazards. The Director of Health Services provides survey results and recommendations to the Safety Director responsible for the affected area, for coordination and inclusion in the hazard tracking system.

(7) Conducts occupational health medical surveillance of all Fort Bliss employees who are at risk of exposure to hazardous materials, noise and pulmonary risk at or above the action level.

(8) Provides data on occupational illnesses caused by exposure to chemical, biological, or physical agents associated with the work environment to the Garrison Safety Office.

(9) Provides exposed workers occupational health care per Occupational Safety and Health Administration (OSHA), Department of the Army (DA), and Health Services Command directives.

(10) Upon request, provides employees access to their occupational health records.

(11) Provides occupational health examinations to employees.

(12) Conducts industrial hygiene and occupational health surveys to identify hazardous work areas.

(13) Conducts medical evaluations to determine an employee's capability to perform assigned task when respirators or other Personal Protective Equipment (PPE) might result in additional physiological stress.

(14) Provides eye examinations to civilian employees when required for job related requirements.

(15) Maintains health hazard inventory of work areas where employees are potentially exposed to hazardous materials, requiring the use of PPE.

(16) Provides technical advice on the proper PPE to the Safety Director and supervisors.

(17) Ensure appropriate medical examinations and surveillance are provided for employees enrolled in the Respiratory Protection Program (RPP).

(18) Ensure that the Occupational Health Section, WBAMC, determines that employees are physically able to wear PPE.

(19) Ensure that an annual review of the medical status of employees enrolled in the RPP is conducted per established directives, and notifies 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.

(20) Ensure medical evaluations are documented in employee medical files.

(21) Ensure Industrial Hygiene support per applicable regulations.

c. The Director of Public Works will:

(1) Ensure the Garrison Safety Office reviews design plans.

(2) Notify the contractor when safety requirements (identified by the Garrison 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 Garrison Safety Office.

(4) Ensure that all work requirements involving the correction of Risk Assessment Code (RAC) 1 safety hazards categorized as life threatening 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 Garrison 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 RAC of 1 or 2 for review and RAC determination. DA Forms 4283 will be returned to the Director of Public Works for continuing action.

(6) Verify all requests for local/depot hazardous material purchases to determine if an Safety Data Sheet (SDS) / Material Safety Data Sheet (MSDS) is required. If items meet the criteria requiring an SDS/MSDS, the director will ensure that the purchase request to the Directorate of Contracting includes the Federal Acquisition Regulation (FAR) clause 52.223-3 in the solicitation and contract, which requires the vendor/depot to provide a copy of the SDS/MSDS for each hazardous material received on Fort Bliss to the Garrison Safety Office.

(7) Ensure all hazardous materials are properly identified and labeled upon receipt, during storage, and when issued.

(8) Ensure an SDS/MSDS is provided for all hazardous products available for distribution.

(9) Provide an SDS/MSDS to the user at the time of initial issue and when a new SDS/MSDS is issued.

(10) Provide a copy of each SDS/MSDS received to the Garrison Safety Office.

(11) Provide chemical spill emergency clean-up, evacuation and notification training per the installation hazardous waste plan.

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 Garrison Safety Office.

(3) Help enforce contract safety requirements through close coordination with the Garrison Safety Office, 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 SDS/MSDS when the product is initially purchased. (The SDS/MSDS must accompany the material when delivered.)

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 Garrison Safety Office.

(2) Coordinate with the Garrison Safety Office in response to all complaints filed by an employee or union member that has any bearing on safety of personnel or unsafe equipment.

(3) Include respiratory protection equipment (RPE) requirements in job descriptions and job announcements.

(4) 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 Respiratory Protection Program (RPP) requirements.

f. The Directorate of Emergency Services (DES) will provide the Safety Office with summary of accident information collected through the military police blotter when required.

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 Risk Management (RM) IAW ATP 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 accidents, near misses, and hazards in their workplace as soon as possible to their supervisor or leader.

(6) Use the Deliberate Risk Assessment Process in managing risk.

h. Supervisors and operating personnel who direct or affect the actions of others will:

(1) Maintain a safe and healthful workplace and training area.

(2) Inspect the work area for hazards.

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

(4) Be responsible for the use of RM 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 this regulation and 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 RM into their mission activities.

(8) Ensure range safety responsibilities and procedures are implemented in accordance with FB 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. Directors will appoint a Collateral Duty Safety Officer, on written orders, to accomplish assigned safety duties and responsibilities IAW AR 385-10.

(10) Have available a copy of unit, directorate, and activity correspondence carrying out and supporting the safety program. 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) Training certificates for required training of safety officers.

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

(e) 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 (RAC 1, 2, and 3) which have not been corrected within 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 each work area SDS/MSDS 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 based on Job Hazard Analysis (JHA).

(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 Garrison Safety Office.

(9) In consultation with the Civilian Personnel Office, take appropriate disciplinary action with employees who violate safety regulations.

(10) Provide, budget, requisition, and issue 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) after each use.

(16) When performing JHA, initiate necessary action to mitigate hazards by means of:

(a) Engineering controls and modifications.

(b) Management/Administrative controls.

(c) Procedural changes.

(d) Select appropriate PPE.

(17) Collect and dispose of unserviceable PPE when issuing replacement items.

(18) Ensure the SOP covers the proper use, care, and selection of respiratory equipment for task.

(19) When respirators are required ensure they are properly used, maintained, and stored.

(20) Remove employees from any position where inhalant exposure may occur until they are medically cleared, trained, and fitted.

(21) Remove employees from the hazardous environment if their pulmonary test is expired, they refuse to take a medical examination or fail to keep a medical examination appointment.

Chapter 2
FT Bliss Safety Program Structure, Program Evaluation, Councils, and Committees

2-1 Army Safety and Occupational Health Program Structure

a. SMC and Garrison Safety Directors will exercise staff supervision over an organization's safety program, RM, and accident prevention activities. Duties performed by the safety director will include the full range of program management responsibilities. The safety director is a member of the commander's personal staff and reports directly to the commander. The safety director will meet Office of Personnel Management standards.

b. Senior Mission Commander, Garrison and authorized Brigade safety offices will be staffed with professional safety personnel (018's) meeting the requirements for these positions established by the Office of Personnel Management and the Army personnel office.

c. Safety organizations will be augmented by additional duty (military) or collateral duty (DA Civilian) safety personnel to perform required safety and accident prevention functions in Army units and industrial and administrative activities.

d. Additional safety personnel will:

(1) Be appointed by the commander on written orders.

(2) Be a commissioned officer, at battalion and higher unit levels.

(3) Be a staff sergeant or higher, at the company level.

(4) Have met or will meet the training requirements of chapter 10.
(5) Have 1 year or more retainability in the unit upon duty appointment.
(6) Give their safety duties proper priority.
(7) Report directly to their unit commander on safety related matters.
(8) Coordinate activities with their installation or Garrison safety office.

e. DA Civilian collateral safety personnel may be used to augment the safety organization. When used, they will:

(1) Be appointed in writing on orders.
(2) Have met or will meet the requirements of 29 CFR 1960.58.
(3) Give their safety duties proper priority.
(4) Report directly to their unit commander or director on safety related matters.
(5) Coordinate activities with their supporting safety office.
(6) Be a general schedule (GS) 11 or above, at battalion and higher unit levels.

f. Additional and/or collateral duty personnel will be authorized use of official time for participating in SOH activities, including application of RM, walk-around inspections, and other safety functions authorized by this regulation in support of their unit's mission.

g. Army safety offices will be staffed in accordance with Army Safety Model approved by DCS, G–3/5/7. The model will be used as an aid in the organization structure to determine the optimum organization for achieving the mission. These models will be used to guide organizations and to aid in efforts to improve operations by analyzing how time is spent within an organization.

2-2 Program Audit and Evaluation

Safety programs will be evaluated for integration of the Army Safety Program into the organization's mission and for effectiveness of execution, both internally and by higher command, on a periodic basis according to guidance in DA Pam 385-10. These evaluations will not be compliance audits, but rather programmatic assessments to measure the overall effectiveness of management controls for integrating the Army Safety Program into their business process and mission execution. Compliance issues may be used as a measure of effectiveness but will not be the primary focus of the audit.

a. Each organization will conduct and document an annual evaluation of their program execution using organizational goals, objectives, and performance indicators.

b. Each level of command, tenant/garrison level and higher, will develop and implement a program that ensures each subordinate organization safety program is formally evaluated every 36 months at the minimum.

c. Organizations with Low Risk Operations as determined by worksite job hazard analysis and deliberate risk assessment will be inspected by CDSO's or ADSO's using the Garrison Worksite Inspection Checklist, OSHA Checklist or their own dependent upon the unit's mission.

d. Organizations with Medium Risk Operations as determined by worksite job hazard analysis and deliberate risk assessment will be inspected by Safety Professionals (018) using the Garrison Worksite Inspection Checklist, OSHA Checklist, or their own unit checklist based upon the unit's mission profile. If there are no Safety Professionals available within your organization, the Garrison Safety Office/SMC Safety will schedule

and conduct your Standard Army Safety and Occupational Health Inspections (SASOHI).

e. Organizations with High Risk Operations as determined by worksite job hazard analysis and deliberate risk assessment will be inspected by Safety Professionals (018) using the Garrison Worksite Inspection Checklist, OSHA Checklist unit checklist based upon the unit's mission profile. If there are no Safety Professionals available within your organization, the Garrison Safety Office/SMC Safety will schedule and conduct your SASOHI.

f. A copy of the completed Inspection Checklist with all deficiencies noted and copies of the work orders submitted to correct the deficiencies will be forwarded to the Garrison and SMC Safety Office within 10 days of completion of the inspection.

2-3 Occupational Safety and Health Administration Inspections

In accordance with the provisions of EO 12196, DODI 6055.1, and within the scope of the OSH Act, OSHA officials and National Institute for OSH officials, acting as representatives of the Secretary of Labor, are authorized to conduct announced or unannounced inspections of all DA Civilian workplaces except those identified as military-unique.

2-4 Safety and Occupational Health Advisory Council (SOHAC)

Installations and subordinate organizations will establish Safety and Occupational Health Advisory Councils composed of management and military and DA Civilian operating personnel.

a. All organizations will conduct Safety Councils within their respective organizations. Such councils will be chaired by the commander or commander's designee, who will be a senior management official within that organization.

b. Each Brigade-sized unit will conduct their semi-annual SOAHC during the four months (Dec-Mar or Jun-Sep) prior to each Garrison SOHAC held in April and October in order to provide issues, discussion, and recommendations to the Garrison Safety Office not later than (NLT) seven working days prior to the date of the Garrison SOHAC for Garrison Commander resolution. Issues that cannot be resolved by the Garrison SOHAC will be forwarded to the Division Safety Office NLT seven work days prior to the date of the Fort Bliss Installation/1AD SOHAC in order to (IOT) be presented at the Fort Bliss Installation SOHAC for Senior Commander consideration. All Brigades and tenant units will provide SOHAC minutes to either the Division Safety Office or the Garrison Safety Office.

c. The Senior Commander or his designated representative will chair the Installation Safety Council. The Garrison Commander will attend the Senior Commander's Safety Council along with all tenant unit commanders. The Fort Bliss Installation/1AD SOHAC will be held semi-annually in May and November. Required attendees will be Tenant Commanders (USASMA, BMC, 32 AAMDC, WBAMC, JTF-N, 5th AR), 1AD Brigade Commanders, Brigade Command Sergeants Major, and Brigade Safety Managers/Officers. The Safety Performance Metrics Tracker will be presented during the SOHAC and other Safety data/information to include Industrial Hygiene (IH), Range

Safety, Fire Safety, and Federal Employment Compensation Act (FECA) issues which require Command visibility.

2-5 Soldier and Department of the Army Civilian Employee Safety Committee
Commanders of separate detachments, companies, and above will establish a Soldier and DA Civilian Employee Safety Committee.

a. The committee will be representative of the workforce within the organization. The number of committee members will be based on the size, safety needs, and diversity of the operations performed by the organization.

b. Committee members will receive appropriate training to perform duties and may be assigned responsibilities for operational safety matters. The safety committee members will:

(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-assessments in their areas of responsibility and coordinate with the organization's safety office.

2-6 Army Radiation Safety Council (RSC)

a. Installation Radiation Safety Council. The Senior Commander will establish the Installation RSC:

(1) The Installation RSC is the advisory body to the Senior Commander that gathers and disseminates information about the status of the Installation Radiation Safety Program.

(2) Membership includes the Senior Commander as chair (or a designee who is a senior member of the commander's staff), the 1AD Radiation Safety Officer (RSO) (recorder), Garrison RSO, and all mission/tenant Radiation Safety Officers (RSO). Installations with large numbers of Tables of Organization and Equipment (TOE) unit personnel that use radioactive commodities will include military representatives knowledgeable about the TOE units' Radiation Safety Programs.

(3) Each Installation RSC will meet at least once each calendar year and at the call of the chair.

b. Unit Radiation Safety Council (USRC). When there is a change to technical publications or the condition of a Nuclear Regulatory Commission (NRC) license, Army reactor permit, or Army Radiation Authorization (ARA) requires a RSC, it will meet the following requirements in addition to any other requirements of applicable directives:

(1) The URSC will meet at least once in each six month period and at the call of the chair.

(2) The commander or a designated representative (someone at the executive level in the organization who is not a radiation user) should chair the RSC. The Unit RSO should be the recorder and will be a voting member.

Chapter 3
Accident Investigation and Reporting

3-1 Introduction
This chapter provides policies and procedures for the initial notification, investigation, and submitting of reports of Army accidents and incidents.

3-2 Policy
Army policy is to investigate and report Army accidents to prevent like occurrences. All Army accidents will be investigated, reported, and analyzed IAW AR 385-10, DA PAM 385-40, and this regulation. The USACR/Safety Center provides use and accident report preparation guides and other developed tools to assist in accident reporting on their website https://safety.army.mil.

3-3 Army Accident
See AR 385-10 for the definition of an Army accident.

3-4 Accident and Incident Classes
See AR 385-10 for a definition of each accident class.

3-5 What to Report
See AR 385-10 to determine which unplanned events will be reported. Commanders will develop and rehearse pre-accident plans IAW DA PAM 385-1, Appendix B to ensure timely reporting.

3-6 Types of Accidents
When two or more types of Army vehicles are involved in an accident, such as an Army Motor Vehicle (AMV) or Army Combat Vehicle (ACV), the type of equipment operated by the individual deemed most responsible will determine the accident type. This process is also true for other types of accidents (fire, marine, explosives, etc.). See DA PAM 385-40 for more information.

3-7 Nonreportable Events
See AR 385-10 for the list of nonreportable events.

3-8 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 personnel involved.

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

(1) The immediate commander or supervisor of all personnel involved.

(2) The Division Safety Office (915) 744-8502/5076/8501 or Garrison Safety office 568-6749/2510 as soon as possible and at a maximum within four hours of the incident. This does not supersede normal CCIR or Serious Incident reporting requirements. The Division or Garrison Safety Office will work with the command in processing all required reports for sub-paragraphs (3 a-d) below.

(3) The Commander, USACR/Safety Center. The method for immediate notification is by telephone (defense switched network (DSN) 558-2660 or 558-3410; commercial (334) 255-2660 or (334) 255-3410). Instructions for immediate notification are contained on the USACR/Safety Center Web site at https://safety.army.mil/accidentreporting

(a) At a minimum, notification will include the information on DA Form 7305 (Worksheet for Telephonic Notification of Aviation Accident/Incident). Hard copies will be sent thru Chain of Command for review and release approval.

(b) At a minimum, notification will include the information on DA Form 7306 (Worksheet for Telephonic Notification of Ground Accident). Hard copies will be sent thru Chain of Command for review and release approval.

(c) Electronic copies of DA Form 7305 and DA Form 7306 may be sent to usarmy.rucker.hqda-secarmy.list.safeoperations-offi@mail.mil. Sending the electronic form does not eliminate the requirement to make telephonic notification.

(d) For all Class A and Class B On/Off-duty accidents and Class C aviation accidents, immediate notification of accidents will be followed by the appointment of a Centralized Accident Investigation (CAI) or an Installation Accident Investigation (IAI) Board. See Paragraph 3-16 for Accident Investigation Board appointment and composition.

(e) DA Civilian work-related fatalities. The accidental death of a DA Civilian will be reported to The U.S. Department of Labor within 8 hours after the death and all in-patient hospitalizations, amputations, and losses of an eye within 24 hours of incident. An activity representative must orally report the fatality and/or hospitalization by telephone or in person to the area office of the OSHA, U.S. Department of Labor, which is nearest to the site of the incident. The representative may also use the OSHA toll-free central telephone number, 1-800-321-OSHA (1-800-321-6742).

(f) Accident Report Submission/Suspense. All accident reports will be submitted using the appropriate forms and suspense in accordance with DA Pam 385-40 and USACR/Safety Center's Use and Preparation Guides. The automated REPORT-IT system will be utilized as the primary reporting system for On/Off-duty Class C-F (Ground) and Class D-F (Aviation). On/Off-duty Class A, B (Aviation/Ground), and Class C Aviation accident investigation reports (hard copy) will be routed through Command/Safety Channels for review and processing IAW DA Pam 385-40.

b. For the civilian workforce the Garrison Safety Office will be provided the required information necessary to meet the OSHA recordkeeping requirements.

c. Using the standards outlined in the OSH Act, the Safety Office in the employee's chain of command is responsible for ensuring that injuries and occupational illnesses to DA Civilians, are recorded using the appropriate Army accident reporting forms. They are further responsible for maintaining an OSHA Form 300 (Log of Work-Related Injuries and Illnesses) in accordance with OSH Act 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 OSHA Form 300 annually. These records will be retained for 5 years in accordance with the OSH Act. Note.

d. Contractor Accidents. See AR 385-10 for contractor accident reporting.

3-9 Accountability for Army Accidents and FORSCOM Procedures for Materiel Failures

a. See AR 385-10 for the criteria to determine accountability for Army accidents, and the reporting requirements when an accident involves more than one DOD Component.

b. All non-USACR/SC led accident Investigation boards that require materiel teardown analysis will contact their Army Command (ACOM) Safety Office to coordinate the action. See DA PAM 385-40 for information regarding materiel factors analysis.

c. Accidents caused solely by design induced failure of malfunction will be recorded as a materiel accident and charged to HQDA. The commander of the unit that experienced the failure or malfunction will ensure that an SF 368 Product Quality Deficiency Report (QDR) or CAT I or II Equipment Improvement Report (EIR) is submitted. Failure to do so will result in the accident being charged to the unit that experienced the accident. See AR 385-10 and DA PAM 385-40 for special instructions regarding transmittal of these reports.

3-10 Categories of Accident Investigation Reports

See AR 385-10 for information regarding the two categories of safety accident investigation report, and the conditions for the release or sharing of accident information.

3-11 Privileged Information

See AR 385-10 for information regarding determination of privileged information and for the proper handling of that information. Release of accident information will be IAW AR 385-10 and after coordination with the ACOM Safety Office.

3-12 Actions When Criminal Activity is Determined

See AR 385-10 for the actions to be taken if evidence of intentional criminal activity is discovered during the MP, CID, civil law enforcement, or safety investigation.

3-13 Accident Investigation Board Appointing Authority

See AR 385-10 for the standards for appointing accident investigation boards. The ACOM Safety Office will be notified when Class A boards are appointed, and informed of the composition of the board. A copy of the board orders will meet this requirement.

3-14 Types of Safety Accident Investigation Boards

See AR 385-10 for the two types of accident investigation boards, and the requirements to support them.

3-15 Accident Investigation Boards

Safety board members may not serve as collateral/legal board members to the same accident. Soldiers or Army Civilians currently performing safety duties may not serve as collateral board members. See AR 385-10 for the number of personnel required to investigate Army, Joint, and Army aircraft accidents involving civil aircraft or functions of the Federal Aviation Administration. See AR 95-27 for additional requirements involving joint FAA and Army accident investigations.

3-16 Board Composition

a. See AR 385-10 for accident investigation board composition requirements. The specific duties and responsibilities of board members are outlined in DA PAM 385-40.

b. The CG, 1AD will appoint Accident Investigation Boards for Divisional units. Units responsible for the accident investigation will submit standard name line, rank, and unit of assignment of board members to 1AD Division Safety Office NLT 5 days following an On/Off-duty Class A, B, or Class C Aviation Accident. Non-Divisional and Tenant unit board appointments will be made by the first General Officer (GO) in the organization's chain of command.

c. In addition to the Accident Board composition requirements outlined in AR 385-10, Divisional units will have appointed an Accident Investigating Officer in the grade of O-3 and above for all Off-duty Class A/B accidents.

3-17 Accident Investigation Outbriefs (AIBs)

a. Formal Accident Investigation Outbriefs will be conducted by appointed board presidents/investigating officers for Division On/off duty fatal Class A (Ground/Aviation) accidents and will be out briefed to the CG, 1AD or his designated representative. Coordination for outbrief time/format/required attendees will be made with the 1AD Safety Office.

b. Formal Accident Investigation Outbriefs will be conducted by appointed board presidents/investigating officers for Division On/off duty non-fatal Class A/B (Ground/Aviation), and Class C Aviation accidents and will be out briefed to the 1AD Safety Director or his designated representative. Coordination for outbrief time/format/required attendees will be made with the 1AD Safety Office within the suspense time of the report.

c. Tenant units will follow their ACOM outbrief requirements.

d. The AIB is a separate brief than Fatality Review Boards (FRB). FRB's are for non-accidental incidents (suicide/homicide/criminal) and will be coordinated thru the 1AD Division G-1.

3-18 Review of Accident Investigation Reports

In addition to the accident investigation report review processes contained in AR 385-10, Safety Managers at all levels will:

a. Coordinate to ensure Class A, B, and aviation Class C accident reports arrive at their ACOM Safety Office NLT the Army timelines established in DA PAM 385-40.

b. Ensure accident reports are reviewed and/or approved at the appropriate level. The Commanding General, 1AD is the Divisional unit approving authority for all Class A

and B on-duty accident reports. The 1AD Safety Director is the approving authority for all Class A-B off-duty accident reports, and the approving authority for Class C aviation accident reports. Tenant units will follow their MACOM approval process.

3-19 Processing Accident Reports

a. For Divisional units, all Class A, B, and aviation Class C reports will be routed through the chain of command to the 1AD Safety Office. All other organizations will use their chain of command in the same manner. Electronic staffing systems (i.e., ReportIt) will be structured to ensure proper chain of command review.

b. The use of ReportIt Simplified mode is not authorized for Class A-C Ground and Aviation accident reports. All other accident reports not requiring Army headquarters approving authority/review may be submitted directly to the USACR/SC (see AR 385-10 for transmittal instructions). As a minimum, copies will be retained by the appointing authority's Safety Office, and the unit that experienced the accident.

3-20 Reports Prepared by the U.S. Army Combat Readiness Center

See AR 385-10 for USACR/SC prepared report information.

3-21 Changes to Accident Reports and Requests for Extension of Submission Time Limits

Requests to change the classification, cause of an accident, or to request an extension to submission time limits, must be requested through 1AD Safety Office for Divisional units and tenants will request thru their ACOM. See AR 385-10 for the information required to support requests of this type.

3-22 Maintaining Accident Reports

See AR 385-10 for accident report retention requirements.

3-23 Scene Preservation

See AR 385-10 for the actions used to preserve the accident scene and protect evidence. Aircraft with actual or suspected damage, regardless of the degree of damage, will not be flown until inspected by qualified maintenance personnel and approved by the commander or his/her designated representative. For all Class A-C Aviation Accidents, blood and urine samples will be collected and processed for analysis from all personnel performing crew member (rated and non-rated) duties, from any person suspected of contributing to the accident, and/or as directed by the Commander. Collection of these samples must take place as soon as feasible following the accident.

3-24 Accident Scene Investigation

See DA PAM 385-40 for the techniques used to investigate accident scenes.

3-25 Access to Information From Other Investigations

See AR 385-10 for the information available to the accident board from other investigations.

3-26 Access to Information Collected by Accident Investigation Boards
See AR 385-10 for the accident board information that may be shared with other Army authorized investigators.

3-27 Accident Information
Safety accident investigation reports are official documents and will be used solely for accident prevention purposes. See AR 385-10 for the purposes this information may and may not be used for.

3-28 Release of Information From Safety Accident Investigation Reports
Requests for extracts or copies of Class A, B, or C accident investigation reports will be referred to the USACR/SC. The USACR/SC is the release authority. See AR 385-10 for the release authority of local safety offices.

3-29 Access to Privileged Safety Information by Department of Defense Contractors
See AR 385-10 for guidance on DOD contractors' access to privileged safety information.

3-30 Special Reporting Requirements

a. Accident investigation and reporting requirements for marine, chemical agent, explosives, ionizing and non-ionizing radiation, nuclear weapon and reactor accidents, and biological defense mishaps are addressed in DA PAM 385-40.

b. Biological mishap reporting and investigation will be IAW with the requirements of DA PAM 385-69, AR 385-10, AR 50-1, DA PAM 385-40, 7 CFR 331, 9 CFR 121, 42 CFR 73, and applicable State and local requirements. Commanders will establish procedures to ensure initial notification, investigation, and reporting of a biological mishap is accomplished in accordance with the requirements of these documents.

c. All biological mishaps will be investigated for the purpose of accident prevention. The term "biological mishap" is defined as an event in which the failure of laboratory facilities, equipment, or procedures appropriate to the level of potential pathogenicity of an Infectious Agents and Toxins (IAT) may allow the unintentional, potential exposure of humans or the laboratory environment to that agent.

d. See DA PAM 385-69 for a detailed discussion of the requirements for biosafety mishap reporting and investigations.

3-31 Costing
See DA PAM 385-40 for accident cost computation standards.

3-32 Injury and Accident Rates
See AR 385-10 for the methods and standards used for calculating injury and accident rates.

Chapter 4
Contracting Safety

4-1 Introduction

a. This chapter prescribes DA and Fort Bliss policy for integrating safety into the contracting process.

b. DA Pam 385-10 contains technical requirements and processes for contract safety management, oversight, and control processes.

4-2 Policy

a. Contract activities will be conducted in a safe and healthful manner that minimizes accidents as well as impacts on Army operations and members of the public. Contractors must comply with applicable Federal, State, and local codes and standards, including SOH requirements, as well as any additional specific requirements invoked by the contract.

b. In general, the requirements in this regulation do not apply to contractor personnel. Army standards, such as this regulation, should not be referenced as a contract requirement.

c. According to DODI 6055.1, Army safety and health responsibilities in contractor operations on Army property are generally limited to helping to ensure the safety of Government-owned equipment, protection of Government property and on-site Army personnel from accidental losses, and the protection of the public. Contractors are responsible for the safety and health of their employees and protection of the public at work sites.

d. Clauses outlining contractor safety requirements and responsibilities will be included in solicitations and contracts as prescribed by the Federal acquisition Regulations (FAR), the Defense Federal Acquisition Regulation Supplement (DFARS), and the Engineer FAR supplement. (See DA Pam 385-10, chap 4.)

e. In addition to clauses as required by FAR, DFARS, and Engineer FAR supplement, activities will develop performance work statements and contract instructions and conditions that outline contractor safety requirements and responsibilities based on a risk assessment of the work to be performed and activity and/or command-unique requirements. Contracting Officer Representatives (COR), requiring activity, or the Defense Contract Management Agency, in consultation with local SOH subject matter experts, will develop additional and necessary clauses to mitigate risk.

f. Under the OSH Act, all employers must comply with OSHA standards and must exercise reasonable diligence to determine whether violations of those standards exist. On multi-employer work sites, more than one employer may be considered responsible for a hazardous condition that violates an OSHA standard.

g. Contracting officers will consult with SOH subject matter experts to ensure that clauses for safety are included in solicitations and contracts as appropriate and necessary. SOH subject matter experts will assist CORs with monitoring contract SOH compliance.

h. When contractor mishap reporting is a contract requirement, such mishaps will be reported IAW AR 385-10, DA Pam 385-40 and this regulation. In addition, the following will be reported:

(1) Injury or occupational illness to on-duty contractors.

(2) Damage to Government furnished material, Government furnished property, or Government Furnished Equipment (GFE) provided to a contractor.

(3) Contractor accidents involving Army property and personnel.

i. The COR will inform the local SOH office of instances where the contractor has been notified to take immediate action to correct serious or imminent danger conditions.

4-3 Army Oversight and Inspections of Contractor Operations

a. Army oversight of contractor operations is restricted to when it is in the best interest of the Army. (Army oversight has historically contributed to lower accident rates among certain contractor employees, on-time delivery of products and services (increased readiness), and ultimate savings to the Government.)

b. Occupational Safety and Health Administration inspections. Army contractors operating from Army or privately owned facilities, located on or off FT Bliss, are "employers" as defined in 29 United States Code (USC) 652 and those that follow and are subject to enforcement authority by Federal and State safety and health officials as stated in the following:

(1) Federal and State OSHA officials must be granted access to DOD contractor workplaces on DOD installations without delay and at reasonable times.

(2) 29 USC Chapter 15 does not authorize the Secretary of Labor to assert authority over working conditions for which another Federal agency or any State agency acting under 42 USC exercises statutory authority to prescribe or enforce standards or regulations affecting SOH.

(3) Federal OSHA standards apply and inspections and investigations may be performed by Federal OSHA officials.

(4) Army contractors have the responsibility of responding to any citations issued by OSHA officials for violations of applicable standards.

(5) Full information regarding citations issued to Army contractors for violations of OSHA standards involving Army-furnished equipment, facilities, or other property will be referred to all appropriate personnel, to include the COR and contracting officer, for appropriate action.

c. Inspection of contract activities.

(1) The contractor is responsible directly to OSHA for the safety and health of the contractors' employees.

(2) The Army will conduct safety and health evaluations of all workplaces and operations where Army personnel are regularly employed. Inspections of workplaces and operations on contractor facilities where fewer than 25 Army personnel are employed will be at the Fort Bliss Safety Director's discretion based on existing conditions and potential risks. While no formal annual inspection is required, the Army is required to ensure the safety and health of their personnel in the contractor facility. In addition, evaluations will include determining if contractor operations jeopardize the safety and health of Army personnel and endanger Army property.

(3) Army SOH Programs will not perform any measurements; that is, perform worker exposure monitoring of contractor worker exposure to Army equipment, unless specifically provided for in contracts between the Government and the contractor.

4-4 Additional References to Contract Safety and Health Requirements See the following sections of this regulation for additional references to contract safety and health requirements:

a. Chapter 5, Explosives Safety Management.
b. Chapter 7, Radiation Safety Management.
c. Chapter 9, Motor Vehicle Accident Prevention.
d. Chapter 11, Occupational Safety and Health Program.

Chapter 5
Explosive Safety Management Program (ESMP)

See AR 385-10 The Army Safety Program, chapter 5, and DA PAM 385-64, Ammunition and Explosive Safety Standards for requirements, tactics, techniques and procedures.

Chapter 6
6A Public, Family, Child, and Youth (CDC/YAC) Safety

6A-1 Introduction
Public, Family, child, youth, and recreational safety programs are an essential part of the Army Safety Program. Sports and recreational activities continue to rank high as a major cause of accidental injury. Accident prevention awareness during all programs involving the public, Families, children and youth is essential and requires leader, stakeholder, and participant engagement through situational awareness. Maintaining situational awareness enables stakeholders to fulfil the responsibility to stop unsafe acts detrimental to Army operations wherever they occur.

6A-2 Policy
The public, Family, child and youth, recreation, and seasonal safety procedures and guidelines prescribed in DA Pam 385-10 will be used together with this chapter.

6A-3 Safety Promotion
a. Promotional programs and procedures will be developed to increase awareness of the specific hazards associated with the change of seasons and celebration of holidays. These programs and procedures will emphasize the application of RM in planning for Family outings, parties, and celebrations, especially addressing the use of alcohol and motor vehicles. Immediate supervisors will conduct safety briefings prior to all holidays and long weekends to emphasize the need for RM and hazard reduction.

b. The SOH program will consist of policy and procedures for developing Family safety plans and promote community safety awareness.

c. Recreational safety planning for the Family should address such areas as-

(1) Taking time to explain the rules of each game or activity.
(2) Protective equipment required and how to use it.
(3) How to travel safely to and from play sites.
(4) Actions to take in case of an accident.

6A-4 Headphones
Using portable headphones, earphones, ear, or other listening devices while walking, jogging, running, skating, skateboarding, and bicycling, including pocket bike, MC, or moped, on DOD installation roads and streets, or adjacent to roadways or roadway intersections, is prohibited.

6A-5 Water Safety
As part of the Army Safety Program, a strategy will be established to provide safe water operations and water recreational activities. This strategy will be publicized in a manner appropriate to the geographic area and will incorporate the requirements contained in AR 215-1, paragraphs 8-25t and 8-28.

6A-6 Recreational Boating
Installations are to develop, publish, post, and enforce rules and regulations for all boating activities (for example, sailing, canoeing, skiing, personal watercraft, fishing, and so forth) addressing boating speed limits, alcohol consumption, right-of-way requirements, approved personal flotation devices, required safety training, accident reporting, and boating operator licensing according to Federal, State, and local laws.

6A-7 Installation Recreation Areas
Installations will develop, post, and enforce SOPs to ensure public and military personnel safety at all recreational facilities and areas (that is, camping, shooting, archery, hunting, and picnic areas; baseball; multi-recreational sport facilities; aquatics center; automotive shops; arts and craft centers; etc.). SOPs will include all rules pertaining to the facility, training required, emergency reporting, and any other pertinent information necessary to maintain a safe and healthful environment.

6A-8 Public Activities on Military Installations
Using military installations for public activities (i.e., marathons, 5k-10k runs, fun runs, walks, concerts, bake sales, exhibitions and demonstrations, bazaars, etc.) introduces a new set of risks that must be identified and either controlled or eliminated.

a. RM will be used to identify all hazards and risks associated with setting up the events, operating the events, and cleaning up following the events.

b. All participating event planners, organizers, sponsors/hosts, and role players will assess their event responsibilities from a RM perspective and document their findings using DD Form 2977 (Deliberate Risk Assessment Worksheet). Approved worksheets with appropriate signatures for the level of residual risk will be forwarded to the GSO for coordinating review as specified in task orders/OPORDs (or within 36 hours of such scheduled events not covered by task orders/OPORDs).

c. An emergency response plan will be developed to cover medical and other emergencies identified by the RM process.

6A-9 Volunteer Safety

Volunteers are valuable assets which provide beneficial human resources to the installation. The safety of all volunteers should be assured in activities conducted on base, either directly for Government-sponsored activities, or through appropriate agreements for private organizations. Existing Army safety rules and procedures will be applied to volunteer positions that are used in lieu of an equivalent paid Government position.

6A-10 Sporting Events

a. MWR will develop and publishing safety information for all sporting activities offered through installation facilities. Refer to paragraph 6A-8b above for additional details.

b. Activities will submit safety requirements and risk assessments to the Garrison Safety Office for coordinating review and dissemination for all supported activities.

6A-11 Child, Youth, and School Services Program and Facilities

a. Garrison Safety Office will -

(1) Conduct pre-certification and annual inspections of Family child care homes.

(2) Verify compliance with CYS services safety standards on designated CYS safety inspection format annually.

(3) Monitor the safety of CYS services facilities as a special hazard area and conduct required annual and other inspections.

(4) Provide training to CYS services personnel on safety related matters, especially special risks and concerns of populations served.

(5) Serve as a member of the garrison CYS services inspection team.

(6) Ensure CYS services facilities and Family child care homes are entered into Garrison Hazard Abatement programs as necessary.

(7) Consult on SOPs developed by the installation CYS services coordinator to ensure that CYS services staff apply RM to their daily planning and all field trip events and activities.

b. Safety structural requirements. CYS services facilities will meet the requirements of this regulation, AR 40-5, and CYS services safety related standards.

c. Safety operational requirements. The Garrison Safety Office will advise and assist the CYS services coordinator in the development of daily safety monitoring checklists for CYS services facilities and playgrounds, Family child care homes, sports fields, equipment, and toys.

6B Off-Duty Recreation and Seasonal Safety

6B-1 Introduction

a. The Army is committed to the safety of soldiers, their families, volunteers supporting installation activities and the public in all aspects of recreational safety. The

loss of a Soldier to an accident during recreational activities impacts unit readiness as much as a loss during military operations. AR 385-10 provides the requirement to establish and maintain a safety program for the public, family, volunteers, and soldiers during recreational time.

b. The U.S. Consumer Product Safety Commission (CPSC). CPSC should be consulted for product alerts and voluntary standards for a wide range of consumer products. See http://www.cpsc.gov/ for current consumer safety information.

c. The responsible unit/organization safety representative will establish a Safety and Occupational Health (SOH) program accounting for off duty recreational and seasonal activities whereas Risk Management (RM) will be integrated into all on and off-duty operations and activities to reduce risk of accidental losses. An integral part of this is for regular training and inspections of public recreation areas and facilities to ensure that safety procedures and equipment are being used.

d. Each Commander will establish a safety program integrating RM into all non-duty operations and activities to reduce risk of accidental losses.

e. Safety messages will include appropriate topics for the season and upcoming holidays.

6B-2 Family Safety Plans

a. The SOH program will consist of policy and procedures for developing family safety plans and promoting community safety awareness. All families should be encouraged to develop safety plans that are intended to keep the Family safe during normal activities as well as during unplanned events. The safety plan should address such critical safety areas such as -

(1) How to exit from the home during fire or other emergencies, how to establish rendezvous points to verify that all members have exited the home.

(2) The placement and proper use of safety monitors (smoke detectors, carbon monoxide detectors, and similar devices) in addition to regular maintenance (for example, battery replacement) of these devices.

(3) Procedures for ensuring firearms, sports, hunting or kitchen knives are secured and not accessible by children or other unauthorized persons.

(4) Proper use and storage of household products (cleaning material, automotive products - gas, oil, antifreeze and medicines, vitamins, lotions, and other beauty products) so that they are not accessible by young children.

(5) Backup plans for those instances when adults are not able to immediately contact children (procedures may be to contact a trustworthy neighbor or police officer, to remain at school, or other appropriate safe action).

(6) How to use emergency 911 or other specific emergency numbers to summon help.

(7) In case of bad weather such as tornadoes, requiring that family members are aware of the location of emergency supplies such as flashlights, tools, and so on.

(8) The use of lights and reflective clothing in low visibility conditions.

(9) Hearing should not be obstructed by radio or other devices that may mask sounds of traffic or safety signals.

(10) Street safety which includes the correct way to walk on a road without

sidewalks, observing crosswalks, and signs for safe travel.

(11) Taking time to explain the rules of each game or activity.

(12) How to travel safely to and from play sites.

6B-3 Public Safety

a. When the public has access to facilities under the control of the Army, precautions must be in place to assure a reasonable level of safety. Precautions that must be in place include:

(1) Signs guiding to and from public areas (including procedures for parking, paths to be used to access open areas).

(2) Enforcement of protective equipment use.

(3) Proper maintenance of area into which the public is allowed.

(4) Notices posted on how to seek emergency assistance.

6B-4 Recreational Safety

a. 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-the-job performance. 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) As per the U.S. Army Public Health Command and Combat Readiness Safety Center statistics, running alone causes 50 percent of all sports and activity-related injuries to Soldiers. A review of non-running related sports injuries demonstrates the most common ones result from basketball (15 percent), weight training (13 percent), football (10 percent), martial arts (9 percent), and softball/baseball (3 percent).

(2) When a sport is unsupervised the number of injuries tends to increase.

(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: not following the rules, lack of skill and ability for the sport being played, not using proper personal protective equipment, not in condition for the activity, or an 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.

(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, personnel risk over-stressing muscles, heart and other body parts to the point that injury may occur.

(7) Commanders, Directors, and Supervisors should encourage personnel through advertising, chain of command or 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) Physical conditioning should be built into the recreational program to bring all participants to a similar level of physical readiness.

(10) Supervisors of sports and recreational activities are responsible for ensuring that recreational areas are safe and are maintained to the extent required for safe use.

(11) The commander will establish and encourage a practice rule against alcohol being used by participants of motor sports.

(12) SOH staff are available to assist leaders supervising sports and recreational activities in integrating RM by identifying or assessing hazards, determining risks associated with each hazard or by supervising or verifying implementation of controls by leaders.

(13) If an accident should occur during organized events, 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.

(14) All accidents will be reported through formal channels.

6B-5 Other Activity 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) Regularly inspect the activity area to provide guidance on the safe operation of equipment and tools, proper use of PPE and removal of personnel using equipment in an unsafe manner.

(9) When activities are complete, 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.

6B-6 Individual Physical Training

a. To ensure jogging/walking is conducted in a safe environment and to prevent accidents, joggers/walkers will whenever possible use the sidewalk.

b. Will face traffic when using roadways.

c. When with others stay in single file in the designated lanes.

d. During hours of darkness or reduced visibility, joggers will wear a reflective vest, reflective belt or other approved reflective material while on a public roadway, street, bicycle path or any other right-of-way.

e. The use of headphones/earphones while jogging/walking is prohibited.

f. Use crosswalks when crossing roads. However, yield the right-of-way to vehicular traffic when crossing a roadway other than within a marked crosswalk. Challenging or obstructing vehicular traffic is prohibited.

g. Obey applicable instructions of traffic control devices including stop signs unless directed otherwise by law enforcement personnel.

Chapter 7
Radiation Safety Management

7-1 General

Fort Bliss is a large Active Army installation with a myriad of equipment and activities that use ionizing and non-ionizing radiation sources. These sources are required by law and regulation to be accounted for, used, maintained, and stored properly. Improper handling of these sources can negatively affect property, equipment, and personnel. Cleanup and disposal is a costly endeavor for all parties involved.

7-2 Purpose

This section provides policy, responsibilities, procedures, and necessary information to use, control, handle, store, and dispose of ionizing and non-ionizing radiation producing devices.

7-3 References
Appendix A outlines required and related forms and publications referenced in this section.

7-4 Explanation of Abbreviations and Terms
Appendix B explains abbreviations and terms used in this section.

7-5 Overview
This section conforms to fundamental radiation safety requirements and procedures outlined in Army Regulation (AR) 385-10, The Army Safety Program, Installation Management Command (IMCOM) Regulation 385-10, Safety Program, and Department of the Army Pamphlet (DA PAM) 385-24, The Army Radiation Safety Program.

7-6 Personnel Safety
All personnel involved in radiation work, including storage, shipment, or disposal of radioactive items will follow the as low as is reasonably achievable (ALARA) philosophy to reduce operational exposure levels to an absolute minimum.

7-7 Fort Bliss Radiation Safety Committee
The Fort Bliss Radiation Safety Committee (RSC), will be established with its purpose and membership as defined in DA PAM 385-24 para 1-8. Its focus is to gather and disseminate information about the status of the Fort Bliss Radiation Safety Program.

7-8 Personnel Protective Equipment (PPE)
Personnel will wear personal protective equipment (PPE) required by an applicable regulation, activity standing operating procedure (SOP), or equipment technical manual (TM). Thermo-luminescent Dosimeters (TLDs) shall be worn when working in radiation areas, with sources or devices that require their use or when specifically required by Army or Nuclear Regulatory Commission (NRC) guidance and directives.

7-9 Responsibilities
a. The Garrison Commander will:

(1) Designate in writing a trained Fort Bliss/Garrison Radiation Safety Officer (RSO) and alternate RSO.

(2) Establish an RSC in accordance with DA PAM 385-24.

(3) Issue Army Radiation Permits.

(4) Perform requirements of DA PAM 385-24 paragraph 1-4 l.

b. The Fort Bliss/Garrison RSO will:

(1) Perform the duties outlined in DA PAM 385-24 paragraph 1-4 p and q.

(2) Establish dosimetry services for personnel identified in The Army Radiation Safety Program (DA PAM 385-24) or Personnel Dosimetry Guidance and Dose Recording Procedures for Personnel Occupationally Exposed to Ionizing Radiation (DA PAM 385-25) assigned to the Fort Bliss Safety Office.

(3) Review for accuracy and provide concurrence with Fort Bliss Garrison and tenant activity radiation safety SOPs.

(4) Coordinate RSO activities and functions with 1st Armored Division (1AD) RSO.

(5) Provide RSO support to Fort Bliss Garrison and tenant activities.

(6) Ensure that radioactive commodity shipments are certified by a qualified HAZMAT shipping official (or contractor) when required.

c. Logistics Readiness Center (LRC) will:

(1) Inform the Fort Bliss RSO of receipt and shipment of containers that display radioactive warning labels or symbols that are physically damaged when received.

(2) Ensure proper processing of shipping documents according to 49 CFR for all radioactive shipments from Fort Bliss.

(3) Ensure trained certified Hazardous Material Class 7 shipping personnel (or contractors) are on staff and complete retraining/certification requirements every two years.

(4) Ensure employees (or contractors) preparing packages for shipment are properly trained in hazardous materials packaging and shipping procedures.

(5) Properly post the temporary shipping, receiving and secure storage areas containing radioactive materials with required radiation caution signage and ensure personnel (or contractors) working in these areas are enrolled in a dosimetry program.

(6) LRC Radiation Maintenance Operations will:

(a) Have the assigned unit RSO (or contractor) perform required wipe tests and maintain test results for the repair shops and storage areas.

(b) Ensure only trained, authorized personnel (or contractors) work on components containing radioactive materials.

(c) Ensure a written SOP for Radiation Maintenance Operations and required actions to take in the event of an emergency.

(d) Comply with emergency actions outlined in this section upon suspected incident and notify the Fort Bliss RSO immediately.

d. Director of Public Works (DPW) will:

(1) Ensure that radiation sources to be procured for use by the DPW shall be coordinated with the Fort Bliss RSO for acceptance review, prior to purchase.

(2) Ensure that contracts which have a potential ionizing radiation source have contractual language requiring and detailing the procedure for the submission of a request for an Army Radiation Permit (ARP).

(3) Ensure that the Fort Bliss RSO is notified when the contractor physically brings the ionizing radiation source on the installation.

e. Director of Emergency Services (DES) will:

(1) Ensure that the Fort Bliss RSO is notified when responding to incident locations that involve radiation sources.

(2) Provide an inventory of DES ionizing radiation sources in possession and use to the Fort Bliss RSO.

f. Defense Logistics Agency - Disposition Services (DLA-DS) will:

(1) Screen items relating to the Army Master Data File (AMDF) for radioactive components.

(2) Return components being submitted for disposal to the submitting unit for proper item processing and inform the Fort Bliss RSO.

(3) Host a walk-through survey of the DLA-DS storage yard, upon request of the Fort Bliss RSO.

g. 1st Armored Division (1AD) Radiation Safety Officer (1AD RSO) will:

(1) Manage the RSO requirements for 1AD units.

(2) Provide shipping information, to include appropriate exposure rate and contamination levels to the unit transportation officer or HAZMAT officer (or contractor) prior to shipment.

(3) Ensure the shipping guidance for the commodity is in accordance with the applicable TM or TB and that radioactive commodity shipments are certified by a qualified unit HAZMAT shipping official (or contractor) when required.

(4) Provide next higher RSO support to unit/mission RSOs assigned to 1AD.

(5) Review for accuracy and provide concurrence with 1AD unit/mission radiation safety SOPs.

(6) Execute other requirements as defined within DA PAM 385-24 paragraph 1-4 r.

h. Commander, WBAMC will:

(1) Provide medical surveillance and evaluations for the installation according to paragraph 5-11, DA Pam 40-11, Preventive Medicine.

(2) Perform bioassays as needed.

i. Commanders and Directors will:

(1) Designate in writing, an RSO when the criteria in DA PAM 385-24 para 1-4 k has been met. The designated RSO will be provided the required certification training to conduct RSO duties and certification IAW with paragraph 7-20 below.

(2) Ensure the RSO, Light Amplification by the Stimulated Emission of LASER Radiation Safety Officer (LRSO), Radio Frequency Safety Officer (RFSO) designee (or contractor), as applicable, is trained to a level commensurate with the Radiation Safety Program scope and responsibilities.

(3) Ensure the orientation and indoctrination of personnel (or contractors) subject to radiation hazards.

(4) Implement applicable directives and SOPs.

(5) Maintain an inventory of radiation sources and furnish a copy to the Fort Bliss RSO annually or as inventory changes.

(6) Report radiation accidents/incidents when required by Army Accident Investigation and Reporting (DA PAM 385-40) or 10 CFR 19 to the chain of command, the appropriate NRC license holder, and the Fort Bliss RSO.

(7) Ensure provisions for dosimetry service and medical examination as required.

(8) Ensure that all personnel (or contractors) occupationally exposed to radiation sources receive appropriate training commensurate with potential workplace hazards.

(9) Ensure controlled areas are properly marked, have proper warning signs, proper warning signals, and safety switches where required IAW TB MED 521 and TB MED 525.

(10) Oversee the integration of Deliberate Risk Management into the unit Radiation Safety Program.

j. Unit and Directorate Radiation Safety Officer (unit / directorate RSO) (or contractor RSO) will:

(1) Perform the RSO requirements of their unit or directorate.

(2) Conduct transportation surveys and ensure that radioactive commodity shipments are certified by a qualified Hazardous Material (HAZMAT) shipping official (or contractor) when required.

(3) Provide shipping information, to include appropriate exposure rate and contamination levels to the transportation officer or HAZMAT officer (or contractor) prior to shipment.

(4) Ensure the shipping guidance for the commodity is in accordance with applicable technical manual (TM) or technical bulletin (TB).

(5) Execute other requirements as defined within DA PAM 385-24 paragraph 1-4 r.

k. Supervisors will:

(1) Ensure the appropriate warning signs and notices are posted.

(2) Ensure that all personnel who use radioactive commodities or radiation producing devices are adequately trained with annual and refresher training, receive adequate instruction; if required, receive medical examinations prior to working in their assigned duties.

(3) Ensure that personnel exposure levels are kept ALARA.

(4) Ensure that radioactive commodities are secured against unauthorized use.

(5) Ensure that a written SOP is available, enforced, and reviewed by all personnel whose work requires protection from radiation hazards.

(6) Ensure radiation safety SOPs are staffed through 1AD RSO or Fort Bliss RSO as applicable, for review and concurrence.

(7) Ensure that assigned TLDs are worn when and as required, and they are properly stored when not in use.

(8) Ensure storage areas are approved by 1AD RSO or Fort Bliss RSO as applicable.

(9) Ensure that radiation program files are maintained according to Army Records Information Management System (ARIMS).

(10) Report to the Fort Bliss RSO and 1AD RSO any accident, unusual incident, personal injury, suspected overexposure, and broken or damaged equipment containing radioactive materials.

l. Workers (or contractors) assigned radiation duties will:

(1) Read and follow SOPs, rules, regulations and special instructions.

(2) Maintain and use safety equipment properly.

(3) Wear assigned TLDs properly and returns them to the approved storage area at the end of the work day.

(4) Report any accident, unusual incident, personal injury, suspected overexposure, or contamination as soon as possible to their supervisor.

7-10 Dosimetry Records

a. Per DA PAM 385-25, personnel (or contractors) who could possibly receive 10 percent of the maximum allowable dose (5 roentgen equivalent mammal [rem]) will be issued dosimeters.

b. Dosimetry managers maintain exposure records and implement guidance on the dosimetry program policy according to this chapter, Preventive Medicine (AR 40-5) and DA PAM 385-24. Monitor exposure of personnel assigned or attached to Fort Bliss who routinely or occasionally may be exposed to sources of ionizing radiation as a condition of their employment.

c. The dosimetry manager will review quarterly dosimetry reports and annotate (sign and date) when the report was reviewed.

d. Report exposure over the thresholds specified in DA PAM 385-24 to the Fort Bliss RSO and 1AD RSO for evaluation, investigation, and recommendation of further action.

7-11 Radioactive Material and Equipment

a. Unserviceable or non-repairable radioactive materials will be disposed of as radioactive waste (radwaste) unless the item must be returned to a depot.

b. Disposition instructions from the equipment item manager via All Army Activities (ALARACT) Message, Safety of Use Message (SOUM), Ground Precautionary Measure (GPM), Maintenance Advisory Message (MAM), Field Alert Notification (FAN), etc., or the inventory control point will provide instructions for proper disposal as radwaste or return to a specified depot.

c. Equipment will be properly accounted for in accordance with AR 710-3.

d. Radwaste will be securely and properly stored by the unit RSO for disposal.

e. Units may seek help in identifying radioactive items from TB 43-0116, Identification of Radioactive Items in the Army, or from their next higher unit RSO.

f. DLA-DS will not accept radioactive items for turn-in and disposal. Units will have the materials returned to follow proper disposition instructions.

g. Damaged radioactive commodities will be separated by isotope; double plastic bagged, sealed with tape, marked with the National Stock Number (NSN), radioactive isotope and the quantity.

7-12 Army Radiation Permits

a. Non-Army applicants will apply by letter with supporting documentation to Head Quarters (HQ), United States (US) Army Garrison Fort Bliss ATTN: IMBL-SO (RSO), Building 4 Slater Road, Fort Bliss, Texas, 79916. Allow at least 30 calendar days for processing prior to the date the source is desired to be used on the installation.

b. Activities (for example, DPW, Directorate of Family, Morale, Welfare and Recreation(DFMWR), or Army Corps of Engineers, etc.) responsible for non-Army personnel who plan to use radioactive sources on the installation, must notify the Fort Bliss RSO when the approved permitted sources are brought onto the installation.

c. The Army Radiation Permit application will specify relevant details, the start and stop dates for the ARP, and describe the purpose for the Army radiation permit.

d. Supporting documentation for the applicant's qualifications must be submitted with the application, otherwise the application will be returned for additional information and the processing delayed.

e. This requirement is IAW provisions of 32 CFR 655.

7-13 Radiation Worker Safety Briefings

Individuals (or contractors) working in or frequenting any portion of an area where radiation, or radioactive materials are used or stored, must be informed of:

a. Proper storage, transfer, or use of radioactive materials or radiation devices.

b. Health protection problems associated with radiation, or radioactive materials.

c. Precautions and procedures to minimize radiation exposure.

d. Appropriate response to warning devices.

e. The individual's right to request and receive radiation exposure reports and records.

f. Fundamentals of radiation safety.

g. The use of protective equipment and the operational steps must be demonstrated.

h. Procedures to minimize contamination, and to secure sources of radiation from unauthorized use.

i. Emergency procedures to follow in case of a radiation accident or incident.

j. The individual's responsibility to report unsafe and/or illegal conditions which may lead to or cause a violation of NRC regulations, licenses, or individual injury or overexposure.

k. The extent of briefings/instruction will be commensurate with potential radiological health protection problems. Instruction is at least annually and documented by placing record of training in official personnel files.

7-14 Radiation Area Designations

a. Controlled Area: A controlled area is an area in which the occupational exposure of personnel to radiation is under the supervision of an assigned unit RSO or an area that is solely used for maintenance on equipment containing radioactive materials.

b. Restricted Area: A restricted area is any area designated by a fully trained RSO with limited access, and where precautionary measures are taken for the purpose of protecting individuals from exposure to ionizing radiation or radioactive materials.

c. Radioactive Material Areas: Radioactive material areas are those areas where radioactive materials are stored because of their radioactive component. Each area and principal container in which radioactive material is stored or used will be conspicuously posted with a sign or label bearing the radiation symbol and the words "Caution Radioactive Material".

d. Required Postings: Units and activities will post the following documents and signs in radiation areas:

(1) "Caution-Radioactive Material" sign (fabricated) or another appropriate sign.

(2) Copy of title 10 CFR 19, Parts 19-21.

(3) Section 206 of the Energy Reorganization Act.

(4) Copy of NRC license and all incorporated documents (when applicable).

(5) Copy of SOP.
(6) NRC Form 3.
(7) Any reports of violations.

Note: The Fort Bliss RSO and 1AD RSO maintain NRC licenses and Army Radiation Authorization (ARAs) on file.

7-15 Transportation of Radioactive Materials on Fort Bliss

It is usually inconvenient to package and transport radioactive materials for on-post movement in the same manner required for off-post shipments. When transporting radioactive materials on Fort Bliss:

a. Use only military vehicles.

b. Secure radioactive materials in the vehicle to prevent movement.

c. Arrange material so that the dose rate does not exceed 0.5 mR/hr (IAW TB 43-0137), at any point on the external surface of the package.

d. Use sturdy containers for transport.

e. MIL-STD-129J requires that each non-accompanied radioactive material container be marked with "CAUTION-RADIOACTIVE MATERIALS".

f. Marking is not required if the package is accompanied by radiation protection personnel.

g. Items which contain radioactive material do not require additional markings unless the radiation markings have been removed, are damaged or are otherwise indistinguishable.

i. Fill out the Radioactive Materials Movement Form in Figure 2 below.

7-16 Transportation of Radioactive Materials Off-Post

Radioactive materials must be transported according to applicable Department of Transportation (DOT) regulations (49 CFR), DTR 4500.9-R (Part II), 10 CFR 71, and TB 43-0137.

a. Radioactive Material Transport Information, UN2911 shipping label (see Figure 1 below) will accompany the shipment.

b. 49 CFR 172.403 and 49 CFR 173.444 provide labeling requirements for the transportation of radioactive materials or devices containing radioactive materials.

c. Shipping containers will be constructed to meet DOT specification for shipment of radioactive materials (for example, strong, tight container, fiberboard box, seams sealed with tape).

d. Garrison activities will obtain Fort Bliss/Garrison RSO guidance and approval for all off-post shipments of radioactive material.

e. Units will get 1AD RSO guidance and approval for all off-post shipments of radioactive material.

f. The unit RSO will affix appropriate labels to shipping documents, monitor the surface radioactive activity of each package, and furnish Radioactive Materials Movement Form, signed and dated (see Figure 2 below).

Figure 1: UN2911 Shipping Label Example

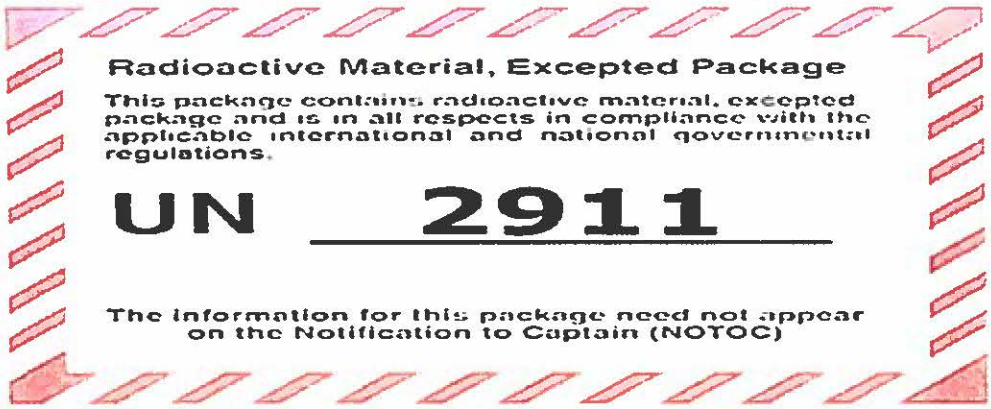


Figure 2: Radioactive Materials Movement Form Example

SHIP TO:	SHIP FROM:

(Check one only)

DEVICE: M8A1/M43A1_____ ISOTOPE: Americium 241_____ Form: Solid Sealed Source

Special Form

M22/M88_____ Nickel 63 _____ Form: Solid Sealed Source

Special Form

CAM / ICAM _____ Nickel 63 _____ Form: Solid Sealed Source

Special Form

PACKAGE CONTENT(S):

1. NSN: _____ NOUN: _____

SERIAL NUMBERS: _____

_____

2. Activity (TBq) in each device: M8A1/M43A1=9.25E-6TBq M22/M88=1.48E-2TBq
   CAM/ICAM=3.7E-4 TBq
   Total Activity (TBq) of Packages: # _____ M8A1/M43A1 x 9.25E-6 TBq = _____ TBq

   # _____ M22 / M88 x 1.48E-2 TBq = _____ TBq

   # _____ CAM / ICAM x 3.7E-4 TBq_____ TBq

3. Unpackaged device reading at 4": Packaged surface Reading:
   (Less than 0.1 mSv/hr or 10mrem/hr) (Less than 0.005mSv/hr or 0.5mrem/hr)

4. Removable radioactive contamination of package is in accordance with 49 CFR Part 173.443 Table 9.
Note: Transport wipe test of package is not required if a new package is used for shipment.
Contamination limits: Less than 22dpm/cm^2 for beta and gamma emitters and low toxicity alpha emitters, and less than 2.2dpm/cm^2 for all other alpha emitting radio-nuclides.
5. Ensure package is marked with DOT "UN2911" (red border) label and complete "ship to" and "ship from" mailing address.
6. Proper shipping name: "RADIOACTIVE MATERIAL, INSTRUMENTS, EXCEPTED PACKAGE, UN 2911"
7. Approving official: _____
(FORT BLISS RADIATION SAFETY OFFICER OR TRANSPORTATION OFFICER)

Date: _____ **EMERGENCY PHONE NUMBER: (TACOM LCMC NRC LICENSEE)**
Commercial (586)282-0891 / 7635 /6194 DSN prefix (786)

7-17 Non-Ionizing Radiation Safety

a. Control of non-ionizing radiation hazards is according to ARs 40-5, DA Pam 385-24, DODI 6055.11, and TB Med 524. Non-ionizing radiation generates thermal energy, which is absorbed by the body. When heat dissipates, thermal effects on the body are reversed and effects are not cumulative as in ionizing radiation exposures. Extreme exposure may produce cataracts, burns, or erythema. Non-ionizing radiation sources consist of:

(1) High intensity light sources.
(2) Ultraviolet or infrared.
(3) Ultrasound.
(4) Radio frequency (RF).
(5) Microwave.
(6) Laser radiation.

b. The Fort Bliss RSO is the local consulting authority for the non-ionizing radiation protection program and is the Fort Bliss Laser Radiation Safety Officer (LRSO).

c. The 1AD RSO

(1) Monitors units that are required to maintain a non-ionizing radiation program SOP and provides support and direction to units on non-ionizing issues.

(2) Conducts required investigations on Radio Frequency Radiation (RFR)/laser incidents or accidents.

(3) Makes required notification to higher headquarters.
(4) Coordinates with the Fort Bliss RSO.
(5) Coordinates with HQ, WBAMC on:
(a) Any reported potential exposure to non-ionizing radiation.
(b) Immediate and follow-up medical examinations as required.

d. Lasers: The word LASER comes from the words Light Amplification by the Stimulated Emission of Radiation. Lasers provide a light source which can be used to measure distance.

(1) Lasers are used in medicine, biology, chemistry, electronics, wood working, military equipment, construction and many other applications.

(2) Typical military uses are target acquisition, fire control, and training devices. These lasers are termed rangefinders, target designators, and direct fire simulators and should be: confined to ranges and/or designated non-live fire training areas. They are

used where no line-of-sight exists between lasers and uncontrolled, potentially occupied areas. This is achieved by removing specular surfaces from targets and the downrange area.

(3) Three aspects of a laser application influence the total hazard evaluation and thereby influence the application of control measures:

(a) Laser device's capability of injuring personnel.

(b) Environment in which the laser is used.

(c) Personnel who may be exposed.

(4) Warning labels and signs may be found in TB Med 524, or contact the appropriate RSO for examples.

(5) See laser classifications and hazards table below for additional information.

Laser Classifications and Hazards Table

Class 3b. CW and repetitively pulsed lasers: cannot exceed 0.5 Watts (W) for 0.25 s. Example: Airborne Infrared Multipurpose (AIM)-1/D, Infrared Aiming Light Pulsed lasers: Cannot exceed 0.030 Joule (CA J/ pulse or 0.125 J within 0.25 s). Example: Army Navy/Ground Vehicular, Visible Light, Fire Control (AN/VVG)-3, M1 laser rangefinder.	Direct and specular reflection viewing hazards. Diffuse reflection is usually not a hazard.	Class 3b Effect: Critical (II)–Catastrophic (I) Hazard Probability: Frequent (A)–Unlikely (E) Risk Assessment Range: **LOW to EXTREMELY HIGH**
Class 4 Average power above 0.5 W Pulsed lasers: Exceeds 0.030 CA J/pulse or 0.125 J within 0.25 s Example: Ground/ Vehicular Laser Locator Designator (G/VLLD)	Direct and specular reflection viewing hazards. Diffuse reflection may present a hazard. May pose a fire hazard May generate plasma radiation.	Effect: Catastrophic (I) Hazard Probability: Frequent (A)–Unlikely (E) Risk Assessment: **MEDIUM to EXTREMELY HIGH**
Notes: 1 ANSI Z136.1 2 DA PAM 385-30		

e. Radio Frequency Radiation (RFR)

(1) Because of the low energy content of RFR radiation, it does not ionize materials and consequently is known as non-ionizing radiation. Absorption of RFR energy generally results in heating of the absorbing medium. If heat gain exceeds compensatory capability, the overall temperature may increase to deleterious levels.

(2) Radiation protection control is required for every RFR system that is able to produce power density levels in excess of the Permissible Exposure Limit (PEL). The following general list of radiation control elements applies:

(a) SOPs will be published and enforced with copies forwarded to the Fort Bliss RSO or 1AD RSO as applicable. These SOPs will specify all radiation safety policies relative to equipment and personnel control to ensure that exposure of personnel is minimized. Under no circumstances should exposure exceed established limits.

(b) All personnel potentially exposed to RFR will be informed of the radiation hazards and instructed regarding the rules and procedures to be complied with. Instructions will include SOP familiarization or review, proper use of protective equipment and devices, accident reporting procedures, routine checks or surveys prescribed to ensure radiation safety, and procedures for maintaining an operational log for recording radiation safety-related events (safety interlock/warning sign or light overrides, prohibited radiation zone violation).

(c) Radiation safety briefings and instructions will be given annually and records of instructions will be forwarded to the appropriate RSO. These records will include a brief outline of the instructions and a list of persons who received the instructions.

(d) All controlled areas will be properly marked and will have proper warning signs, barricades, lights, alarms, and safety switches. RFR hazard warning signs are required at all access points to areas in which RFR levels may exceed the PEL. Appropriate information will be inserted on the signs IAW TB MED 524.

(e) The Fort Bliss RSO, 568-7819/2510, will be notified in the event of an alleged RFR overexposure or related safety feature malfunction that could produce radiation levels in excess of the PEL.

(f) All alleged RFR overexposure will be reported in accordance with the requirements of AR 385-40.

(g) A comprehensive inventory of all RFR sources will be maintained, and an updated copy of this inventory will be forwarded to the Fort Bliss RSO. The inventory will be due annually NLT 31 October.

(3) Electromagnetic environment controls. Commanders will take measures (for example, identifying susceptibilities, quantifying electromagnetic environments, evaluating risks associated with operating procedures, and establishing tailored emission control instructions) to ensure: Hazards of Electromagnetic Radiation to Ordnance (HERO), Hazards of Electromagnetic Radiation to Personnel (HERP), and Hazards of Electromagnetic Radiation to Fuel (HERF) are mitigated prior to conducting all military exercises, operations, and activities.

(4) See RFR table below for additional information.

Radio Frequency Radiation Sources Table

RFR Sources	Activities Operating RF Radiating Sources	RF Damage
Radar systems	Air defense sites.	Potential locations for RF burn are antennas, cables, connectors, all RF circuits, and microphones. An RF burn can occur when RF current enters through a small cross section of the body. Burns can occur at any RF frequency.
Radio Sets	Military Auxiliary Radio System (MARS) stations. Signal battalions	
Electronic Countermeasures Equipment (jammers).	Military intelligence units. Communications and electronics shops. Avionics activities.	
Satellite Communications (SATCOM) Systems	Signal battalions	
RF Diathermy Sets, MRIs	Physical therapy clinics in hospitals	

7-18 Accident and Incident Response Actions

The following is provided in the event of a radiation contamination accident and incident:

a. Accident response.
   (1) Stop work.
   (2) Warn others in the area.
   (3) Isolate the area.
   (4) Minimize exposure.
   (5) Notify the Fort Bliss RSO and/or 1AD RSO as appropriate.

b. Emergency response (immediate actions done by the user):
   (1) Bag the device (contain it).
   (2) Label the bag to prevent further exposure.
   (3) Describe the device (NSN, nomenclature, etc.).
   (4) Write a caution on the bag: "DO NOT OPEN!"
   (5) Identify yourself (Name, telephone number, etc.).
   (6) Control the package.
   (7) Place it in a safe and secure isolated area.
   (8) Notify the Fort Bliss RSO.

c. Emergency response (actions by the Fort Bliss RSO):
   (1) Ensure that immediate actions have been taken.
   (2) Ensure current control of the device.
   (3) Isolate the area where further exposure may occur.

(4) Identify personnel who may have been exposed, and may have internal activity.

(5) Have a bioassay sample taken, if required (this decision is made only by the RSO). Sample must be taken at least four hours after suspected exposure.

(6) Conduct a wipe survey of the area.

(7) Have wipes analyzed.

(8) Decontaminate the area if necessary. Notify the licensee, if required.

7-19 Written Reports

a. When an incident involves lost, damaged, or stolen radioactive material, commanders must submit a written report to: Commander, U.S. Army Garrison, ATTN: IMBL-SO (RSO), Fort Bliss, Texas 79916. The license agreement requires this information to be furnished to the NRC. The report will be forwarded through HQ, IMCOM/FORSCOM as appropriate to HQ, U.S. Army Medical Command (AMC)-Rock Island.

b. Commanders will be notified in writing to furnish reports by the Fort Bliss or 1AD RSO. Information required in written reports is as follows:

(1) Description of licensed material involved: kind, quantity, chemical, physical form.

(2) Description of the circumstances under which the loss occurred.

(3) Description of disposition, or probable disposition of the licensed material involved.

(4) Exposures of individuals to radiation, circumstances under which the exposures occurred, and the possible total effective dose equivalent to persons in unrestricted areas.

(5) Actions taken to recover the material.

(6) Procedures or measures that have been or will be adopted to ensure against a recurrence of the event. Identify any common trends if a similar occurrence has occurred at location previously.

7-20 Certification Training Requirements for Class 7 Shippers

a. Personnel seeking to ship Class 7 items must complete the two week AMMO 62 course located within the Gooding Instructional Facility (GIF), building 11190 Sergeant Major Blvd., Fort Bliss. Upon completion of the AMMO 62 course personnel will complete the online AMMO 86 course at: http://dactces.org/index.php?option=com_content&view=article&id=206:ammo-86&catid=50&Itemid=76

(1) AMMO 62 Course Description: This course provides personnel from all services detailed technical information pertaining to all phases of transportation for hazardous materials, and satisfies the mandatory training for persons who certify hazardous materials and conduct function specific training for subordinate personnel as specified in The Defence Transportation Regulation (DOD 4500.9-R). Course content regulations governing the transportation of hazardous materials by all modes (i.e. land, vessel, and commercial/military air). International regulations covered include the International Maritime Dangerous Goods Code and the International Commercial Air Transport

Associations Dangerous Goods Regulations. United States regulations covered include the Department of Transportation (DOT) 49 Code of Federal Regulations (CFR) and U.S. military regulations. Course materials include emphasis on shipping papers, marking, labelling, placarding, packaging, compatibility, and emergency response information.

(2) AMMO 86 Course Description: This course provides supplemental instruction in the unique shipping requirements associated with Hazard Class 7 materials. This course was exclusively designed to provide supplemental instruction in the unique shipping requirements associated with Hazard Class 7 materials. It is not intended to be a stand-alone certification course.

b. Personnel requiring AMMO 62 and AMMO 86 training must register for the training, complete the training requirements and maintain copies of certifications on file with their organizations.

c. Personnel who perform Hazard Class 7 duties and have completed AMMO 62 and AMMO 86 are required to enroll in and complete Ammo-37-DL General Transportation of Hazardous Materials Refresher (9E-F66/920-F34 (DL)) training every 24 months to remain certified in Hazard Class 7 duties. This course is intended as a refresher for personnel from all services who certify hazardous materials for transportation IAW 49 CFR and Chapter 204 of DOD 4500.9-R. Satisfactory completion of a previous 80 hour hazardous materials transportation certification course (Ammo-62 or equivalent) is required.

d. Additional Certification training is available by attending the 4-day Radiological Packing resident Course taught by the Chemical, Biological, Radiation, and Nuclear (CBRN) School at Fort Leonard Wood, Missouri.

7-21 Shipping of Radioactive Materials

Any organization in possession of RAM has the requirement for a Radiation Safety Program and Officer IAW AR 385-10 Appendix B-2, which states: "A unit possessing radioactive commodities or radiation-emitting equipment (to include X-ray, accelerators, Class 3B, Class 4, or military-exempt lasers, or EMF emitters that exceed the MPE) requiring the implementation of a Radiation Safety Program (for example, leak testing, radiation postings, and shipping requirements)." A unit with CBRN equipment utilized within modified table or organization and equipment/TDA organizations:

a. Shipping Instructions / URSO will:

(1) Contact the Item Manager to receive a disposition for the item to be shipped.

(2) Based on the disposition received, the item may need to be wiped or have a leak test conducted. URSO will coordinate with the item manager to have this process achieved.

(3) If a wipe test or leak test is necessary, the URSO will wait for disposition results from the item manager on the results of the testing before proceeding with shipment. Once results are received, URSO will:

(a) Contact LRC, Packaging and Crating to schedule an appointment.

(b) Shipping containers will be constructed to meet DOT specification for shipment of radioactive materials (for example, strong, tight container, fiberboard box, seams sealed with tape).

(c) Inform RSO of all off-post shipments of radioactive material.

(d) Affix appropriate labels to shipping documents, monitor the surface for radioactivity levels of each package, and furnish Radioactive Materials Movement Form, signed and dated.

b. If equipment is damaged:

(1) Seal the entire device in a double-wrapped plastic bag.

(2) If possible, place the item in the original or replacement shipping container, and return to depot for disposal or repair.

c. Standard issue items containing radioactive materials (except individual controlled items) may be moved and used anywhere on the installation, consistent with the owning activity's mission and the items intended purpose as specified in the applicable technical publications.

d. Unsealed or leaking "sealed sources" will be moved only by the RSO or ARSO.

e. Transport radioactive materials according to applicable DOT regulations, 49 CFR, TM 55-315, Transportation TB 43-0131, and FORSCOM Regulation 385-1.

7-22 Controlled Radiation Sources

The following items are radiation sources, which are controlled, dangerous, and require specific usage and handling safety precautions, warning signs if applicable, and storage limitations:

a. Individually Controlled Items:

(1) 6635-00-030-6896 Tester, Density, Moisture Nuclear (MC1)
(2) 6665-00-856-8235 Radioactive Source Set, M3A1
(3) 6665-00-556-8825 Radiac Calibrator Set, AN/UDM-1A
(4) 6665-00-179-9037 Radiac Calibrator, AN/UDM-2
(5) 6665-00-767-7497 Radiac Calibrator, AN/UDM-6
(6) 6665-00-973-1123 Radiac Calibrator, TS-123OA
(7) Radiac Calibrator Unit, JLS-81-10

b. Controlled Items:

(1) 6665-00-526-8648 Source, AN/PDR-39
(2) 6665-00-832-6159 Source, MK-7338
(3) 6665-01-081-8140 Chemical Agent Detector, M43A1
(4) 6665-01-199-4153 Chemical Agent Monitor
(5) 6665-01-357-8502 Improved Chemical Agent Monitor
(6) 6665-01-438-3673 Automatic Chemical Agent Detector, M88

Chapter 8
Safety Awards Program

8-1 Introduction
This chapter establishes safety awards for recognizing organizations and individuals for their contributions and enhancements to the Army Safety Program.

8-2 Promoting Safety
Safety awards enhance Army operations and improve safety awareness by recognizing and promoting individual and organizational accident prevention measures and successes.

8-3 Award Guidance
Criteria, policies, and procedures for nominating units and individuals for the awards in this chapter are contained in DA Pam 385–10.

8-4 Department of the Army Level Awards
See AR 385-10, paragraph 8-4, page 53.

8-5 Army Headquarters and Organization-Level Safety Awards
See AR 385-10, paragraph 8-5, page 54.

8-6 Army Safety Excellence Streamer
See AR 385-10, paragraph 8-5e, page 54.

8-7 Other Individual and Organizational Awards
See AR 385-10, paragraph 8-5c, page 54.

8-8 Garrison Safety Awards
a. Company, Troop, Battalions and Squadrons experiencing six months (two consecutive quarters) and 12 months (four 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 six 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.

e. Units must submit a memorandum to the Garrison Safety Director through the Company, Battalion, Brigade, Division and then Garrison Safety Office (approval authority) indicating unit, dates of accident/injury free period, and a unit point of contact information.

f. Units will return the green safety streamer (6 months) to the Garrison Safety Office if they are awarded the gold safety streamer (12 months).

8-9 Unit Safety Certification
Unit safety certification is used to identify units-platoon size or larger-that have achieved levels of safety that deserve recognition. When the below criteria have been certified by the commander at the next level, a certificate will be issued by the Garrison Safety Office recognizing the unit's achievement for the given period of time. To be certified, a unit must have completed the following:

a. Appointed in writing a safety officer who has completed the required level of training.

b. Implemented a safety program according to AR 385-10.

c. Reduced the number of accidents, both on and off the job, by 50 percent of the previous year.

d. Had in place an accident tracking and reporting system that complied with the requirements of this regulation.

e. Had in place a documented RM process demonstrating controls implementation and management of identified risks.

f. Sustained the above initiatives for a period of not less than 24 consecutive months.

8-10 Educational Materials
See AR 385-10, paragraph 8-7, page 54.

8-11 Promoting the Prevention Awards Program
See AR 385-10, paragraph 8-8, page 54.

Chapter 9
Motor Vehicle Accident Prevention

9-1 General
The objective of the ground accident prevention program is to complete all assigned missions and tasks in a professional and safe manner; safeguard all military and civilian employees and property from accidents; prevent accidental damage or destruction to all equipment, facilities and properties; and provide a continuing and aggressive accident prevention program compatible with the assigned mission.

9-2 Motor Vehicle Safety
The primary ingredient of a motor vehicle accident prevention program is involvement by commanders and leaders. They are responsible for supervising and promoting the safety program, as well as ensuring sufficient training of personnel under their jurisdiction. Incorporate the following actions to prevent motor vehicle accidents:

a. Commanders and Directorates will establish written dispatch procedures for each unit motor pool and TMP. They will include internal procedures for release of vehicles during periods of inclement weather.

b. The Military Police (MP) and gate guards will randomly stop military vehicles entering and exiting the installations, inspect dispatches, and ensure that occupants are utilizing available safety restraints.

c. Commanders and Directorates will ensure that all Army Motor Vehicle (AMV) and Army Combat Vehicle (ACV) operators complete the mandatory online Army Accident Avoidance Course every four years. Online training should be supplemented by additional accident avoidance training that establishes and reinforces positive driver attitudes.

d. All drivers of Army buses, MP vehicles, ambulances, fire trucks, fueling vehicles, vehicles carrying hazardous cargo, powered industrial trucks, motorcycles, mopeds, crash-rescue vehicles, or other emergency vehicles must complete additional training conducted by a designated master driver, license examiner, or specified contractor/agency. This additional training is to ensure competency in the safe operation of such vehicles and will include applicable laws and regulations, safe operating practices under normal and emergency conditions, and driver inspection and primary preventative maintenance.

e. A certifying official will indicate to the person issuing the OF 346 (US Government Motor Vehicle Operator's Identification Card) that the driver has met the above requirements and fully understands operational peculiarities of the vehicle. Document the training on the operator's DA Form 348 (Equipment Operator's Qualification Record).

f. Use driver incentive awards to recognize the achievements of military and civilian drivers who contribute to safe operations IAW AR 385-10.

g. All personnel will use available restraint systems while driving or riding in an AMV/ACV and POV on and off military installations, IAW Fort Bliss Regulation 190-5 and AR 385-10.

h. Commanders and Directorates will establish countermeasures to prevent AMV/ACV and POV/POV-M accidents based upon the Commanders Accident Prevention Plan (CAPP) and the annual accident analysis for Fort Bliss. Each unit will address POV/POV-M safety in conjunction with each holiday safety briefing and will inspect POV/POV-M using a POV/POV-M checklist. Soldiers will complete a Travel Risk Planning System, PMV risk assessment while on leave, pass, or TDY out of the immediate local area and operating a motor vehicle. The local area is defined as 250 miles from Fort Bliss. The risk assessment tool is on the USACR/Safety Center Web site (https://safety.army.mil). Holiday safety briefings should include the following:

(1) The hazards/implications of driving while under the influence of alcohol or drugs.

(2) The importance of properly planning trips using the Army Travel Risk Planning System (TRiPS), taking rest stops, and having someone assist with the driving responsibilities.

(3) Seat belt and child safety seat requirements.

(4) The hazards of driving too fast for road conditions.

(5) Precautions for handling firearms.

(6) Precautions for swimming, boating, fishing, and hunting, and off-duty activities.

(7) Seasonal hazards, to include heat/cold injuries.

(8) Motorcycle safety.

i. Individual operators of POVs will comply with the requirements of Fort Bliss

Regulation 190-5 as it pertains to annual safety inspections and insurance requirements.

j. Drivers will not pass a vehicle in the process of yielding for runners, joggers or walkers in the roadway.

k. When traffic signals are not in place or in operation, vehicle drivers will yield the right-of-way and stop to yield for runners, joggers, or walkers crossing the roadway within a crosswalk.

9-3 AMV Safety

AMV operations are inherently dangerous and require organizations to establish and maintain a driver's training program that instills and promotes safety. Most fatalities involving AMVs are preventable. The five most common factors that lead to AMV accidents are: speed, failure to enforce standards, failure to follow known standards, failure to wear proper PPE, and failure to wear restraint systems. To assist in AMV accident prevention at Fort Bliss, the following standards apply:

a. All Soldiers, DA Civilians and contractors assigned or attached to Fort Bliss operating an AMV either owned or leased by the government will not exceed the following speed limits:

(1) Tactical vehicle: highway- 50 miles per hour (MPH); populated areas- 25 MPH; secondary paved roads- 40 MPH; dirt/gravel roads- 25 MPH; while using night vision devices/night vision goggles (NVDs/NVGs)- 10 MPH.

(2) Government Services Administration (GSA) vehicle: highway- posted speed limit; populated areas- posted speed limit; secondary paved roads- posted speed limit; dirt/gravel roads- 30 MPH; see item (e) below.

(a) The above speed limits will be observed unless a lower speed limit is posted or the responsible commander determines a lower speed limit is warranted, i.e., road conditions, weather, visibility, etc.

(b) Oversized, overweight, and towed vehicles speed limit as determined by the responsible commander or per TM criteria; whichever speed limit is lower.

(c) Catch-up speed will not exceed 10 MPH above the briefed convoy speed and will not exceed posted speed limits.

(d) GSA vehicles will travel at or below the posted speed limit depending upon road conditions, weather, visibility, etc.

(e) GSA vehicles will not drive under NVDs/NVGs, but will use white lights (service drive) or a ground guide.

b. General Requirements: All Soldiers riding in tactical vehicles will wear as a minimum the advanced combat helmet (ACH) and approved ballistic eye protection from the Authorized Protective Eyewear List (APEL). The driver and vehicle commander (VC) are responsible for the safety of all vehicle occupants and will refuse to move a vehicle if occupants are not wearing proper PPE, not correctly using restraints, in an unsafe position, too many vehicle occupants, or equipment is not correctly secured.

c. Restraints: All Soldiers will wear vehicle restraint systems/seatbelts. The driver is responsible for informing passengers of the restraint use requirements and the VC is responsible for enforcement. Soldiers riding in vehicles that have turrets or gunner

positions will use the gunner restraint system (GRS) and be positioned at nametag (chest level) defilade when the vehicle is moving.

d. Passenger Carrying Capacities: Passengers who are not crew members and carried in the cab of a vehicle, as well as passengers in sedans, vans, and other administrative vehicles are limited to the number of seat belted positions. When cargo space is used for passengers: canvas tops will be in place with sides rolled down, troop safety strap will be fastened in place when vehicle is moving. Soldiers will not sit on the bed or on gear, but will be seated in properly installed permanent or temporary seats.

e. Ground Guides: All Soldiers will be trained on proper ground guide procedures. Vehicle ground guides will be used during periods of limited visibility/darkness, when vehicles are moved backward, in congested areas, into and out of tactical assembly areas, into and out of motor pools and maintenance collection points, enclosed areas, and any mixed troop/vehicle tactical area. Before moving the vehicle, the ground guide will thoroughly check the area around, above and under the vehicle for objects and personnel. At night and during periods of limited visibility illumination devices will be used. Illumination devices used for this or other purposes will be IAW unit SOP.

f. Rollover Drills: All Soldiers will be trained in rollover drills. Rollover drills will be integrated into convoy briefs, pre-combat checks (PCCs)/pre-combat inspections (PCIs), rehearsals, and deliberate risk assessments.

g. Load Plans: Soldiers will secure equipment, supplies, ammunition, etc. to prevent injuries from and damage to these items caused by uncontrolled movement during a crash sequence. Soldiers will not ride in cargo areas where ammunition or fuel is being transported, nor where the potential of shifting loads may occur.

h. Chock Blocks: Tactical vehicles and trailers will use properly sized chock blocks on sloping terrain, while maintenance is being performed, or when the vehicle and/or trailer is parked. Vehicles will not be left unattended while running. During Soldier load and unload tasks, vehicles will be adequately spaced and engines turned off/shut down. Soldiers will not walk, stand or loiter between running vehicles at any time. Troop transport vehicles will be equipped with ladders and ladders will be used to allow soldiers to enter/exit cargo areas without jumping or climbing without use of troop ladders.

i. Uniform Standard: Soldiers will adhere to the required uniform standards for conducting training on Fort Bliss. Commanders may adjust the uniform IAW METT-C.

(1) Ballistic eyewear, hearing protection, ACH, Interceptor Body Armor (IBA), Small Arms Protective Insert (SAPI) plates, throat and neck protector, and groin protector will be worn. Mission essential items such as canteens, small arms cases, first aid cases, etc. will be affixed to the IBA IAW unit SOP.

(2) The Modular Light Weight Load-carrying Equipment System (MOLLE) will be affixed to the IBA IAW unit SOP to allow each Soldier to wear the IBA/MOLLE system in a manner conducive to the Soldier's duty position.

9-4 Motorcycle, Moped Specialty Vehicles and ATVs

a. Motorcycle accidents continue to be a leading cause of Soldier fatalities and serious injuries. Personnel will comply with traffic laws and regulations relative to the operation of motorcycles and mopeds contained in AR 385-10, Fort Bliss Regulation

190-5, and Fort Bliss Standing Order 7. When operating a motorcycle or moped, both rider and passenger will wear a DOT-approved protective helmet at all times. Additionally, riders and passengers will wear full-fingered motorcycle specific gloves or mittens that are made from leather or other abrasion-resistant material and designed for use by motorcycle operators and passengers.

b. Riders and passengers will wear protective clothing which includes long-sleeved shirt or jacket and long trousers. Motorcycle jackets and pants constructed of abrasion-resistant materials such as leather, Kevlar®, or Cordura® and containing impact-absorbing padding are strongly encouraged. Riders and passengers are additionally encouraged to select protective clothing that incorporates bright colors and/or fluorescent colors and retro-reflective material. All motorcyclists will attend an approved Motorcycle Safety Foundation (MSF) courses listed at FB 385-10 paragraph 10-3f and will have the MSF card in their possession. Prior to any operation of ATVs, operators will be trained on the safe operations and controls that have been implemented to mitigate hazards.

c. At no time will unauthorized personnel operate an ATV on Fort Bliss property.

d. Commanders and Directors of organizations (to include contractors) that use commercial off the shelf (COTS) utility vehicles, referred to as specialty vehicles, such as Segway HT, M-Gators, Gators, "mule" utility vehicles, aircraft-tugs, etc. in garrison or tactical environments will establish the following:

(1) An SOP that includes at a minimum, safe operations, maximum safe speed limits, operational work area limits, operator and passenger PPE, load carrying capacities, passenger capacity, cargo security, maintenance of vehicle manufacturer installed safety equipment, and vehicle maintenance program requirements.

(2) A driver qualification and training program to include licensing procedures.

(3) Established operational work areas to limit the travel of specialty vehicles that are routinely used in garrison areas. An operational work area is that area in which a specialty vehicle can travel that is not on a public or installation roadway. Specialty vehicles will not be driven on installation or public roadways except to cross the roadway. A road guard will be used when crossing roadways at locations other than intersections.

9-5 Marching Units and Physical Training

a. The total fitness of our fighting force is essential, but needlessly exposing troops to preventable risks of injury is unacceptable.

b. IAW Fort Bliss Standing Order 11 (currently under revision), individual and formation runs are not authorized anywhere inside the fence surrounding the Biggs Army Airfield.

c. To support marching units and PT programs within Fort Bliss, the following applies to all formations:

(1) Prior coordination with DIV G3 (744-6841) is required for all battalion-sized or larger unit/formation runs.

(2) Commanders will ensure that personnel wear a reflective vest, reflective belt, or other approved reflective material. Commanders will ensure uniformity of the type and wear of reflective material within their formations. Road guards will use flashlights

during times of limited visibility.

(3) Formations will utilize the right side of roadways in the direction of traffic and will not be more than three abreast, nor take more than one lane of a roadway to include the formation commander.

(4) Formation runs will not be conducted on public roads outside Fort Bliss.

(5) Vehicles approaching an oncoming formation will stop until directed to continue by the road guards or formation commander. Passing speed is a maximum of 10 MPH.

(6) Vehicles approaching battalion-sized formations from the rear will not pass the formations, but may continue to follow. It is incumbent upon the commander of the last unit in battalion formations to ensure this action. Vehicles may pass company-sized or smaller formations only at the direction of the road guards or formation commander.

(7) Small unit formations that close on a battalion formation may continue to run behind the battalion, but will not pass.

(8) Small unit formations may pass similar size units only after directed to do so by the road guards or formation commander of the formation to be passed.

(9) Designate individuals, other than the road guards, for straggler control to check on personnel that drop out for potential injuries and to ensure accountability.

9-6 Individual Physical Training

a. See AR 385-10, AR 670-1, Fort Bliss Regulation 190-5, Fort Bliss Standing Order 11 and FM 7-22.

b. Serious accident potential exists when joggers/walkers compete with motor vehicles for space on the roads. To prevent accidents, joggers/walkers will use the sidewalk if available and will face traffic when using roadways. When in groups stay in single file in the designated lanes.

c. During hours of darkness or reduced visibility, joggers will wear a reflective vest, reflective belt or other approved reflective material while on a public roadway, street, bicycle path or any other right-of-way.

d. The use of headphones/earphones while jogging/walking is prohibited.

e. Use crosswalks when crossing roads. However, yield the right-of-way to vehicular traffic when crossing a roadway other than within a marked crosswalk. Challenging or obstructing vehicular traffic is prohibited.

f. Obey applicable instructions of traffic control devices including stop signs unless directed otherwise by law enforcement personnel.

9-7 Prevention of Personal Injuries

a. Commanders and Managers will take specific actions to prevent personal injuries.

b. Pre-plan work activities and obtain proper equipment before assigning the task.

c. Identify areas within workplaces, such as maintenance areas, where there is a potential for oil/grease leaks.

d. Enforce dismount procedures to prevent injuries caused by troops jumping from the rear of AMV/ACV.

e. Inspect workplaces for physical features that may cause slips/falls. Correct, color code or request repair as appropriate.

9-8 Personal Protective Equipment (PPE)

a. Commanders/Directors at all levels will have qualified safety and health personnel evaluate workplaces, operating procedures, and hazardous material to determine work hazards and health risks. Organizational SOPs will include any exposure restrictions or requirements for PPE noted in this evaluation.

b. Mark each work area or health risk with potential hazard sign to warn personnel and indicate PPE requirements.

c. Train personnel how to properly select, use, inspect, and care for PPE.

d. Establish a PPE maintenance program for all recoverable equipment. This will include cleaning, disinfecting, replacing unserviceable parts, periodic inspection by qualified persons, and proper storage to protect against environmental conditions that might contaminate the PPE or lessen its effectiveness.

e. Ensure that PPE selected is inspected for proper fit and operation at the time of issue to the employee.

f. Comply with the prescribed use of the PPE. In the case of noncompliance, management will initiate the necessary corrective action to ensure compliance.

9-9 Operation of Bicycle and Recreational Vehicles

a. See AR 385-10 and Fort Bliss Regulation 190-5.

b. Bicycles and recreational play vehicles (inline skates, roller skates, scooters, skateboards, etc.) will be operated in a safe, responsible manner on Fort Bliss.

c. All Soldiers, DoD Civilians, Contractors and Family members who operate or intend to operate bicycles or recreational vehicles within Fort Bliss purview will adhere to the same guidelines.

d. Traffic laws apply to persons riding bicycles. Bicyclists riding on a roadway are granted rights and are subject to traffic laws applicable to operators and drivers of any other type vehicle.

e. Bicyclists will ride as near to the right side of the roadway as practical and will exercise due care when passing a stationary vehicle or one proceeding in the same direction.

f. Bicycle helmets approved by the Consumer Product Safety Commission will be worn by all personnel, including Family members, who ride bicycles on Army installations. Previously purchased bicycle helmets certified by the American Society for Testing and Materials may also be worn. When purchasing a new helmet, riders should look for the Consumer Product Safety Commission certification.

g. The helmet will be worn level on the head with the strap properly fastened under the chin. Reflective vest or reflective belt will be clearly visible (e.g. not covered/obstructed by anything such as a backpack), at all times. Elbow/knee pads and gloves are highly recommended when riding on a recreational vehicle.

h. Bicycles used during hours of darkness or limited visibility must be equipped with a front light and rear light. The front lamp must emit a white light visible at least 500 feet (150 meters) to the front. A rear lamp must emit a red light visible from 100 feet (30 meters).

i. Wearing headphones, earphones, or other listening devices while bicycling on or

adjacent to roadways on DOD installations is prohibited.

j. Bicyclists will not ride other than on or astride a permanent and regular seat. Bicycles will not be used to carry more persons at one time than the number for which they are designed and equipped.

k. Bicyclists will not carry any package, bundle, or article when transporting the article prevents the operator from keeping both hands free to control the bicycle and to give signals.

l. Recreational vehicles are not authorized on roadways or inside buildings and school areas. Stunts, acrobatics or jumping while on a recreational vehicle is not authorized except in the MWR Skate Park.

m. Unit leadership, Military Police, Contract Security Guards and the Fort Bliss community will assist in the enforcement of these requirements.

Chapter 10
Safety Training

10-1 Safety Training

a. Commanders Safety Course (CSC). Commanders, Command Sergeants Major and First Sergeants are required to complete the Commanders Safety Course (CSC). The CSC provides unit Commander, CSM and 1SG the tools to manage their unit safety programs effectively and to incorporate RM 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 Center, online. All Commanders, CSM and 1SG are required to complete prior to attending the Fort Bliss Pre-Command Course. The USACR/SC is the course proponent for the CSC. A copy of training will be retained in the training file.

b. Additional Duty Safety Officers (ADSO) Course. ADSOs and NCO's appointed IAW AR 385-10, Para 2-7g are required to complete the online ADSO Course. Civilian directorates will appoint a Collateral Duty Safety Officer (CDSO) (Army civilian) IAW AR 385-10, ADSO/CDSO personnel will:

(1) Be appointed by commander on written orders.

(2) ADSO will be a commissioned officer at battalion and higher command levels, and be in the rank of staff sergeant or higher at the company level. Directorates will appoint a GS-9 or higher as CDSO.

(3) Have one year or more retainability upon duty appointment.

(4) Give their safety duties proper priority.

(5) Report directly to their Commander/Director on safety–related matters.

(6) Coordinate activities with their Unit or Garrison Safety Office.

(7) Be authorized use of official time for participating in safety and occupational health activities, including application of mishap risk management component of RM, walk around inspections, and other safety functions authorized by AR 385-10 in support of their unit's mission.

10-2 Safety Briefings/Training

a. 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.

b. 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.

c. All newly employed Fort Bliss DA civilians will be given a safety briefing by the GSO during the New Employee Orientation Class. This training will inform employees of the Garrison safety program requirements. It will emphasize their rights and responsibilities.

d. Newly arriving Soldiers under the age of 26 years old will receive an initial safety brief from the 1AD Safety Office during in-processing which covers general safety issues and local hazards.

e. Military personnel who are appointed as Additional Duty Safety Officers per AR 385-10, will take the on-line ADSO Course and attend the local Additional Duty Safety Officers Course prior to assuming duties.

f. Civilian personnel will take the on-line CDSO course prior to assuming duties.

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, Garrison 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 identification of seasonal hazards associated with:

(1) Holiday driving.
(2) Recreational activities.
(3) Fatigue.
(4) The effects of alcohol or other drugs.
(5) The effects of prescription medication and over-the-counter drugs.
(6) The effects of severe weather.

10-3 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. Battalions can enroll on the CRC Safety homepage.

b. Additional Duty and Collateral Safety Officer- ADSO personnel from company through brigade level. The ADSO course establishes the Army standard for trained and qualified additional duty safety personnel. The on-line course will require approximately 16 hours to complete. Additional duty safety personnel on active duty are required to complete the on-line ADSO and local resident ADSO course prior to appointment to ADSO duties. Collateral Duty Safety Officers (Civilian) will complete the on-line Collateral Duty Safety Officers Course. Soldiers and Civilians can enroll by logging into the CRC Safety homepage website.

c. Accident Avoidance Course (AAC). Anyone who operates an Army Motor Vehicle to include GSA and rental vehicles will have completed the online accident avoidance course as part of licensing procedures. The training includes mishap risk management component of RM, personal responsibility, driving hazard awareness, defensive driving techniques, accident avoidance, and motorcycle safety. The online accident avoidance training will be repeated every four 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 log into the CRC Safety website to enroll.

d. Risk Management (RM) Basic Course. Completion of the RM Basic Course must be completed by all Soldiers and Army civilian employees.

(1) RM Operational Course (on-line) (designed for SSG/SFC, CW3/4, CPT/MAJ and others who integrate RM into Military Decision making Process).

(2) RM Basic Course for Army civilian employees (online).

(Note: All above courses are available on-line via CRC Safety website. 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.

e. Intermediate Driver Training Course. All newly assigned Soldiers less than 26 years of age will receive intermediate traffic safety training that reinforces the initial traffic safety–training course. Garrison 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://imc.army.mil/airs/.

f. Basic/Advanced and Sport Motorcycle Safety Courses. Required for all Soldiers that ride motorcycles on/off the installation, on/off duty. Commanders will authorize Soldiers to attend this course during duty hours.

(1) Motorcycle riders training. Soldiers are required to complete Basic Motorcycle Riders Course prior to riding a motorcycle and the Experienced or Sports rider course within one year of completing the basic course.

(2) Sustainment training within 5 years of completing an ERC/BRC–II or MSRC/ARC which consists of, at a minimum, retaking an ERC/BRC–II or MSRC/ARC. A Soldier can meet the sustainment training requirement, at no expense to the Government, by taking an Army-approved advanced level MC course. A list of courses

meeting the criteria is located on the USACR/Safety Center Web site (https://safety.army.mil).

g. Driver improvement/remedial drivers training. To reinforce positive driving behaviors Commanders:

(1) Will require the driver improvement course to military or civilian personnel who, while operating a Government motor vehicle, have been convicted of a moving traffic violation, or have been determined to be at fault in a traffic mishap.

(2) Will require personnel as described in paragraph (1) inside or outside normal duty hours, to attend the courses or lose installation driving privileges. State-approved driver improvement programs may be used to fulfill the requirement where an Army standardized course is not provided.

(3) May refer Soldiers to attend remedial drivers training due to high risk driving activity. Examples of high risk driving activities may include:

(a) Warning traffic citation(s) for moving and nonmoving infraction(s);
(b) Letter(s) of counseling or reprimand for driving; or
(c) Confirmed witness statements of driving infraction(s).

Chapter 11
Occupational Safety and Health Program (Workplace Safety)

Chapter 11A
Hazard Communication/Globally Harmonized System (HAZCOM/GHS) Program

11A-1 General

a. This chapter establishes the Fort Bliss Hazard Communication Program in compliance with OSHA Hazard Communication Standard (HCS), 29 Code Federal Regulation (CFR) 1910.1200. It provides for:

(1) Safe handling and use of hazardous chemicals.

(2) Identification of operations and activities where hazardous chemicals are used or stored.

(3) Labeling of hazardous chemicals or materials.

(4) Safe storage and disposition of hazardous chemicals.

(5) Acquisition, accessibility, and review of Safety Data Sheets (SDS).

(6) Training personnel on the requirements of the HCS and safe handling and use of hazardous chemicals.

b. The term Material Safety Data Sheet (MSDS), although still in limited use, has been replaced by Safety Data Sheet (SDS). The SDS provides information to the user pertaining to the hazards of a substance. Included are identification, hazard(s) identification, composition, information on ingredients, first-aid measures, fire-fighting measures, accidental release measures, handling and storage, exposure controls/personal protection, physical and chemical properties, stability and reactivity, toxicological information, ecological information, disposal considerations, regulatory information, and other information, including date of preparation or last revision.

11A-2 Responsibilities

a. The Garrison Safety Office (GSO):

(1) Provide oversight for the Garrison Hazard Communication Program.

(2) Validate hazardous chemicals/materials and personnel that should be covered by the program based upon evaluations made during annual facility inspections.

(3) Coordinate with Hazardous Materials Management Program (HMMP)-DPW, Preventative Medicine Services (PMS) Clinic, Directorate of Emergency Services (DES), and Logistics Readiness Center (LRC) to provide assistance to units/activities as needed.

(4) Validate LRC is maintaining a centralized SDS library for the installation which is cross-referenced by the Centralized Hazardous Chemical Inventory (CHCI) to ensure units/activities are provided the guidance to obtain a required SDS.

(5) Coordinate the DOD Federal Hazard Communication "Train the Trainer" Course for the personnel designated by their commanders/directors to provide unit/activity level training. Course materials may also be used as a complete self-study training program for satellite activities and incoming personnel.

(6) Provide assistance to Commanders, Directors, and Activity Chiefs in developing their hazardous chemical SOPs as needed.

b. PMS Clinic:

(1) Complete and revise the Health Hazard Information Module (HHIM) as provided by AR 40-5.

(2) Evaluate health aspects of hazardous chemicals in use by units/activities during periodic surveys.

(3) Provide guidance to personnel regarding specific chemical hazards, protective equipment, work practices, and engineering controls.

(4) Conduct workplace air samples when needed to determine whether or not installation of mechanical ventilation systems, issuance of respirators to personnel, or substitution of chemicals is warranted.

(5) Perform health screenings of personnel routinely exposed to hazardous chemicals/materials at their workplace.

(6) Provide assistance to Commanders, Directors, and Activity Chiefs in developing their hazardous chemical SOPs as needed.

c. Mission Installation Contracting Command (MICC):

(1) Insert FAR Clause 52.223-3 in all solicitations and contracts for local purchase of nonstandard hazardous material items.

(2) Include in all service/construction contracts a requirement that contractors provide the Hazardous Materials Control Center (HMCC) an inventory of all chemicals to be used, MSDS/SDSs and their storage location prior to beginning work.

(3) Inform service/construction contractors of any possible chemical hazards to which their employees may be exposed while working on the installation.

(4) Follow all requirements of the Hazardous Materials Management Program.

d. Directorate of Emergency Services (DES) receives calls concerning chemical accidents/spills and forward calls to Fire Department to respond. DES will:

(1) Respond to emergencies.

(2) Act as accident scene coordinator for all chemical accident/spills.

(3) Ensure DES emergency response personnel receive ongoing training in chemical accident/spill response and have proper Personal Protective Equipment.

e. Directorate of Public Works-Environmental (DPW-E):

(1) Be proponent for the Fort Bliss Oil and Hazardous Substance (OHS) Spill Prevention and Response Plan and the (HMMP-DPW/DPW-E) program.

(2) Ensure the plans are updated as necessary.

(3) Evaluate environmental aspects of hazardous chemicals in use by units/activities during periodic HMMP-DPW/DPW-E surveys and provide feedback to the units/tenant regarding problems or deficiencies noted.

(4) Provide guidance to chemical users concerning methods of spill control.

(5) Assist units/activities regarding proper procedures for disposal of hazardous waste through the HMCC.

(6) Provide assistance to commanders, directors, and activity chiefs in developing their hazardous chemical SOPs as needed.

f. Logistics Readiness Center (LRC):

(1) Request inventories of the hazardous chemicals in stock, on procurement and currently in use as required for the unit/activities, and assist the Hazardous Chemicals Control Center (HCCC) to maintain a Centralized Hazardous Chemical Inventory (CHCI). Inventory data shall include building, chemical name, MSDS/SDS, quantity, national stock number (NSN), manufacturer, inspection date and POC.

(2) Maintain a centralized MSDS/SDS library for the installation, which is cross-referenced by the Centralized Hazardous Chemical Inventory (CHCI) and ensure units/activities are provided the guidance to obtain a required MSDS/SDS.

g. Commanders, Directors, and Managers:

(1) Develop SOPs which address policies and procedures for training, use, handling, disposal, and protective clothing and equipment requirements for hazardous chemicals and ensure supervisory and subordinate personnel adhere to them.

(2) Maintain an inventory of all hazardous chemicals used and/or stored within their areas of responsibility and ensure the inventory is cross referenced by SDSs. The inventory will be updated as necessary (whenever a new hazardous chemical is added to the work area/process or a hazardous chemical is removed from the work area or process) and a copy of the inventory will be provided to the HMMP-DPW/DPW-E, HMMC-LRC, and Garrison Safety Office quarterly or as new MSDSs/SDSs are received.

(3) Ensure supervisory personnel make available to all personnel of each work shift for reference and review, copies of the Garrison Hazard Communication Program, unit/activity hazardous chemical SOP, spill contingency plan, chemical inventory, and SDSs.

(4) Ensure supervisory personnel provide safety orientation training to incoming personnel and to all personnel when a new chemical is added. Training will also include an explanation of hazards associated with chemicals in unlabeled containers.

(5) Screen all requests for materials generated by their organization to ensure only necessary materials are ordered and minimal quantities of materials are kept on hand in accordance with the HMMP-DPW and HCCC-LRC.

(6) Ensure all personnel working with or potentially exposed to hazardous chemicals in their work environments receive training on the HCS and safe handling and use of hazardous chemicals. Additional training will be provided for affected personnel whenever a new hazard is introduced into their workplace. The HCS required training will be documented on the employees Job Hazard Analysis (JHA). The JHA will be maintained in the employee's official personnel folder. The Garrison Safety Office, PMS Clinic, HMMP-DPW, and HCCC-LRC will provide assistance to units/activities conducting hazardous chemical training as needed. Training will emphasize the following elements:

(a) A summary of the standard and this written program.

(b) Hazardous chemical properties including visual appearance and order, and methods which can be used to detect the presence or release of hazardous chemicals.

(c) Physical and health hazards associated with the potential exposure to the workplace chemicals.

(d) Procedures to protect against hazards, e.g., personal protective equipment, work practices, and emergency procedures.

(e) Hazardous chemical leak and spill procedures.

(f) Where MSDSs/SDSs are located, how to understand their content, and how employees may obtain and use appropriate hazard information.

(7) Ensure that hazardous chemicals are properly labeled. Labels will list the chemical identity, appropriate hazard warning and name and address of the manufacturer, importer, or other responsible party. The MSDS/SDS should be referenced to verify label information. Items received with commercial labels which meet hazard communication standards will not be relabeled. Warning information, whether provided by the manufacturer or locally produced, will not be defaced or removed from a container of hazardous chemicals.

(8) Abide by all requirements of the Hazardous Materials Management Program.

h. Employees:

(1) Adhere to all applicable SOPs, directives, and regulations regarding the safe handling and use of hazardous chemicals.

(2) Use available engineering controls and protective clothing and equipment to eliminate or protect against hazards of the workplace and maintain protective clothing and equipment in good repair.

(3) Report for health screenings and tests as required.

(4) Attend training sessions, as directed, in order to become informed of the hazards associated with the materials being used or handled in the workplace.

(5) Ensure they know the location of SDSs and review all SDSs within their assigned working area at least monthly or as new SDSs are posted.

(6) Wear proper PPE if required by the situation or as identified in their JHA.

11A-3 GHS Requirements

a. The Globally Harmonized System of Classification and Labeling of Chemicals, like other hazard communication systems, has two basic requirements: (1) Decide if the

chemical product produced and/or supplied is hazardous, and (2) Prepare a label and/or Safety Data Sheet (SDS) as appropriate.

b. The US will incorporate GHS through OSHA's Hazard Communication standard, 29 CFR 1910.1200.

c. By June 1, 2016, all Army organizations will be required to have integrated GHS into their existing Hazard Communication program and must have:

(1) Completed transition to new workplace labeling,

(2) Made sure SDSs are available on every chemical and have replaced all existing MSDS sheets, and

(3) Have provided additional employee training for newly identified physical or health hazards.

d. How does GHS change Hazard Communication at my Garrison?

(1) "Hazard Classification" rather than "hazard determination"

(2) "Safety data sheet" (rather than "material safety data sheet") uses a 16-section format, and

(3) Labels are more defined with specific requirements.

e. The three GHS categories of hazards are:

(1) Physical: explosives, flammable gases, flammable aerosols, oxidizing gases, gases under pressure, flammable liquids, flammable solids, self-reactive substances, and pyrophoric liquids.

(2) Health: pyrophoric solids, self-heating substances, substances which, in contact with water, emit flammable gases, oxidizing liquids, oxidizing solids, organic peroxides, corrosive to metals.

(3) Environmental (non-mandatory): acute toxicity, skin corrosion/irritation, serious eye damage/eye irritation, respiratory or skin sensitization, germ cell mutagenicity, carcinogenicity, reproductive toxicity, target organ systemic toxicity (single or repeated exposure), aspiration toxicity.

f. The standardized label elements included in the GHS are:

(1) Signal Words: Words such as "Danger" or "Warning". Used to emphasize hazards and indicate relative level of severity of the hazard assigned to a GHS hazard class and category.

(2) Hazard Statements: Include appropriate statement for each GHS hazard on labels for products possessing more than one hazard. Examples of required hazard statements: "Keep away from fire, sparks and heated surfaces", "Do not use in areas without adequate ventilation", "Use CO2, dry chemical, or foam" (for fighting fires), "Wear safety goggles and gloves".

(3) Symbols (hazard pictograms): Have been standardized to convey health, physical and environmental hazard information, assigned to a GHS hazard class and category. For a description of the nine standard pictograms refer to Annex E of this regulation. Also included in this annex are the common transport pictograms used on shipping containers and shipping documents.

11A-4 References

a. 29 CFR 1910.1200

b. The Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Chapter 11B
Confined Space Entry Program

11B-1 General

a. There are confined spaces in industrial workplaces, many of which pose unique problems due to their contents and/or configuration. Some spaces pose entrapment hazards for entrants, while others restrict air circulation so that hazardous atmospheres may accumulate quickly. Confinement itself can increase the risk of injury or death by making employees work closer to hazards than they would otherwise.

b. This document and OSHA standard 29 CFR 1910.146 provides minimum safety requirements to be followed while entering, exiting, and working in confined spaces.

c. Also refer to Chapter 11C, Respiratory Protection, Chapter 11E, Hazardous Energy Control Lockout/Tagout, Chapter 11H, Safety Marking and Signage, and Chapter 11K, Fall Protection when working in confined spaces.

d. Confined space permits will be obtained from the Fort Bliss Garrison Safety Office, Building 4 Slater Road, Fort Bliss, Texas, 79916. No one will enter a "Permit Required Confined Space" without an approved permit.

11B-2 Definitions

a. Asphyxiation. Suffocation; paralyzed muscles which control breathing; person loses consciousness or dies because he/she cannot breathe.

b. Atmosphere. Refers to the gases, vapors, mists, fumes, and dusts within a confined space.

c. Attendant. An individual stationed outside one or more permit spaces who monitors the authorized entrants and who performs all attendant's duties assigned in the confined space entry permit program.

d. Authorized entrant. An employee who is authorized by the supervisor to enter a permit space.

e. Ceiling Level. The maximum airborne concentration of a toxic agent to which an employee may be exposed for a specified period of time.

f. Combustible Dust. A dust capable of undergoing combustion or burning when subjected to a source of ignition.

g. Confined Space. A space which, by design, has limited openings for entry and exit; unfavorable natural ventilation which could contain or produce dangerous air contaminants and which is not intended for continuous employee occupancy. Confined spaces include but are not limited to storage tanks, compartments of ships, process vessels, pits, silos, vats, degreasers, reaction vessels, boilers, ventilation and exhaust ducts, sewers, tunnels, underground utility vaults, and pipelines.

h. Corrosive. Capable of being eaten away gradually, especially by chemical action.

i. Entry. The action by which a person passes through an opening into a permit-required confined space. Entry includes work activities in that space and is considered to have occurred as soon as "any part" of the entrant's body breaks the plane of an opening into the space.

j. Entry Supervisor. The person (such as the supervisor, foreman, or crew chief) responsible for determining if acceptable entry conditions are present at a permit space where entry is planned for authorizing entry and overseeing entry operations and for termination entry.

k. Explosion-proof. Apparatus enclosed in a case capable of withstanding an explosion which may occur within it and of preventing the ignition of a gas or vapor surrounding the enclosure by sparks, flashes, or explosion and which operates at such an external temperature that a surrounding flammable atmosphere will not be ignited.

l. Gas. The fluid form of a substance which can expand indefinitely and completely to fill its container. A form that is neither liquid nor solid.

m. Hot Work. Any work involving burning, welding, riveting, or similar fire producing operations, as well as work which produces a source of ignition such as drilling, abrasive blasting, and space heating.

n. Hydrocarbons. Any of a class of compounds containing only hydrogen and carbon as methane, ethylene, benzene, or acetylene.

o. Hydrogen Sulfide. A colorless gas which smells like rotten eggs. Dulls the sense of smell quickly; person may not be aware that he is breathing toxic concentrations. Frequently found in oil refining industry, sewage treatment, or wherever organic matter containing sulfur decomposes.

p. Immediately Dangerous to Life or Health (IDLH). Any condition which poses an immediate threat of loss of life; may result in irreversible or immediate severe health effects; may result in eye damage; irritation or other conditions which could impair escape from the permit space.

q. Inerting. Displacement of the atmosphere by a non-reactive gas (such as nitrogen) to such an extent that the resulting atmosphere is noncombustible.

r. Irritant. Any substance that will induce a local inflammatory reaction on immediate, prolonged, or repeated contact with living tissue.

s. Isolation. A process whereby the confined space is removed from service and completely protected against the inadvertent release of material by the following: blanking off (skillet type metal blank between flanges), misaligning sections of all lines and pipes, a double block and bleed system, electrical lockout of all sources of power, and blocking or disconnecting all mechanical linkages.

t. Lower Explosive Limit (LEL). The minimum concentration of a combustible gas or vapor in air (usually expressed in percent by volume at sea level), which will ignite if an ignition source (sufficient ignition energy) is present.

u. Non-Permit Confined Space. A confined space that does not contain or, with respect to atmospheric hazards, have the potential to contain any hazard capable of causing death or serious physical harm.

v. Oxygen Deficiency. Refers to an atmosphere with a partial pressure of oxygen.

w. Oxygen Enriched Atmosphere. Any oxygen concentration greater than 25 percent at normal atmospheric pressure.

x. Permissible Exposure Limit (PEL). The maximum 8-hour time weighted average of any airborne contaminant to which an employee may be exposed. At no time shall the exposure level exceed the ceiling concentration for that contaminant as listed in 29 CFR 1910 Sub Part Z.

y. Permit-Required Confined Space. A confined space that has one or more of the following characteristics:

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

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

(3) Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross section.

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

z. Purging. The method by which gases, vapors, or other airborne impurities are displaced from a confined space.

aa. Respirator (Approved). A device which has met the requirements of 30 CFR Part II and is designed to protect the wearer from inhalation of harmful atmospheres and has been approved by the Bureau of Mines and the National Institute for Occupational Safety and Health and Mine Safety and Health Administration.

11B-3 Responsibilities

a. Garrison Safety Office will:

(1) Establish and administer a comprehensive confined space entry program.

(2) In coordination with Directorate of Public Works (DPW), identify areas on the installation which are considered to be confined spaces.

(3) Maintain a list with DPW-GIS of confined spaces on Fort Bliss.

(4) Identify permit-required confined spaces described in paragraph 11B-2.

(5) Maintain a file of entry supervisors appointed by the directorate or activities and their certification of training.

(6) Provide guidance to supervisors/entry supervisors in the preparation of SOPs on confined space entry.

(7) Review directorate/activity SOPs as applicable prepared for confined space entry before they are published.

(8) Conduct on-the-spot evaluations of confined space entry operations and permits periodically to ensure compliance.

(9) Determine if workers assigned to enter confined spaces are physically able to perform their duties.

(10) Review medical surveillance documentation on employees required to enter permit-required confined spaces at least annually.

b. Civilian Personnel Advisory Center: Refer personnel being considered for employment who may be required to enter confined spaces to the Occupational Health Clinic for preplacement physical examinations.

c. Fire Department Fort Bliss:

(1) Perform entry rescue/practice annually on Fort Bliss during schedule drills.

(2) Receive notification from the agency or performance contractor of any scheduled or emergency permit-required confined space entry operations before entry is made.

d. Directors/Commanders/contractors with employees who may be required to enter confined spaces will:

(1) Appoint, in writing, entry supervisors and submit appointment orders to the Garrison Safety Office.

(2) Ensure the number of entry supervisors appointed is sufficient to meet operation needs.

(3) Train entry supervisors on confined space entry procedures and the proper selection, issue, calibration, maintenance, and care of instruments required to perform such duties.

(4) Provide entry supervisors with proper monitoring equipment.

(5) Ensure employees are supplied with required personal protective clothing and equipment (PPE), and training on its use, to safely enter confined spaces.

(6) Notify the Fort Bliss Fire Department prior to permit-required confined space entry, and immediately following completion of permit-required confined space exit procedures.

(7) Provide the Garrison Safety Office a copy of entry permit after shift is completed and maintain a copy of entry permit for at least 1 year.

e. Supervisors will:

(1) Be familiar with the provisions of this program as they relate to personnel or operations under their control.

(2) Explain to all personnel under their immediate supervision the nature of the hazards with the operations and the precautions necessary to control such hazards.

(3) Ensure personnel entering confined spaces are properly trained prior to entering confined space.

(4) Strictly enforce safety and health guidelines for confined space operations.

(5) Take prompt action to correct and report any unsafe acts, conditions, or procedures and, where warranted by such conditions, cease operation until corrective actions are taken.

(6) Ensure proper PPE requirements are in job descriptions and that employees are clean-shaven for the wear of respirators.

(7) Allow only trained entry supervisors, attendants and entrants to do permit-required confined space work.

f. Entry Supervisors will:

(1) Be appointed in writing with a copy furnished to the Garrison Safety Office.

(2) Be trained IAW paragraph 11B-3 e.

(3) Approve or disapprove routine entry into permit-required confined spaces.

(4) Ensure training certification is made part of their personnel folders.

(5) Test confined space with properly calibrated testing equipment prior to entry.

(6) Complete and sign the confined space entry permit IAW paragraph 11B-4 of this document before allowing entry.

(7) Ensure sufficient personnel are present for operation.

(8) Ensure required PPE is worn and in good condition.

(9) Ensure precautions are taken to prevent dangerous air contamination.

g. Attendants will:

(1) Know the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure.

(2) Continuously maintains an accurate count of authorized entrants.

(3) Remain outside during entry operations until relieved by another attendant.

(4) Communicate with authorized entrants.

(5) Monitor activities inside and outside permit space and take appropriate action if unsafe condition/act occurs or is about to occur.

(6) Summon rescue and other emergency services as soon as assistance is needed to rescue entrant.

(7) Perform non-entry rescues.

(8) Perform no duties that interfere with the primary duty to monitor and protect the authorized entrants.

(9) Continuously monitor confined space atmosphere.

h. Authorized Entrants will:

(1) Know the hazards that may be faced during entry, including information on the mode, signs, or symptoms, and consequences on the exposure.

(2) Communicate with the attendant.

(3) Wear a personal monitor or be monitored by a device adjacent to the entrant.

(4) Properly use required equipment.

(5) Alert the attendant whenever he or she:

(a) Recognizes any warning sign or symptom of danger.

(b) Detects a prohibited condition.

(6) Exit from the permit space as quickly as possible whenever:

(a) Attendant or entry supervisor orders evacuation.

(b) Recognizes any warning sign or symptom of danger.

(c) Detects a prohibited condition.

(d) An alarm activates.

11B-4 Permit-required Confined Space

a. The permit-required confined spaces have been identified on Fort Bliss. These areas include:

(1) Manholes (electrical, water & sewage) and (telephone cable lines) not exempt by 29 CFR 1910).

(2) Steam pits.

(3) Crawl spaces.

(4) Tankers/carriers.

(5) Vessels.

(6) Underground vaults.

(7) Boilers.

b. Entry into a permit-required confined space shall be by permit only using the Fort Bliss Confined Space Entry Permit, paragraph 11B-12. The permit is an authorization and approval in writing that specifies the location and type of work to be done and

certifies that all existing hazards have been evaluated by the entry supervisor and necessary protective measures have been taken to ensure the safety of each worker.

c. The entry supervisor will be responsible for completing the permit and will sign off when the following areas and actions have been reviewed and confirmed:

(1) Location and description of the work to be done.
  (a) Provide adequate barriers/shields.
  (b) Perform testing and monitoring.
(2) Hazards that may be encountered.
(3) Complete isolation checklist.
  (a) Blanking and /or disconnecting.
  (b) Electrical lockout.
  (c) Hazardous energy lockout/tagout procedures.
(4) Special clothing and equipment.
  (a) Personal protective equipment and clothing.
  (b) Safety harness and/or lines.
  (c) Tools, approved electrical and lighting equipment, for use in accordance with the Hazardous Location Certification IAW the National Electrical Code (NEC-1990).
  (d) Ventilating equipment.
  (e) Communication equipment.
  (f) Any other equipment necessary for safe entry and rescue.
  (g) Retrieval mechanical device.
(5) Atmospheric test monitors.
  (a) Oxygen level.
  (b) Flammability and/or explosive levels.
  (c) Toxic substance levels.
(6) Atmospheric monitoring while work is being performed.
(7) Personnel training and complete understanding of the hazards.
(8) Attendant(s) as named on the permit.
(9) Rescue and emergency equipment and procedures.
(10) Evaluate permit-required conditions prior to entry.
  (a) Document the readings.
  (b) Sign the permit before entering.
  (c) Made available to all authorized entrants, by posting it at the entrance so that notification of pre-entry preparation has been completed.

d. Permit-required confined space shall carry expiration time and date valid for one shift only and shall be updated for each shift. The entry supervisor authorizes entry and cancels the permit. Retain each cancelled entry permit for at least 1 year.

e. Contractors: Non-permit confined space entry requires supporting documentation showing that continuous forced air ventilation alone is sufficient to maintain the space safe for entry. Develop monitoring and inspection data that support a non-hazardous condition. Updated annually as long as there is no change during the atmosphere testing.

11B-5 Medical

a. Workers who enter a permit-required confined space shall have a pre-placement physical examination. The supervisor shall provide the physician performing or responsible for the medical surveillance program information such as the type of confined space the employee may be required to enter, substances the employee may encounter, and a description of protective devices or equipment the employee may be required to use. The physical examination shall include:

(1) A demonstration of the worker's ability to use negative and positive pressure respirators as cited in 29 CFR 1910.134.

(2) A demonstration of the worker's ability to see and hear warnings, such as flashing lights, buzzers or sirens.

b. Following completion of the examinations, the physician shall approve or disapprove the employee for confined space work.

c. Periodic medical examinations shall be made available to employees required to work in permit-required confined spaces at least annually.

11B-6 Emergency and Rescue Services

a. The authorized entrant shall wear a full body harness or a chest belt attached to a retrieval lifeline except if it creates a greater hazard. If the exit opening is less than 18 inches (45 cm) in diameter, a wristlet harness shall be used.

b. Attendant will only perform non-entry rescues. Rescue procedures shall be specifically designed for each entry. There shall be a trained attendant assigned to that confined space and properly trained with the operation of the rescue retrieval system. Under no circumstances will the attendant enter the confined space. However, while awaiting rescue services, the attendant will make rescue attempts using the retrieval system.

c. The Fort Bliss Fire Department is the authorized rescue service to enter permit spaces to perform rescue services on Fort Bliss and its training areas. The emergency telephone number is (915) 744-2115/1283/9345. Do not call 9-1-1.

11B-7 Training

a. Personnel working in the vicinity of confined spaces shall be made aware of the hazards. Personnel required to work in a confined space, or in support of those working in a confined space shall have additional training as follows:

(1) Emergency entry and exit procedures.

(2) Use of applicable respirators.

(3) First aid.

(4) Lockout procedures.

(5) Safety equipment use.

(6) Initial and annual rescue and training drills designed to maintain proficiency or at lesser intervals as determined necessary.

(7) New or revised procedures.

(8) Permit system.

b. Training shall not be considered complete until the employee has attained an acceptable degree of proficiency for entering and working in confined spaces. The trainee's judgment of the adequacy of his training should be properly considered.

c. The supervisor shall certify the employees training. Documentation of employee's name, signatures or initials of the trainers and the dates of training. Ensure copies are sent to the Garrison Safety Office, included in the official personnel file and workplace training file.

11B-8 Testing and Monitoring

a. Monitoring of the atmosphere shall be performed in accordance with the permit. Equipment for continuous monitoring of gases and vapors shall be explosion-proof and equipped with an audible alarm or danger-signaling device that will alert employees when a hazardous condition develops. Instruments used for testing the atmosphere in a confined space shall be selected for their functional ability to measure hazardous concentrations. Instruments shall be calibrated in accordance with the manufacturer's guidelines or manuals. Each calibration shall be recorded, filed, and available for inspection for 1 year after the last calibration date.

b. The percentage of oxygen for entry into a confined space shall be no less than 19.5 percent or greater than 23.5 percent. If tests indicate the oxygen level to be greater than 23.5 percent, hot work is prohibited until ventilating techniques have reduced the oxygen level to approximately 21 percent. If the percentage of oxygen falls below 19.5, approved respiratory equipment shall be used.

c. When the contaminants in the atmosphere cannot be kept within permissible exposure levels as established in 29 CFR 1910 Subpart Z, the employee shall wear an approved respirator.

11B-9 Posting, Labeling and Barriers

a. To prevent unauthorized or inadvertent entries into confined spaces where work is in progress; such areas shall be posted, as warranted, until the operations have been completed. Refer to chapter 11H of this regulation for detailed explanation. These signs include the following information:

CAUTION
CONFINED SPACE WORK IN PROGRESS
DO NOT ENTER WITHOUT PROPER AUTHORIZATION
EMERGENCY NUMBER: (915) 744-2115/1283/9545

b. Entrances to confined spaces of permanent structures shall be posted as necessary. Signs shall include but not necessarily be limited to the following information:

DANGER
CONFINED SPACE
ENTRY BY PERMIT ONLY
EMERGENCY NUMBER: (915) 744-2115/1283/9545

c. When employees enter a confined space, a barricade shall be erected if inadvertent entry poses a problem. The barricade shall have a mechanism to prevent closure of the escape way, signs warning of the danger present, a physical barrier

(fence) to keep the area clear, and an adequate platform (3 feet x 3 feet as a minimum) for entry or exit. The attendant shall be responsible for maintenance of the barricade system.

11B-10 Personal Protective Equipment and Clothing

a. The entry permit includes a list of necessary protective equipment to be used in the confined space as determined by the entry supervisor.

b. Items normally used to protect against traumatic injury include: safety glasses, hardhats, footwear, and protective coveralls and respiratory protection as directed by the Confined Space Entry Permit (Paragraph 11B-12).

c. Other protective measures shall include:

(1) Safety nets used to protect employees working 10 feet (3m) above ground or grade level when other protective devices are impractical;

(2) Life jackets worn if workers are exposed to falls into liquid over 4 feet (1.2m) in depth;

(3) Insulated floor mats when hot work requires use of electrical energy.

11B-11 Work Practices

Before entering a confined space, employees shall review the specific guidelines appropriate for safe entry and emergency exit. These guidelines or standards shall be compiled by the entry supervisor and be definitive on all possible hazards. Areas covered by such guidelines shall follow this recommended standard. Personnel requesting entrance into a confined space will also review the "Confined Spaces" map, which can be provided by DPW before entering any confined space on Fort Bliss.

a. Purging and Ventilating

(1) Environmental control within a confined space is accomplished by purging and ventilating. The method used will be determine by the potential hazards that arise due to the product stored or produced, suspected contaminants, work to be performed, and the design of the confined space. When ventilating and/or purging operations are to be performed, the blower controls shall be at a safe distance from the confined space. In a permit-required confined space an audible warning device shall be installed in all equipment to signal when there is a ventilation failure. When a ventilation system is operational, airflow measurements shall be made before each work shift to ensure that a safe environmental level is maintained. Initial testing of the atmosphere shall be performed from outside the confined space before ventilation begins to determine necessary precautions in purging and ventilating. Testing of more remote regions within the confined space may be performed once the immediate area within the confined space has been made safe. Exhaust systems shall be designed to protect workers in the surrounding area from contaminated air. If flammable concentrations are present, all electrical equipment shall comply with the requirements of NEC (National Fire Protection Association No. 70) hazardous locations and bonding requirements of article 250, NEC. Where continuous ventilation is not part of the operating procedure, the atmosphere shall be tested until continuous acceptable levels of oxygen and contaminants are maintained for three tests at five-minute intervals. Care shall be taken to prevent recirculation of contaminated air and interaction of airborne contaminants.

(2) Continuous general ventilation shall be maintained where toxic atmospheres are produced as part of a work procedure such as welding, painting, or where a toxic atmosphere may develop due to the nature of the confined space; i.e., desorption from walls or evaporation of residual chemicals. General ventilation is an effective procedure for distributing contaminants from a local generation point throughout the workspace to obtain maximum dilution. However, special precautions shall be taken if the ventilating system partially blocks the exit opening. These precautions include a method for providing respirable air to each worker for the time necessary for exit and a method of maintaining communications.

(3) Local exhaust ventilation shall be provided when general ventilation is not effective due to restrictions in the confined space or when high concentrations of contaminants occur in the breathing zone of the worker. Local high concentrations of contaminants may occur during activities such as welding, painting, and chemical cleaning. The worker shall not be exposed to concentrations of contaminants in excess of those specified in 29 CFR 1910 Sub Part Z. Therefore, respiratory protection may be needed in addition to engineering controls. The use of respiratory protection will be determined by the entry supervisor. However, when fumes may be generated that contain highly toxic or other airborne metal contaminants, provisions of 29 CFR 1910.252 shall be observed. When freely moving exhaust hoods are used to provide control of fumes generated during welding, such hoods shall maintain a velocity of 100 feet per minute in the zone of the welding. The effective force of freely moving exhaust hoods is decreased by approximately 90 percent at a distance of one duct diameter from the plane of the exhaust opening. Therefore, to obtain maximum effectiveness, the welder shall reposition the exhaust hood as he changes welding locations to keep the hood in close proximity to the fume source.

(4) Special precautions shall be taken when outgassing or vaporization of toxic and/or flammable substances is likely. If the vapor-generating rate can be determined, the exhaust rate required can be calculated to dilute the atmosphere below the PEL and/or 10 percent of the Lower Flammable Limit (LFL), whichever is lower. This shall be the lowest acceptable ventilation rate. If the area of concern is relatively small, diffusion of the contaminants may be controlled by enclosure with a relatively low volume exhaust for control, or by exhaust hoods located as close as possible to the area of vaporization or outgassing. If the area to be ventilated is too extensive to be controlled by local exhaust, general ventilation procedures shall be used to control the contaminant level. When the problem of out-gassing is due to the application of protective coatings or paint, ventilation shall be continued until the buildup of a flammable and/or toxic atmosphere is no longer possible.

b. Isolation/Lockout/Tagging. Detailed explanation in chapter 11E this regulation.

(1) The isolation procedures shall be specific for each type of confined space. Safety equipment required during this procedure shall be designated by the entry supervisor and be dependent upon the potential hazards involved. A permit-required confined space shall be completely isolated from all other systems by physical disconnection, double block and bleed, or blanking of all lines. In continuous systems where complete isolation is not possible, such as sewers or utility tunnels, specific

written safety procedures that are approved and enforced by the entry supervisor shall be used.

(2) All blanks for that specific confined space shall be recorded on the entry permit.

(3) If a drain line is located within the confined space, provision shall be made when necessary to tag it and leave it open. This shall also be recorded on the entry permit.

(4) Additional procedures necessary when the confined space is of double wall type construction: e.g., water-jacketed or similar type shall be determined by the entry supervisor and noted on the entry permit.

(5) Electrical isolation of the confined space to prevent accidental activation of moving parts that would be hazardous to the worker is achieved by locking circuit breakers and/or disconnects in the open (off) position with a key-type padlock. The only key is to remain with the person working inside the confined space. If more than one person is inside the confined space, each person shall place his own lock on the circuit breaker. In addition to the lockout system, there must be an accompanying tag that identifies the operation and prohibits use.

c. Cleaning

(1) Procedures and processes used to clean the inside of a confined space shall be reviewed by the Garrison Safety Office, Fire and Emergency Services Division, and Industrial Hygienist. The method to be prescribed shall be dependent upon the product in the space. If the confined space contains a flammable atmosphere above the upper flammable limit, it shall be purged with an inert gas to remove the flammable substance before ventilating with air. Initial cleaning shall be done from outside the tank if at all possible.

(2) Special procedures should be adopted to handle the hazards created by the cleaning process itself. If the tank is steamed:

(a) It shall be allowed to cool prior to entry;

(b) Ventilation shall be maintained during neutralization procedures to prevent buildup of toxic materials;

(c) Steaming shall not be used as a cleaning method when the product stored was a liquid with an auto ignition temperature 120 percent or less of the steam temperature; and

(d) The pipe or nozzle of the steam hose shall be bonded to the tank to decrease the generation of static electricity that could accumulate in tanks during steaming procedures. These and other hazards and controls shall be evaluated by the Garrison Safety Office and the Fire and Emergency Services Division.

d. Equipment and Tools. Equipment and tools to be used in a confined space shall be carefully inspected and shall meet the following requirements:

(1) Hand tools shall be kept clean and in good repair.

(2) Portable electric tools, equipment, and lighting shall be approved in accordance with 29 CFR part 1910 Sub Part Z and be equipped with a ground fault circuit interrupter that meets the requirements of 29 CFR 1910.309. All grounds shall be checked before electrical equipment is used.

(3) All electrical cords, tools, and equipment shall be of heavy-duty type with heavy-duty insulation and inspected for defects before use.

(4) Air-driven power tools shall be used when flammable liquids are present. Air-driven power tools reduce the risk of explosion but do not eliminate it. Explosions can arise by tools overheating (drilling), sparks produced by striking (percussion), grinding or discharge of accumulated electrostatic charges developed from the flow of compressed air.

(5) Lighting used in permit-required confined spaces shall be explosion-proof and where necessary, equipped with guards. Only equipment listed by Underwriters Laboratories for use in Division 1, atmospheres of the appropriate class and group, or approved by U.S. Bureau of Mines or Mining Enforcement and Safety Administration or Mine Safety and Health Administration, or the U.S. Coast Guard shall be used. Lighting shall not be hung by electric cords unless specifically designed for that purpose. The illumination of the work area shall be sufficient to provide for safe work conditions as referenced in the ANSI standard All-1-1965 or the revision, 1979. Under no circumstances will matches or open flames be used in a confined space for illumination.

(6) Cylinders of compressed gases shall never be taken into a confined space and shall be turned off at the cylinder valve when not in use. Exempt from this rule are cylinders that are part of self-contained breathing apparatus or resuscitation equipment.

(7) Ladders shall be adequately secured or of a permanent type which provides the same degree of safety as cited in 29 CFR 1910 Sub Part D.

(8) Scaffolding and staging shall be properly designed to carry maximum expected load, be equipped with traction-type planking, and meet the requirements of 29 CFR 1910.28.

(9) Electrical lines, junctions, and appurtenances will be in accordance with National Electric Code and 29 CFR 1910.309.

(10) Only hose lines and components designed specifically for the compressed gas and working pressure shall be used and such systems shall have a pressure relief valve outside the confined space.

(11) All equipment that may be used in a flammable atmosphere shall be approved as explosion-proof or intrinsically safe for the atmosphere involved by a recognized testing laboratory such as the U. S. Bureau of Mines, MES, or MSHA for methane and by the Underwriters Laboratories or by Factory Mutual for all cases.

11B-12 FB Confined Space Entry Permit

A printable FB Confined Space Entry Permit for permit-required confined space entry operations is included at Annex D of this regulation.

Chapter 11C
Respiratory Protection Program

11C-1 General

This is a mandatory program. Personnel must comply with the Respiratory Protection Program as outlined below, in OSHA Standard 29 CFR 1910.134 and IAW AR 11-34, The Army Respiratory Protection Program.

a. Respirators are considered an acceptable method of protecting the health of DA personnel when the Garrison Safety Office or Industrial Hygienist (IH) determines that the following conditions exist:

(1) Routine operations in which there are no feasible engineering controls and/or work practices (if used) that would adequately eliminate exposure to the hazard.

(2) Intermittent, non-routine operations (such as those not exceeding 1 hour/day or 1 day/week) when there are no feasible engineering controls and/or work practices available that would adequately control exposure to the hazard.

(3) Interim periods when engineering controls are being designed and installed.

(4) Emergencies.

(5) Federal regulation or operating license requires use of respirators.

b. Where economically feasible and the technology exists for eliminating or reducing the cause of an environmental respiratory hazard, the following engineering control methods will be implemented:

(1) Substitution of less toxic substances.

(2) Installation of local exhaust systems.

(3) Natural or mechanical ventilation.

(4) Segregation or isolation of processes or operations.

c. When the determination that the use of a respirator is required by an employee, a facial grooming standard shall be added to their job position and employee's evaluation form.

11C-2 Responsibilities

a. Garrison Safety Office (GSO) will:

(1) Have secondary responsibility for administration and management of the Fort Bliss Installation Respiratory Protection Program (RPP). Occupational Health and Industrial Hygiene have the primary responsibility IAW AR 11-34.

(2) Annually evaluate the Fort Bliss directorates/activities Respiratory Protection Programs per AR 11-34.

(3) Conduct random worksite inspections to ensure that all respirators are approved and that these respirators are properly used, stored, cleaned, maintained and disposed of.

(4) Provide guidance and assistance to the Garrison directorates/activities in establishing SOPs for respirator use.

b. Industrial Hygiene (IH), WBAMC will:

(1) Initiate prompt corrective action on any deficiencies detected in the RPP.

(2) Coordinates with the Chief, Fire Prevention and DES, to ensure a monthly inspection of emergency-use respirators and self-contained breathing apparatus (SCBA) is conducted.

(3) Perform worksite evaluations to determine areas/locations where respiratory protection is required, and provide copies of evaluations with recommendations to GSO. Ensures proper documentation is maintained to show breathing air systems have been tested for quality.

(4) Prescribe and disseminate instructions to worksite supervisors as to the type of approved respirator required for the task involved.

c. CPAC will: Provide administrative support as required to all individuals responsible for ensuring/enforcing the Fort Bliss Respiratory Protection Program. Examples of this support are:

(1) Addresses the requirement for respirator use in Fort Bliss directorates/activity job descriptions.

(2) Refer personnel being considered for employment in areas of operations requiring the use of respirators to Occupational Health, WBAMC for a pre-employment physical.

(3) Reassign employees presently working in areas requiring respirators that are unable to wear the required protection as determined by Occupational Health and GSO.

(4) Documenting training per 29 CFR 1910.134.

d. Occupational Health, WBAMC will provide:

(1) A pre-placement medical examination and periodic medical evaluation per established directives for individuals requiring respiratory protection, before job assignment.

(2) A Respirator Evaluation Request, with OH section completed to document their action.

(3) A fitting for corrective lenses inside full-face-piece respirator to ensure proper vision and good fit.

e. DPW will:

(1) Install and maintain breathing air systems capable of providing Grade "D" breathing air where required.

(2) Maintain compressed air breathing system alarms in an operable manner.

(3) Implement a schedule of routine maintenance for servicing and quality assurance evaluations of airline purification panels and changing filters and cartridges as necessary.

(4) Install airline couplings that are incompatible with outlets for other gas systems.

f. Fire Department will:

(1) Provide training for fire fighters on the proper cleaning and disinfecting methods to be used on mask after every use.

(2) Inspect emergency-use respirators and SCBA equipment monthly.

(3) Be available for emergency situations where an SCBA would be required to enter a contaminated atmosphere.

g. Supervisors will:

(1) Complete section 1 of Respirator Evaluation Request, on all personnel that have been identified to be entered into the respiratory program.

(2) Develop an SOP on safe respirator use, maintenance, and user inspection for their operation. Ensure an SOP is approved by the GSO and IH, and that employees are familiar with the SOP.

(3) Indicate job requirement to use respiratory equipment on the Request for Personnel Action, when it is submitted to CPAC for recruitment to fill a position. Supervisor will ensure that selected personnel for vacancies requiring respiratory protection are advised of this requirement before acceptance of the position.

(4) Conduct and document monthly inspections of SCBA and emergency escape equipment.

(5) Post signs in areas where respiratory protection is required and type to be used.

(6) Conduct routine inspections to ensure that proper Respiratory Protective Equipment (RPE) is used by employees where required and that employees adhere to the instructions relative to the proper use and maintenance requirements of the respirator. Consider user compliance in performance appraisals.

(7) Ensure employees receive periodic medical examinations by providing Occupational Health with a Respirator Evaluation Request on all individuals in the respiratory program.

(8) Provide facilities for cleaning, maintenance, and proper storage of equipment.

(9) Ensure workers are individually fit tested by the directorate/activity respirator specialists before work assignment.

(10) Ensure users are supplied and trained in the use and care of appropriate respirator as specified by GSO/IH and maintenance of this equipment meets manufacturer's requirements.

(11) Ensure individual to be fit tested on tight fitting respirators are free from facial hair that would prevent a proper seal per AR 11-34 which states, "Respirators equipped with a tight fitting face piece will not be worn if facial hair comes between the sealing periphery of the face piece and the face, or if facial hair interferes with valve functions."

(12) Ensure training for personnel on RPE is documented and kept current by the respirator Point of Contact (POC).

(13) Ensure respirators are maintained per manufacturer instructions. Respirators used by more than one person shall be thoroughly cleaned and disinfected after each use.

(14) Do not permit employees to wear contact lenses or eyeglasses when wearing full-face-piece respirators, helmets, hoods or suits. Optical inserts for the respirator are the accepted replacement.

(15) Ensure procedures for rescue and standby personnel in Immediately Dangerous to Life or Health (IDLH) situations are incorporated into the directorate/activity SOP.

(16) Maintain an inventory of hazardous areas, in which respiratory protection is required. Provide a copy of updated listing to GSO by 31 Jan annually.

(17) Follow the procedures in paragraph 11C-3.

h. The Directorate/Activity Respirator Specialist will:

(1) Coordinate with supervisors and identify to GSO/IH all personnel, by section, who are required to use respirators in their jobs.

(2) Coordinate with supervisors and schedule personnel for initial training/fit test and periodic fit test. Maintain training records and suspense for training.

(3) Update respirator user's records after determining that all requirements for medical evaluation, training and fit testing are met.

(4) Attend training sessions and meetings as scheduled by IH.

(5) Issue Respiratory User Cards, IAW AR 11-34, after determining that all requirements for medical evaluations, training, and fit testing are met. The card will contain the employee's name, medical clearance date, fit test date, respirator type authorized, and retest date.

i. Respiratory equipment users will:

(1) Use respirators according to the manufacturer's instructions, training provided, and work area SOP.

(2) Notify immediate supervisor if it is suspected that RPE is needed or that the respirator is defective.

11C-3 Respiratory Protection Equipment Procedures

a. Selection of respiratory protection equipment

(1) All respirators procured for use will be approved, tested and listed as satisfactory by both the National Institute for Occupational Safety and Health (NIOSH) and the Mine Safety and Health Administration (MSHA). Any modification that is not authorized by these agencies voids the approval of a respirator. Component replacement, adjustments, or repair will follow the manufacturer's recommendations only. A respirator is approved as a whole unit with specific components.

(2) The correct respirator for each job will be specified by IH based on environmental evaluations.

(3) Industrial respirators (negative pressure types) are not to be used in confined spaces or where concentrations of contaminants are IDLH, or in any atmosphere containing less than 19.5 percent oxygen. For entry into confined space or IDLH atmospheres, only self-contained breathing apparatus or supplied airline respirators will be used, and then only where specific controls and requirements are applied, where experts have been consulted, and written procedures developed to ensure safe operations have been approved. Regulations require that the GSO be contacted prior to any planned confined space entry.

(4) In the event an employee desires not to wear a facial respirator, the directorate/activity will negotiate with the union for the possibility of optional respiratory equipment. This applies only for employees in which respirator use is not a condition of employment.

b. Use of respiratory protection equipment:

(1) A respirator will be assigned to an employee for their exclusive use.

(2) Supervisors will ensure that permanently assigned respirators are marked to indicate to whom it is assigned. The mark will not affect the respirator performance in any way. The issue date will be recorded on inventory maintained by the supervisor.

c. Initial and annual respiratory protection training and respiratory fit testing will be conducted by the directorate/activity respirator specialist.

d. Contact lenses will not be worn with full-face-piece respirators, helmets, hoods or suits.

e. Each area and operation requiring respirators will be marked to inform personnel of the work hazards or health risks involved and the type of respirator required.

f. Testing for fit. Fit testing will be conducted annually. In addition, fit testing will be repeated whenever there are physical changes that could affect respirator fit, i.e., facial scarring, dental changes, cosmetic surgery, or an obvious change in body weight. Before entering an area containing a hazardous atmosphere, the respirator wearer will test the tightness of the seal by performing one of the tests below:

(1) Positive Pressure Fit Check. Place thumb through large opening in exhalation valve guard to close the exhalation valve. Exhale. If the mask bulges slightly and there is no evidence of air leaks, a tight fit has been obtained. If an air leak is detected, reposition the mask and/or tighten straps and repeat the test.

(2) Negative Pressure Fit Check. Place palms of hands over opening on filters and inhale for 5-10 seconds. If mask collapses, you have a good seal. If an air leak is detected, reposition the mask and/or adjust straps. Repeat the test.

g. Inspection, maintenance and care of respirators:

(1) When a respirator is issued to an individual, that person is responsible for the primary maintenance and care of that respirator. Where respirators are used collectively or kept ready for emergencies by a shop or operating activity, the work area supervisor is responsible for establishing the respirator maintenance and cleaning program. This program will be adjusted for the number and types of respirators in use, working conditions, hazards involved, and will include the basic services of inspection for defects, cleaning and disinfecting, repair, and storage. Equipment will be properly maintained to retain its original effectiveness.

(2) No attempts will be made to replace components or to make adjustments or repairs to the mask beyond the manufacturer's recommendations. If mask is unserviceable, turn the mask into IH for disposal.

(3) All respirators will be inspected routinely before and after each use and during cleaning. A respirator that is not routinely used, but kept ready for emergency use, will be inspected after each use and at least monthly to ensure that it is in satisfactory working condition using the following steps: Examine the face piece for: excessive dirt, cracks, tears, holes, or distortion from improper storage or inflexibility. Examine the head straps or head harness for: breaks, loss of elasticity, broken or malfunctioning buckles and attachments. After removing the cover, examine the exhalation valve for the following:

(a) Foreign material, such as detergent residue, dust particles, or human hair under the valve seat.

(b) Cracks, tears, distortion in the valve material, or improper insertion of the valve body in the face piece.

(c) Cracks, breaks, or chips in the valve body, particularly in the sealing surface.

(d) Missing or defective valve cover or improper installation of the valve body.

(e) Examine the air-purifying elements for: Incorrect cartridge, canister, or filter for the hazards; incorrect installation, loose connections, missing or worn gaskets, or cross thread in holder; expired shelf-life date on cartridge or canister; cracks or dents in outside case of filter, cartridge, or canister; evidence or prior use of sorbet cartridge or canister, indicated by absence of sealing material, tape, foil, etc. over inlet.

h. A monthly inspection will be conducted on all SCBA-type respirators. Air and oxygen cylinders will be fully charged according to the manufacturer's instructions, and determine if the regulator and warning devices are functioning properly.

i. Respirators issued to specific individuals will be cleaned, disinfected as frequently as necessary to ensure that skin penetrating, dermatitis-causing contaminants are removed from respirator surfaces. Respirators maintained for emergency use or used by more than one person will be cleaned and disinfected after each use.

j. Cleaning and disinfecting.

(1) Remove any filters, cartridges, or canisters. NOTE: Do not submerge filters in cleaning or disinfecting solution.

(2) Wash the face piece and breathing tube in a cleaning solution of one-tablespoon dishwashing soap to one-gallon warm water. To disinfect the face piece and breathing tube, use two tablespoons of household bleach to one gallon of warm water.

(3) Rinse completely in clean, warm water.

(4) Air dry in a clean/non-contaminated atmosphere.

(5) Clean other respirator parts as recommended by the manufacturer.

(6) Insert new filters, cartridges, or canisters as specified by the manufacturer and ensure the seal is tight. Filter assemblies will be replaced if the wearer notices any odor, difficulty in breathing, or ill effects from fumes.

(7) After inspection and cleaning, respirators will be stored to protect them against dust, sunlight, heat, extreme cold, excessive moisture, or damaging chemicals. Respirators placed at stations and work areas for emergency use will be stored in compartments built for the purpose. The compartments must be clearly marked to indicate their content and must be quickly accessible at all times. Routinely used respirators may be stored in plastic bags; however, respirators will not be stored in such places as lockers or toolboxes unless they are in containers or cartons. Respirators will be placed or stored so that the face piece and exhalation valve will rest in a normal position in order not to impair the respirator function by affecting its physical configuration.

Chapter 11D
Bloodborne Pathogens Program

11D-1 Purpose

To standardize procedures as required by the Occupational Safety & Health Administration (OSHA) for the management of Fort Bliss Bloodborne Pathogen Program. Additionally this chapter provides guidance and procedures to minimize and prevent, when possible, occupational exposure to Bloodborne Pathogens, as well as action to be taken if potential or actual exposures occur.

11D-2 Scope
The following procedures are applicable to all units and individuals assigned or attached to the USAG Fort Bliss. This chapter applies to all operations that have or involve occupational exposure to Bloodborne Pathogens. In particular; personnel whose required duties include routine or reasonably anticipated tasks, procedures, or processes where there is anticipated or actual occupational exposure to blood or potentially infectious materials.

11D-3 Occupational Safety and Health Administration (OSHA)

a. OSHA established the standard for protecting employees from occupational exposure to Bloodborne Pathogens. Army policy is to extend this same protection to their personnel.

b. Bloodborne Pathogens are defined as Human Immunodeficiency Virus (HIV), Hepatitis B Virus (HBV) and Hepatitis C Virus (HCV). They may be transmitted to persons whose skin, eyes, and mucous membranes and non-intact skin are exposed to human blood and/or body fluids.

c. Occupational infection with Bloodborne Pathogens cannot be detected by visual inspection. Consequently, all human blood and human body fluids must always be treated as containing Bloodborne Pathogens.

11D-4 Responsibilities

a. The Fort Bliss Garrison Safety Director will:

(1) Provide oversight for the overall implementation of this program.

(2) Advise the Commander immediately when corrective action is needed to ensure an effective program.

(3) Ensure this chapter is reviewed and updated when necessary, but at least annually to account for new or modified tasks, procedures, and job classifications that involve occupational exposure to Bloodborne Pathogens.

b. Commanders/Directors will:

(1) Identify, by name, all personnel that are Military Police (MP), Cardiopulmonary Resuscitation (CPR) Certified, Combat Lifesaver, Emergency Medical Technicians (EMT), and Life Guards shall be trained and qualified for enrollment into Bloodborne Pathogen Program.

(2) Ensure all exposure incidents are evaluated and appropriate follow-up action is provided.

(3) Ensure that all first responders receive Hepatitis B Virus (HBV) inoculations.

c. All personnel will report suspected exposures, both occupational and non-occupational (e.g., incidental and - Good Samaritan), to Bloodborne Pathogens or other potentially infectious material (i.e., exposure incidents) to their supervisor.

(1) Comply with all the requirements of this chapter.

11D-5 Exposure Determination In making the decisions concerning what tasks involve occupational exposure to Bloodborne Pathogens, the following materials encountered in the work place are not considered to release blood or other potentially

infectious material in a liquid or semi-liquid state if compressed or infectious waste. 29 CFR 1910.1030 and -

a. Used personal hygiene products, i.e., tampons, sanitary napkins, diapers, and facial tissues;

b. Absorbent materials (e.g., Band-Aids, bandages) containing small amounts of blood or body fluids and no free-flowing or unabsorbed liquid.

11D-6 Methods of Compliance, 29 CFR 1910.1030.

a. Universal Precautions:

(1) Will always be observed where there is a potential for contact with human blood or other potentially infectious materials and are the primary means to prevent exposure.

(2) Procedural control of exposure to Bloodborne Pathogens by treating all human blood and body fluids as if infectious.

(3) Include the use of proper PPE to prevent exposure to BBP's.

b. Work Practice Controls, 29 CFR 1910.1030.

(1) These methods will be the secondary means to eliminate or minimize personnel exposure to Bloodborne Pathogens.

(2) Work practice controls alter the manner in which a task is performed. They include proper handling of used bandages and other emergency items that have contacted human blood or other potentially infectious materials as well as performing procedures in a manner that will prevent or minimize the spattering, splashing, spraying, or generation of droplets of blood or other body fluids.

(3) The following work practices will be employed and enforced, when appropriate:

(a) Eating, drinking, smoking, applying lip balm or cosmetics, handling contact lenses, and similar practices will be prohibited in all areas where occupational exposure to Bloodborne Pathogens can be anticipated.

(b) Hand washing facilities shall be provided when feasible. When not feasible, because of the location or event, antiseptic hand cleanser and clean paper or cloth towels or antiseptic towelettes, as a minimum, will be provided. Employees will wash their hands and any other exposed skin using soap and running water as soon as feasible. Mucous membranes that have been exposed will also be flushed with copious amounts of water.

(c) Any equipment or surfaces that may have been contaminated with human blood or other potentially infectious materials will be decontaminated following practices and using materials approved for the purpose.

(d) No waste container, especially plastic bags, will be compressed by hand. This reduces the potential for inadvertent exposure due to sharp objects concealed in such containers.

c. Personal Protective Equipment (PPE)

(1) PPE is a Universal Precaution used to eliminate or minimize personnel exposure to Bloodborne Pathogens.

(2) PPE prevents human blood or other potentially infectious material from reaching or passing through work or street clothes, undergarments, skin, eyes,

mouth, and mucous membranes under normal conditions. PPE consists of disposable pocket mouth-to-mouth resuscitation devices, gloves, eye protection, and face shields, masks and similar items.

(3) PPE, appropriate to the hazard, will be used to reduce exposure to Bloodborne Pathogens.

(4) PPE will be issued, used, and maintained as follows:

(a) Don disposable gloves prior to performing any emergency aid.

(b) PPE that has been penetrated by blood or other potentially infectious material, or that has been punctured or damaged in any manner, will be removed from use immediately or as soon as feasible and will be disposed of properly. (Ensure proper exposure follow-up evaluation.)

(c) Contaminated PPE will be placed in containers/sturdy plastic bags, before being removed from any work area, and immediately turned over to the Medical Clinic for disposal. Reusable and disposable PPE will be containerized separately conditions.

(d) Reusable PPE will be cleaned after each use and will be stored under sanitary conditions.

11D-7 Housekeeping 29 CFR 1910.1030. Consult the local area medical facility for any Blood or Body Fluid spill.

11D-8 Biohazard Waste Disposal All biohazard wastes will be turned over to the local area medical facility.

11D-9 Exposure Incidents 29 CFR 1910.1030

a. If an employee is involved in or is a witness to an exposure incident (i.e., specific eye, mouth, mucous membrane, non-intact skin or parental contact with blood or other potentially infectious materials) he/she will take immediate action to clean the area of exposure then report the incident to his/her supervisor. All exposure incidents will be reported regardless of whether they are occupational or non-occupational (i.e., incidental or "Good Samaritan"). Due to their confidential nature, these incidents will be recorded in the Medical Records of the employee, which is protected by the Privacy Act.

b. Supervisors will immediately notify the unit Safety Office.

c. The Unit Safety Office will take the following actions:

(1) Provide written notification of the exposure incident to the local medical facility.

(2) Investigate the incident.

(3) When the investigation is complete, report the specific circumstances of the incident, including route(s) of exposure, to the local area medical facility. The written report will contain a description of the employee's job duties as they relate to the exposure incident.

(4) The local area medical facility should provide appropriate medical evaluation and follow-up.

11D-10 Training 29 CFR 1910.1030. All employees with potential for occupational exposure to Bloodborne Pathogens, and their supervisors, will receive training sufficient to ensure they are knowledgeable of the requirements contained in this chapter. The hazards Bloodborne Pathogens pose to workers, of the control measures used to reduce or eliminate the hazards, and of command policy will be covered. The requirement will include but not be limited to the initial (1 Hour) and annual training (minimum 30 minutes). (See CFR 1910 Bloodborne Pathogens: 1910.1030 (g) (2) (i)).

11D-11 Cardiopulmonary Resuscitation (CPR): The proper use of protective barriers to perform CPR (i.e., mouth-to-mask ventilation) will be included as an element of all CPR training conducted. Mouth-to-mask training does not replace, but is an addition to, the required mouth-to-mouth training.

Chapter 11E
Hazardous Energy Control Lockout/Tagout Program

11E-1 Purpose
This section establishes the minimum program requirements whenever Lockout/Tagout (LOTO) of energy sources is required during repair, replacement work, renovation, modifications or other adjustments to power equipment preventing unexpected energizing or accidental startup of machinery on Fort Bliss and its properties.

11E-2 Scope
This section applies to all services, all federal, state and local agencies, all civilian personnel and all contract personnel at any time on Fort Bliss or its properties.

11E-3 References
Required and related publications are listed in appendix A.

11E-4 Abbreviations and Terms
Abbreviations and special terms used in this section are explained in appendix A.

11E-5 Responsibilities
a. Garrison Safety Office (GSO):

(1) Serves as principle staff adviser for implementation and compliance of this procedure.

(2) Conducts periodic inspections to ensure activity is in compliance with this regulation and other Army and Federal policies governing LOTO.

b. Commanders/Directors and Civilian Contract managers:

(1) Ensures LOTO SOPs are developed, established, and implemented in each workplace as required.

(2) Ensures authorized personnel responsible for performing LOTO procedures are identified on equipment listing, such as supervisors, line supervisors, operators, maintenance personnel.

c. Supervisors:

(1) Establish LOTO SOP for isolating equipment/machinery at the energy sources.

(2) The LOTO procedure must outline the scope, purpose, authorization, rules, and techniques that employees will use to control hazardous energy sources, as well as the means that will be used to enforce compliance. This procedure must provide employees at least the following information:

(a) A statement on how to use the procedure.

(b) Specific procedural steps to shut down, isolate, block, and secure machines.

(c) Specific steps designating the safe placement, removal, and transfer of LOTO devices and identifying who has responsibility for the LOTO devices.

(d) Will maintain LOTO training records within each area.

d. Authorized Personnel:

(1) Will know the requirements for testing machines to determine and verify the effectiveness of lockout devices, tagout devices, and other energy-control measures.

(2) Conduct and document initial and annual refresher training for affected employees (in the purpose and use of the LOTO procedures).

(3) Conduct and document initial and annual refresher training for authorized employees in performing LOTO procedures.

(4) Conduct periodic inspections to ensure authorized employees are performing LOTO procedures as required.

(5) Establish and review annually a list all machinery and equipment in the LOTO SOP.

(6) Obtain required LOTO devices to isolate equipment/machinery in workplace.

(7) Assign required LOTO devices to authorized personnel.

e. All Personnel:

All personnel (military, civil service, Non-Appropriated Fund (NAF) or contractors) are responsible for implementing and complying with this procedure.

11E-6 Employee Training and Retraining

a. All affected and authorized personnel must be given initial training before starting any LOTO service and maintenance activities (other employees receive instruction regarding control procedures).

(1) All affected personnel must be given retraining whenever there is a change in the following:

(a) Job assignments,

(b) Machinery or processes that present a new hazard, or

(c) Energy-control procedures.

(2) When tagout devices are used, all employees must receive training regarding the limitations of tags.

b. Authorized Employees: A qualified person (as specified in the National Electric Code (NEC) and OSHA regulation or other regulation) will train authorized employees in the proper LOTO process and procedures.

c. Affected Employees: An Affected Employee will be trained by a qualified person in the purpose and use of the LOTO procedures.

d. Other Employees: All other employees whose work operations are, or may be in an area where energy-control procedures are used must receive instruction regarding the energy-control procedure and the prohibition against removing a lockout or tagout device and attempting to restart, reenergize, or operate the machinery.

e. Retraining Employees: Retraining will be accomplished whenever a periodic inspection reveals, or an employer has reason to believe, that shortcomings exist in an employee's knowledge or use of the energy-control procedure.

f. Training records shall be maintained by the Supervisor or Safety Representative within the activity.

11E-7 Procedure When Worker Leaves the Area

a. During all short absences such as breaks or trips to pick up parts, locks, tags, and all other safety-warning devices must be left in place.

b. When work is incomplete and temporarily suspended overnight or over a weekend, all locks, tags, and other safety warning devices must be left in place.

c. When work is suspended for more than a weekend, the equipment or machinery must be tagged as out of service, permanently disconnected from all energy sources, and must have its cover and access panels reinstalled. All locks and other tags must be removed.

d. When an employee leaves the facility site and does not remove his/her lock(s) from the energy isolating device(s) (for example, if the employee became sick and left the site) then the responsible supervisor must attempt to contact that employee to determine if he/she will be able to return to remove the lock. If it is verified that the equipment is ready to be returned to service, and the employee is unavailable or cannot return, the Authorized person, then cuts the lock(s) off the energy isolating device(s).

Chapter 11F
Electrical Safety

11F-1 Introduction

This chapter prescribes policy for integrating Federal electrical safety standards as well as worldwide electrical safety consensus standards, techniques, and procedures in Army systems and operations to mitigate risk of electrical related injuries and deaths. More specific electrical safety guidance, procedures, and techniques to protect Army personnel, facilities, and equipment against electrical hazards are addressed in DA Pam 385-26.

11F-2 Policy

a. All Army leaders will ensure that effective electrical safety procedures prescribed in DA Pam 385-26 are appropriately integrated into their operations.

b. Electrical hazards will be mitigated to the lowest possible risk level in all operations including all Army work sites, recreational areas, office areas, training areas, construction zones, contingency operations, range facilities, vehicle operations, storage facilities, and so forth.

c. Evaluation of elements of electrical risk will be included in deliberate risk assessments, job hazard analyses (JHA), and Army Regulations.

d. SOH inspection, safety audits, and command inspections, as appropriate.

e. Commanders, Directors, and Managers at every Army echelon will include electrical safety in SOH policies and training that emphasizes prevention of electrical related accidents in their organization.

f. All leaders will ensure that electrical safety requirements and DRM are applied to mitigate electrical related hazards.

g. All supervisors of Army electrical related operations will ensure that standard electrical safety operating procedures are developed and all personnel working in electrical related operations are appropriately trained.

h. Applicable Army, DOD, Federal, National, and worldwide electrical safety consensus standards will be appropriately integrated into all Army electrical related operations, to include construction, maintenance, and service construction. These standards include, but are not limited to, the following:

(1) DA Pam 385-26.

(2) 29 CFR 1910.

(3) 29 CFR 1915.

(4) 29 CFR 1926.

(5) NFPA 70 National Electric Code.

(6) NFPA 70B Recommended Practice for Electrical Equipment Maintenance.

(7) NFPA 70E Standard for Electrical Safety in the Workplace.

(8) ANSI/IEEE C2, National Electrical Safety Code, 2002.

(9) ANSI/National Electrical Testing Association (NETA) Standard for Acceptance Testing Specifications (ATS) for Electrical Power Distribution Equipment and Systems.

(10) ANSI/NETA Maintenance Testing Specifications (MTS) for Electrical Power Distribution Equipment and Systems.

(11) Unified Facilities Criteria (UFC) 3-560-01, Electrical Safety, O & M.

a. Where applicable, installer/maintenance professional certifications required by regulatory bodies or jurisdictions will be incorporated into electrical operations.

11F-3 Definitions

Electrical: Low voltage is when the potential is greater than 30 volts Root Mean Square (RMS) or direct current, but less than 600 volts; high voltage is when the potential is greater than 600 volts; high current is when 25 amperes or greater exists at any voltage.

a. High Voltage System: Associated electrical conductors and equipment operating at or intended to operate at a sustained voltage of more than 600 volts.

b. Low Voltage System: Associated electrical conductors and equipment operating at or intended to operate at a sustained voltage of 600 volts or less.

c. Qualified High Voltage Electrical Worker: A person who has a minimum of two years of training and experience with high voltage circuits (> 600 volts) and equipment and who has demonstrated he/she is familiar with the work to be performed and the hazards involved. A Qualified High Voltage Electrical Worker will actually be performing the electrical work. All Qualified High Voltage Electrical Workers must be trained in:

(1) Electrical Safety Training.

(2) Lockout/Tagout Training.
(3) Hazardous Electrical Voltage Training.
(4) Equipment specific procedures for individual work areas.

11F-4 Electrical Equipment and Appliances

a. Only UL-approved electrical equipment and appliances are permitted. Electrical cords must be in good condition.

b. Turn off or disconnect power to electrical equipment to include computers and other office equipment at close of business.

c. Do not run any electrical appliance or equipment cord under rugs, carpeting or furniture.

d. All surge protectors, power strips or battery backup devices must be recognized by a Nationally-Recognized Testing Laboratory (NRTL), such as Underwriter Laboratories (UL), Electrical Testing Labs (ETL), or Canadian Standards Association (CSA).

e. All space heaters must remain at least three feet from combustibles, such as drapes and newspapers. Space heaters must also be equipped with automatic shut-off devices to cut off its power in the event of tip-over.

f. Space heaters and appliances must be plugged directly into a wall outlet. Do not plug appliances into multiple outlet strips or power supplied systems furniture. Do not use an extension cord with an electric space heater and appliances.

g. All electrical wiring, plugs etc., must be done by a certified electrician.

h. A work request form must be submitted to DPW for changes in building wiring. All organizations such as Army and Air Force Exchange Services (AAFES), DFMWR, military units and contractors must consult with DPW before any electrical work or changes are made to ensure all work was achieved using National Electrical Code (NEC), National Fire Code (NFC) and Unified Facilities Code (UFC) 3-600-1.

i. No electrical work of any kind will be done until approved by DPW.

j. Do not use extension cords or flex wire in place of fixed wiring.

k. Do not tape, wire or bridge circuit breakers in the open position. Every breaker must have a circuit directory for information clearly visible for identification.

l. Do not block the circuit breaker panel; it must have at least 36 inches clearance and be easily accessible to building occupants, emergency and maintenance personnel.

m. Do not use extension cords for more than 30 days on a continuous basis. Disconnect extension cords when not in use.

n. Inspect insulating equipment (gloves, mats, etc.) for damage before each day's use and after any incident that could be suspected of having caused damage.

o. Inspect all power tools and extension cords for worn insulation, bent/ missing pins, etc. before each use.

p. Only use Christmas lights and decorations that are rated for outdoor use. Putting indoor-only products outside in the weather can result in electric shock and fire hazards.

q. If you are unsure as to whether Christmas lights are rated for indoor or outdoor use, check the color-coded UL mark on the product's package. A green holographic UL mark says, "indoors-only", while a red one indicates that the product is safe for both indoor and outdoor use.

11F-5 Electrical Safety Training

a. Electrical safety awareness and promotion. All personnel will be made aware of electrical hazards in their environment and how to recognize electrical hazards and further protect themselves from the identified electrical hazards. All leaders will include electrical safety awareness in their organization's safety training program.

b. Electrical safety awareness instructions will include basic elements of electricity, general electrical hazards, recognition of faulty wiring and possible equipment defects. Injury causation factors and control measures including location of circuit de-energizing equipment along with emergency response procedures will also be included to mitigate risk of potential electrical safety hazards.

c. Employee and supervisor training will be tailored to the hazards of the employee's work environment. Employees and the supervisors of those employees must receive training specific to the work if they work on or near exposed energized parts.

(1) Qualified person. A qualified person is one who has skills and knowledge related to the construction and operation of the electrical equipment and installations and has received safety training to recognize and avoid electrical related hazards. Personnel shall be trained according to National Fire Protection Association (NFPA) 70E, and DA Pam 385-26.

(2) Unqualified person. An unqualified person is one who does not work close to exposed energized circuits and is untrained in recognizing hazards associated with working on such circuits but may be in the vicinity of qualified personnel close to exposed energized circuits. Unqualified persons will receive training to include, at a minimum, recognition of electrical safety warning signs, location of shut off switches and breakers, and emergency call procedures.

a. Workplace training. All personnel will receive general electrical safety training as an element of their organization's SOH training program. Supervisors are responsible for ensuring this training is completed. Training should include, but not be limited to, basic properties of electricity, proper use of extension cords, power strips, surge protectors, and adapters. Training may also include, personal protective equipment, appropriate response to electrical mishaps, space heaters and other electrical equipment used in the workplace.

b. All electrical safety training will be documented. Supervisors will maintain records of training and ensure that training is updated annually. Personnel will receive additional training or retraining under any of the following conditions or as determined by the supervisor:

(1) Observation or indication of improper work practices.

(2) Changes in technology, equipment, or working environment.

(3) Introduction of new procedures.

11F-6 Technical Assistance

Directors, managers, commanders, and supervisors are encouraged to contact the safety manager about their local electrical safety program.

11F-7 Electrical Hazards

a. Only trained, qualified personnel will perform work on electrically-powered equipment and facility electrical systems. Defective electrical wiring, downed wires, and other electrical hazards will be reported to DPW immediately for correction.

b. Flagpoles, radio masts, metallic ladders, and similar objects will not be erected or dismantled where the possibility of contact with energized circuits exists. Masts, towers, and antennas will be installed at least twice the height of the structure from power lines.

Chapter 11G
Material Handling Program

11G-1 Purpose

This paragraph establishes procedures for safe material handling. These responsibilities and procedures will reduce the risk of material handling related injuries (strains, back injuries, falls, over exertions, struck by, caught between, crushed by, punctured by, and others). Local material handling programs will be implemented in accordance with 29 CFR 1910.176, 29 CFR 1910.178, 1910.184, 1910.244, DA PAM 385-10, TB 43-0142, and this regulation.

11G-2 General

a. Employees shall be trained in and will use safe lifting techniques.

b. Material handling devices will be available for the material handling needs of an activity.

c. Whenever heavy or bulky material is to be moved, the material handling needs will be evaluated in terms of weight, size, distance, and path of movement. The following hierarchy will be followed in selecting a means for material handling:

(1) Elimination of material handling needs by engineering;

(2) Movement by mechanical device (e.g., lift truck, overhead crane, or conveyor);

(3) Movement by manual means with handling aid (e.g., dolly or cart);

(4) Movement using safe lifting techniques

11G-3 Procedures

a. Use of mechanical equipment. Where mechanical handling equipment is used, sufficient, safe clearances will be allowed for aisles, at loading docks, through doorways and wherever turns or passage must be made. Aisles and passageways will be kept clear and in good repair, with no obstruction across or in aisles that could create a hazard. Permanent aisles and passageways will be appropriately marked.

b. Secure storage. Storage of material will not create a hazard. Bags, containers, bundles, and other items, stored in tiers will be stacked, blocked, interlocked and limited in height so that they are stable and secure against sliding or collapse.

c. Housekeeping. Storage areas will be kept free from accumulation of materials that present hazards from toppling, tripping, fire, explosion, or pest harborage. Exterior vegetation control will be exercised when necessary to control growth and hazards.

d. Clearance limits. Appropriate clearance signage to warn of clearance limits will be provided.

e. Guarding. Covers and/or guardrails will be provided to protect personnel from the hazards of open pits, tanks, vats, ditches, and elevated surfaces.

g. Lifting devices. Fire protection, design, maintenance, and use of fork trucks (powered industrial trucks/fork lifts), tractors, platform lift trucks, motorized hand trucks, and other specialized industrial trucks powered by electric motors or internal combustion engines will comply with 29 CFR 1910.178.

h. Material handling equipment operators will be properly trained and licensed on all equipment operated, and appropriately supervised by a knowledgeable person.

i. Lifting by Hand. Lifting and carrying can be done without injury by using the following criteria:

(1) The maximum weight to be lifted with two hands, under ideal conditions, is 51 pounds as stated in the NIOSH Work Practices Guide for Manual Lifting. How much should you lift? Lifting capacity depends on body condition; that is, flexibility and strength, and physical make-up. To help your condition, build up your strength by a regular exercise program and stretch your body before doing any lifting.

(2) There are six steps to proper manual lifting:

(a) Keep feet parted–one alongside the object and one behind the object. Comfortably spread feet give greater stability; the rear foot is in position for the upward thrust of the lift.

(b) Keep back straight, nearly vertical. Use the sit-down position to do so, but remember that "straight" does not mean absolutely "vertical". A straight back keeps the spine, back muscles, and organs of the body in correct alignment. It minimizes the compression that can cause a hernia.

(c) Tuck in chin so the neck and head continue the straight back line and keep spine straight and firm.

(d) Grasp the object with the whole hand. The palm grip is one of the most important elements of correct lifting. The fingers and hand are extended around the object to be lifted. Use the full palm; fingers alone have very little power. Wearing gloves is recommended.

(e) Tuck elbows and arms in and hold load close to body. When the arms are held away from the body, they lose much of their strength and power. Keeping the arms tucked in also helps keep body weight centered.

(f) Keep body weight directly over feet. This provides a more powerful line of thrust and ensures better balance. Start the lift with a thrust of the rear foot and continue the lift motion until reaching the standing carry position. To change direction, turn the entire body including the feet; avoid twisting the body. When setting the load down, the same six proper lifting steps will be used in reverse.

(3) Team Lifting

(a) When two or more people carry one object, they will adjust the load so that it rides level.

(b) When long sections of material (pipe, lumber) are carried, the load will be carried on the same shoulder and both carriers will walk in step.

(c) When team lifting, one person will be designated to give the signal for when to lift, move, or lower the object.

(4) Handling of Specific Shapes

(a) Barrels and drums. It is recommended that a hand truck or other type of material handling equipment be used for lifting and transporting barrels and/or drums. If it is necessary to roll a barrel or drum, the worker will push against the sides with both hands. To change directions, the drum or barrel will be stopped, the direction changed by grabbing the upper and lower rim seams, and movement started. To upright a full drum, follow the six steps of safe lifting.

(b) Long Objects (pipe, lumber, bar steel, etc.). The item will be carried on the shoulders with the ends under control so as to avoid striking other workers and to avoid overhead objects.

(c) Compressed gas cylinders. Compressed gas cylinders may be rolled on the bottom edge, for short distances. They shall never be dragged. Whenever compressed gas cylinders are moved, they will be disconnected with caps screwed securely into place. Because of their shape, smooth surface, and weight, cylinders are difficult to carry by hand. Cylinders weighing more than 40 pounds total will be transported on a hand or motorized truck, suitably secured to keep them from falling.

(5) Hand Lifting Rules to Remember:

(a) Avoid twisting while turning with a load.

(b) Watch for narrow places when moving materials.

(c) Avoid high reaching and lifting. A suitable ladder or platform will be used to get up to load.

(d) Do not jump with a load; do not catch or throw loads.

(e) Check the materials to be lifted for nails, splinters, rough strapping, or other objects that may injure hands.

(f) Ensure good visibility, especially on stairs.

11G-4 Requirements for Hand Trucks, Pallet Jacks and Dollies

a. Keep equipment under control at all times. Avoid distractions and horseplay.

b. Always move the equipment at a safe, manageable speed; do not run.

c. Loads will be packed securely; avoid overhanging.

d. Hands will be kept inside to protect them in narrow areas if the equipment does not have knuckle guards or handles.

e. Keep the center of gravity of the load as low as possible; place heavy objects below higher objects.

f. Place the load so it is carried by the axle, not the handles. Load only to a height that will allow a clear view ahead. When moving high loads, use an assistant as a guide.

g. Enter elevators or tight areas with the load oriented forward.

h. Equipment will be properly stored in a designated place when not in use.

i. Inspect equipment daily before and after use. Ensure defective equipment is tagged and removed from service. Report all equipment deficiencies to your supervisor for corrective action.

11G-5 Requirements for Heavy Construction Equipment (rollers, compactors, front-end loaders, bulldozers, trucks, etc.)

a. Only trained, authorized and licensed operators will operate such vehicles, equipment, and machinery. Operators will wear seat belts at all times when equipment/machinery is operated.

b. All vehicles of these types will have a suitable horn available which is tested before the vehicle is used.

c. All controls (brakes, steering, etc.) will be tested each shift before the vehicle is used.

d. No riders will be allowed on machines unless the machine is designed to carry riders/assistant operators.

e. Blades, buckets, and shovels on earth-moving machines will be lowered to the ground when the equipment is parked or unattended.

f. All earth-moving equipment shall have a roll-over protection structure (ROPS) and seat belts.

g. Trucks that are loaded by a crane, power shovel, loader, or similar equipment shall have a cab shield and/or canopy strong enough to protect the operator from shifting or falling materials. Operators will set brakes, dismount vehicles, and stand in the designated clear zone while their vehicles are being loaded.

h. All trucks, excluding pickup trucks and earth-moving equipment, shall have an audible warning device that sounds automatically when they are backing up. The sound will be able to be heard at least 200 feet away.

i. Smoking during vehicle refueling is prohibited.

j. All vehicles shall be operated in a safe manner. Earth-moving equipment will not exceed 15 mph.

k. All vehicles will be inspected before each use and thoroughly on a regular basis in accordance with equipment operator's manual and technical service manual.

11G-6 Requirements for Fork Trucks (fork lifts/powered industrial trucks)

a. Only trained, authorized, and licensed operators shall be permitted to operate a powered industrial truck. Operators will wear appropriate PPE, i.e. Hardhat/Army Combat Helmet, Eye protection, and other PPE as required.

b. Training will include: lecture, instructor-led field/workplace practice activities, workplace hands-on evaluation.

c. Guarding. Hazardous moving parts such as chain and sprocket drives and exposed gears will be guarded to protect the operator in his normal operating position. All fork trucks will have an overhead guard in accordance with ANSI B 56.1. Exposed tires will have guards that will stop particles from being thrown at the operator.

d. Hydraulically-driven lifting systems will have a relief valve installed and suitable stops will be provided to prevent travel over of the carriage.

e. A load backrest extension will always be used when the type of load presents a hazard to the operator. The top of a load will not exceed the height of the backrest.

f. Loading:

(1) If the material being handled is obstructing the view, the operator is required to travel backwards. The operator will face the direction of travel at all times.

(2) Only loads within the rated capacity of the truck will be handled. No counter weights are allowed. A nameplate showing the weight of the truck and its rated capacity will be located in plain view on the truck.

(3) Backwards tilt will be used to stabilize the load.

(4) Loads will be checked for overloading and for loose material before making the lift.

(5) Extreme care will be taken when handling long items, i.e., bar stock, pipe, crates and lumber.

(6) The load will never be driven in an upward (lifted) position, nor raised or lowered while moving.

(7) Forks will be locked to the carriage, and the fork extension designed so as to prevent unintentional lifting of the toe or displacement of the fork extension.

(8) Bridge plates and dock boards will be strong enough to support the intended load. They will also have side boards, anti-slip surfaces, and be secured to the dock.

(9) Chocks will be used on truck/trailer wheels when unloading.

g. Inspections. All fork trucks and associated lifting jigs, apparatus, devices, and fixtures will be inspected before each use and formally by the maintenance organization on an annual basis. Date of next inspection and load rating are stenciled on the mast to the operator's left by the maintenance organization IAW TB 43-0142, paragraph 5f (4). Lifting jigs, apparatus, devices and fixtures will be stenciled in a prominent location with the same information. Stenciling must be replaced when it becomes obliterated or not clearly visible.

h. General Operating Requirements:

(1) Fork trucks will be equipped with operational horns.

(2) Steering wheel knobs are prohibited.

(3) All trucks will be equipped with a serviceable ABC fire extinguisher.

(4) Fork trucks will not be used on upper level floors unless the floors are designed for that load capacity.

(5) Diesel or gasoline fork trucks will be used in adequately vented areas only.

(6) Fork trucks will be operated at a safe speed for operating conditions. No passengers are allowed.

(7) Before dismounting the fork truck, the operator will lower the forks to the ground, shut off the motor, apply/set the emergency brake, ensure power is off, and ensure all controls are in the neutral position.

(8) No one will be allowed to pass under the elevated portion of any truck, loaded or empty.

(9) The operator will come to a stop at blind corners and before passing through doorways.

(10) Extreme caution will be taken when operating on turns, ramps, grades, or inclines.

(11) Reverse control will not be used for braking.

(12) Drive with the load pointing upgrade unless a bulky load creates poor visibility.

(13) Trucks will not be used for any purpose other than the one for which they were designed, i.e., bumping skids, pushing piles of material out of the way, using forks as a hoist, etc.

(14) When standard forks are used to pick up round objects such as rolls or drums, care will be taken to ensure the tips do not damage the load or push it against other workers.

(15) Operators of fork trucks will not move improperly loaded skids or pallets, broken pallets, or loads too heavy for the truck.

(16) Using a fork truck as an elevator for employees will only be done if the work platform is securely seated on the forks, fastened to the vertical face, and provided with handrails and toeboards. The truck will also have an overhead guard for the operator's protection. The operator will not leave the controls while the truck is being used as a man lift.

11G-7 Requirements for Hoists

a. Hoists are used to raise, lower, and transport heavy loads for limited distances. Refer to ANSI 830.7 for base mounted drum hoists, or B30.16 for overhead hoists as appropriate for specific details. Operators will be appropriately trained and licensed for the equipment operated.

b. Hoists will not be used to lift, support, or otherwise transport people unless designed for that purpose.

c. The load capacity of each hoist will be shown in conspicuous figures on the hoist body. Lifts will not be made beyond the rated capacity of the hoist, slings, chains, ropes, straps, etc.

d. All hoists will have safe operating procedures affixed to them.

e. Hoists operating on rails, tracks, or trolleys will have positive stops or limiting devices on the equipment, rails, tracks, or trolleys to prevent overrunning of safe limits.

f. Pick up loads only when they are directly under the hoist.

g. Unless they are grounded, rope-operated electric hoists will have non-conducting control cords.

h. Control cords shall be clearly marked "hoist" or "lower" or a similar verbiage combination.

i. The block shall not be lowered below the point where less than two full wraps of rope remain on the hoisting drum.

j. When lifting and moving material, the area must be clear. No one will be allowed to walk under the load.

k. No load will be left suspended without an operator at the controls.

l. When not in use, the hoist will be lifted in the upward position.

m. Hoists will be inspected before each use. Regularly scheduled detailed inspections will pay special attention to load hooks, ropes, brakes, limit switches, wear damage, and rail stops. During inspection and/or repair, the power will be disconnected and potential energy sources depleted and isolated. A warning sign stating such will be posted. See Lockout / Tagout Program details.

11G-8 Requirements for Insulated Aerial Baskets, Aerial Bucket Lifts, Aerial Boom Platforms

a. Pre-job briefings will be conducted before each job involving aerial baskets/lifts.

b. Aerial baskets, aerial bucket lifts, aerial boom platforms, etc. will be of the proper design and construction for the intended work.

c. The design limits of the equipment must be thoroughly understood and the equipment operated within the limits of its capabilities. Allow for the combined weight of the worker(s), tools, and materials.

d. Operators of aerial baskets, etc. will be licensed, trained on and familiar with the specific type of aerial basket/equipment being operated.

e. While working in a bucket or basket, workers must wear fall protection equipment with the lanyard connected to an anchor point on the boom or bucket/basket.

f. Outriggers (if so equipped) shall be positioned on pads or a solid surface.

g. Parking brakes shall be set and wheel chocks applied before using an aerial lift on an incline.

h. Controls shall be plainly marked as to their function and easily accessible to the operator. Lower level override controls shall not be operated unless permission has been obtained from the employee in the lift, except in case of emergency.

i. Maintain a minimum clearance of at least 10 feet away from the nearest overhead line. The operator's ability to judge distances is critical.

j. Aerial lift must be insulated, and uninsulated portions of the lifts must maintain the minimum approach distance from live parts. If necessary, another worker must be a spotter for the operator to ensure the minimum approach distance is maintained.

k. Daily inspections will be performed by the operator to uncover defects before they become serious in nature. A comprehensive inspection and dielectric testing will be performed by a qualified person on an annual basis.

l. Never override hydraulic, mechanical, or electrical safety devices.

m. All maintenance, both preventive and corrective, will be performed by a qualified person.

11G-9 Requirements for Lifting Slings

a. The type of sling to be used is determined by the load to be lifted. For specific details refer to ANSI B30.9, Safety Standards for Slings.

b. Fiber rope is particularly suitable for the handling of loads that may be damaged by contact with metal slings.

c. Wire rope is used widely instead of fiber rope because: It has a greater strength and durability under severe working conditions, its physical characteristics do not change when used in varying environments, it has controlled and predictable stretch characteristics, where mechanical type loop endings are employed or where swaged or pressed on termination points are used.

d. Chain slings are used when a high resistance to abrasion and corrosive substances is needed. Chain slings are generally made from alloy steels.

e. Web slings are used when lifting loads in need of surface protection; used on tubular, nonferrous, ceramic, painted, polished, highly machined, and other products with a fine or delicate surface.

f. As slings are used, factors such as abrasion, nicking, distortion, corrosion, and other factors affect their load rating. Each sling will bear a legible tag indicating its rated load capacity. Rated capacity is based on newly manufactured slings. Allowances will be made when hitches are used.

g. If loads having sharp edges or corners are to be lifted, pads or saddles will be used to protect the ropes and chains.

h. Slings will be checked daily by trained employees. Any damaged or suspected damaged slings will be removed immediately from service and made unusable.

i. Fiber ropes will be inspected every 30 days and more often if used in critical applications. Rope shall be examined over the length of the rope for wear, abrasion, broken fiber between strands, variations in size or roundness of strands, dislocation, and rotting.

j. Wire rope shall be inspected when installed, weekly during use, and regularly by a trained inspector. Wear of crown wires, broken wires, kinking, high strands, corrosion, loose wires, nicking, and lubrication shall be checked. Experience and judgment of all factors, combined with the length of time in service and the tonnage hoisted by the rope, determines when it should be discarded.

k. Chain slings will be inspected daily by personnel using the chain and semi-annually or more often by persons qualified by experience or training. A link-by-link inspection link inspection will be made to detect bent links, cracks in welded areas, transverse nicks and gouges, corrosion pits and elongation (stretching by overloading).

l. Web slings will be inspected by the user each time they are used. Periodic inspections will be made by a person experienced in the inspection of web slings. Web slings will be checked for abrasive wear, cuts, tears, snags, punctures, deformations.

Chapter 11H
Safety Signs and Markings

11H-1 Introduction
All personnel have a responsibility to warn personnel about hazards that exist in the workplace. All units will have established safety signs and markings using easily understood uniform symbols on labels and signs. Signs and markings will be properly posted as required. Refer to annex A of this regulation for examples.

11H-2 Purpose
The purpose of this Chapter is to establish Fort Bliss guidelines and specifications for safety colors, signs and markings. This chapter is intended to coincide with DA PAM 385-11 to cover all signs except those designed for streets and railroads. This chapter does not apply to bulletin boards or safety posters.

11H-3 Standards Governing Safety Signs and Markings
a. The Department of the Army specifications are cited in DA PAM 385-11, Guidelines for Safety Color Codes, Signs, Tags, and Markings.

b. Occupational Safety and Health Administration (OSHA): Specifications for

safety signs, accident prevention signs and safety tags are cited in 29 CFR 1910.145 and 29 CFR1926.200.

c. NFPA Standards for accident prevention signs, markings and tags are cited in NFPA 470 and 180.

11H-4 Selecting Signs or Markings

The first consideration when selecting a safety sign to identify a hazard is to determine the probability and severity of a potential injury if a person does not follow the instructions contained on the safety sign.

11H-5 Wording of Safety Signs

Signs shall be concise, easy to read, bi-lingual, easily understood, and can also be depicted in a picture (as appropriate).

11H-6 Placement of Signs

a. Signs will be placed to alert and inform employees of hazards in sufficient time for the employees to avoid the hazard and take appropriate action. Personnel should be able to see the sign in a safe viewing distance.

b. Signs will be placed so they are legible, do not create a distraction, and are not a hazard in themselves.

c. Safety signs shall not be located in areas where they may be removed by the motion of the hazardous device, or rendered ineffective by situational conditions of the hazard. These alerting devices shall not be blocked by moveable panels such as doors, windows, racks, gates, and so forth.

d. Safety signs shall be displayed with illumination, as needed, for adequate legibility under normal operating conditions. For situations other than normal operating conditions, such as emergency conditions, power failure, and so forth, where illumination may be interrupted, the sign should be made with photo luminescent and/or retro-reflective materials, and/or equipped with emergency lighting.

11H-7 Classifications/Types of Signs

a. Hazard Classifications of signs:

(1) Danger signs: Indicates immediate danger and that special precautions are necessary. DA Pam 385-11 specifies that the red, black and white colors used for Danger signs will be in accordance with OSHA 1910.145, 1926.200 and ANSI Z53.1-1967.

(2) Caution signs: Warns against potential hazards or caution against unsafe practices. OSHA specifies that the standard color for Caution signs shall have a yellow background black panel and yellow letters. All letters used against the yellow background shall be black. The colors must be in accordance with ANSI Z53.1-1967.

(3) Warning signs: Indicates a potentially hazardous situation which, if not avoided could result in death or serious injury.

(4) Safety instruction signs: Used where there is a need for general instructions and suggestions relative to safety measures. DA specifies that the standard color for Safety Instruction signs shall be a white background, green panel and white letters. Any

letters used on the white background shall be black. The colors must be in accordance with ANSI Z53.1-1967.

b. Types of Safety Symbols

(1) There are four types of safety symbols that communicate different messages hazard alerting, prohibition, mandatory actions, and information.

(2) General. Safety symbols should be used, whenever practical to do so. A safety symbol is a configuration consisting of an image, with or without a surround shape, which conveys a message without the use of words. It may represent a hazard, a hazardous situation, a precaution to avoid a hazard, a result of not avoiding a hazard, or any combination of these messages.

(a) Hazard alert symbol. This is the general warning symbol. It is used to alert the user to potential hazards. All safety messages that follow this symbol shall be obeyed to avoid possible harm.

(b) Prohibition symbol. This type of safety symbol conveys actions that should not be taken or should be stopped. For prohibition, use of the surround shape is mandatory.

(c) Mandatory symbol. This type of safety symbol conveys actions that should be taken to avoid hazards. If a surround shape is desired, the symbol should consist of a white image within a solid Safety Blue circular surround shape.

(d) Information symbol. This type of safety symbol is generally used on general safety or fire safety signs to convey equipment location, egress, permitted actions, and fire equipment location.

(3) Symbols and messages. Two panel signs can be used to display both the symbol and the message. When symbols are used with a word message, safety symbols shall be compatible with the word message. A symbol may only be used to substitute for a portion or all of a word message, if it has been demonstrated to be satisfactorily comprehended, or if there is a means (for example, instructions, training materials, manuals, and so forth) to inform personnel of the symbol's meaning.

11H-8 Other Signs

a. Slow Moving Vehicles (vehicles designed to travel at or less than 25 MPH) will have a Fluorescent, Yellow-Orange triangle with a dark red reflective border. The triangle will be a highly visible color for daylight hours.

b. Explosive Fire Hazard and Chemical signs will be IAW DA PAM 385-64.

11H-9 Safety Markings

a. Safety tags

(1) Safety tags will be used to prevent accidental injury or illness to personnel exposed to hazardous or potentially hazardous conditions, equipment, or operations that are not ordinarily expected or not readily apparent.

(2) Safety tags will have a single warning with a major emphasis warning.

(3) Safety tags will be affixed using a positive connecting means (nylon tie wrap, durable string, wire, adhesive, or other means that will prevent unintentional removal) as close to the hazard as possible without causing undo exposure to personnel. Barrier tape will provide separation from the hazard and will be placed as to not create a hazard

in itself.

(4) Safety tags will remain in place until the identified hazard has been eliminated.

b. Barrier tape

(1) Barrier tape will also be used to prevent accidental injury or illness to personnel exposed to hazardous or potentially hazardous conditions, equipment, or operations that are not ordinarily expected or not readily apparent.

(2) Barrier tape will have a single warning with a major emphasis warning.

(3) Barrier tape will remain in place until the identified hazard has been eliminated.

c. Safety Marking Colors

(1) Safety Paint Markings Use luminous paint to mark the location of exits and emergency equipment in low light areas.

(a) Paint Color Code

(1) Red: Fire
(2) Yellow: Caution
(3) Green: Safety
(4) Black White and Yellow: Traffic or Housekeeping
(5) Blue: Safety Information
(6) Orange: Dangerous moving parts or Energized Electrical Equipment

Chapter 11I
Fire Prevention and Protection

11I-1 Introduction This chapter supplements the requirements of the Fort Bliss Fire Prevention Guidebook. It does not supersede any fire guidance. The Fort Bliss Fire Chief is the Authority Having Jurisdiction (AHJ) in matters pertaining to fire safety.

11I-2 Purpose To provide all personnel Fire Prevention and Protection guidelines and ensure commanders at all levels continue oversight of their Fire Protection programs.

11I-3 Fire Prevention Plans Fire Prevention Plans within the unit should include (but is not limited to) the following:

a. A system for reporting fires (see annex B of this regulation) Fort Bliss label 5.
b. Procedures for sounding alarms.
c. Evacuation procedures.
d. Type and use of appropriate firefighting equipment.
e. Application and meaning of each type of fire and hazard symbol.

11I-4 Training

a. Training is a vital part of the Fort Bliss fire protection and prevention program. All personnel must be trained in:

(1) Reporting fires
(2) Evacuating personnel
(3) Accounting for all personnel
(4) Fighting fires

(5) Inspecting
(a) Workplace areas for fire hazards
(b) Fire alarms and smoke alarms
(c) Fire extinguishers

b. Training should include an understanding of individual responsibilities during fire drills and fire training exercises.

11I-5 Inspection and Maintenance of Fire Extinguishers

a. All personnel are responsible for identifying, reporting and/or turning in to the building manager (for immediate replacement) any fire extinguisher which is broken, discharged or beyond the 6 year hydrostatic testing requirement.

b. Inspections of fire extinguishers will be accomplished on a monthly basis by the user (i.e., Arms Rooms is the Armorer). All fire extinguisher inspections must be documented in writing and available for review. NOTE: These inspections cannot be documented on an erasable form.

c. Fire extinguisher maintenance must be conducted through an off post contractor. Replacement extinguishers may be purchased locally.

Chapter 11J
Ergonomics Program

11J-1 Purpose

Prevent injuries and illness by eliminating or reducing worker exposure to Work-related musculoskeletal disorder (WMSD). Training of personnel on workplace hazards related to ergonomics and their prevention.

11J-2 Scope

Ergonomics covers all personnel and their interaction in the workplace. Consideration is given to the design of the workplaces, environment, jobs, tasks, equipment, and processes in relationship to human capabilities and interactions in the workplace.

11J-3 Responsibilities

Commanders will appoint an Ergonomics Program representative who may be the Occupational Safety and Health (or Safety Officer) Representative for the unit. The representative's responsibilities are:

a. Provide information about problematic work areas to the Ergonomics Team within the organization. Issues not resolved will be forwarded to the Installation Medical Authority for resolution.

b. Contact Installation Industrial Hygiene department to conduct a survey of the working area.

c. Coordinate and participate in unit activity work area assessments, solution identification, personnel training and education efforts, and health care management issues.

d. Brief the Commander on Ergonomic Program issues, activities and recommendations.

11J-4 Goals

To prevent injuries and illness by eliminating or reducing worker exposure to Work-Related Musculoskeletal Disorders (WMSD) risk factors.

a. Reduce the potential for fatigue, error, and unsafe acts by adapting the job and workplace to the worker's capabilities and limitations.

b. Increase the overall productivity of the work force.

c. Improve overall unit readiness.

11J-5 General

a. Do not direct the warm airflow from the CPU and disk drives toward you.

b. Use anti-static floor mats or other static grounding in low humidity workplaces.

c. Place equipment on and around your desk IOT avoid overcrowding so that when you perform routine tasks:

(1) Your shoulders are relaxed.

(2) Your upper arms are close to your body.

(3) The angle between your upper arm and forearm is in the range of 75 to 135 degrees.

(4) Your wrists are bent no more than 5 degrees right or left and no more than 10 degrees up and down.

(5) Ideally, your desk/work stations should have an adjustable surface large enough to accommodate a monitor and a separate, adjustable keyboard tray. Adjustable desktops and keyboard trays allow for different operators and a variety of tasks to be performed.

(6) If a fixed height desk is used, add a keyboard tray that adjusts vertically to provide added adjustability. The minimum adjustment range for this tray should be 22 inches to 28 inches from the floor.

(7) Adjust your chair to a comfortable position, adjust the keyboard tray to allow you to type with the angle between your upper and forearm in the range of 75 to 135 degrees, and your wrists bent no more than five degrees.

(8) Right or left and no more than 10 degrees up or down. Adjust the monitor support surface to allow you to gaze slightly down to view the center of the screen.

(9) Desk clearance underneath should be 15 inches for knees, and 23.5 inches for feet. Minimum under-desk clearance width should be 20 inches.

(10) Allow at least 16 inches between monitor and eyes.

(11) Taller workers or workers with a history of back pain may be more comfortable with a height-adjustable desk, a sit/stand desk, or a standing workstation. The minimum adjustment range for a keyboard tray on a standing workstation should be 34 inches from the floor.

(12) Avoid prolonged repetitive motions of any kind.

(13) Avoid stressful physical motions for any lengthy period of time.

(14) Lift with legs and observe two-man lift requirements. Generally, anything over 25 lbs. should be handled as potentially injurious to lower back when lifted from any position.

(15) Remove common lifts as much as possible and/or decrease their load for

workers (engineer out/remove hazard).

(16) Teach workers to not make sudden or abrupt moves when lifting.

(17) Pushing objects is preferred over pulling.

(18) Use mechanical assets with lift as much as possible.

(19) Lift only stable balanced loads manually.

(20) Keep in mind that relatively light loads when unbalanced or improperly lifted can and do cause injury to workers every day. Additionally, repetitive motions that may not seem harmful can be harmful. For example, using a computer mouse for more than four hours per day over a period of time, depending on the individual, can cause repetitive stress injuries.

(a) In 1996, more than 647,000 American workers experienced serious injuries due to overexertion or repetitive motion on the job. These work related musculoskeletal disorders (WMDS) account for 34 percent of lost workday injuries. WMSDs cost employers an estimated $15 to $20 billion in workers compensation costs in 1995 and $45 to $60 billion more in indirect costs.

(b) DOD's Ergonomics Working Group contains a vast amount of information concerning ergonomics at:
http://phc.amedd.army.mil/topics/workplacehealth/ergo/Pages/default.aspx

(c) OSHA also contains a vast amount of information concerning ergonomics at:
https://www.osha.gov/SLTC/ergonomics/index.html

Chapter 11K
Fall Protection

11K-1 Purpose This Chapter is designed to ensure that employees are aware of the requirements for the usage of Fall Protection and arrest when it is required Personal Protection Equipment (PPE).

a. This chapter is not a substitute for any of the provisions of the Occupational Safety and Health Act of 1970 or for any standards issued by the U.S. Department of Labor.

b. The issues of how to provide fall protection for employees at construction sites or within general industry are difficult ones. There are so many different types of work and so many different kinds of fall hazards that it is not possible to organize fall protection into a neat set of rules that fit all situations. OSHA reflects this difficulty when it places its rules for fall protection in several different subparts in the Construction and General Standards, depending primarily on the nature of the work being undertaken. There are separate locations, for example, for fall protection during work on scaffolds, work on certain cranes and derricks, work in tunnels, work on stairways and ladders, steel erection, confined space, etc.

11K-2 General Rule If an employee can fall six feet or more onto a lower level, fall protection must be provided.

a. Required Fall Protection.

b. In most cases, a guardrail system, a safety net system, or a personal fall arrest system must be used. In some cases fences, barricades, covers, equipment guards or a controlled access zone may be used.

c. Employees must be protected not just from falling off a surface, but from falling through holes and from having objects fall on them from above.

d. An organization may use a variety of fall protection systems to protect employees.

e. These systems must meet OSHA requirements.

f. The competent person. OSHA Standard defines a competent person as someone who is:

(1) Capable of identifying existing and predictable hazards in the surroundings, or working conditions which are unsanitary, hazardous, or dangerous to employees.

(2) Authorized to take prompt corrective measures to eliminate them.

(3) Capable of and required to make frequent and regular inspections to determine if these systems meet OSHA requirements before employees rely on these systems. More specific detail may be found in 29 CFR 1926.502.

g. Employers engaged in leading edge work, precast concrete erection work, or residential construction work who can demonstrate that it is infeasible or it creates a greater hazard to use conventional fall protection equipment may develop a fall protection plan that provides other measures to be taken to reduce or eliminate fall hazards for workers. Fall protection plans must:

(1) Conform to OSHA provisions and be prepared by a qualified person.

(2) Identify locations where conventional fall protection methods cannot be used and set up controlled access zones and any necessary safety monitoring systems.

(3) Fall protection Plans must be reviewed and signed off by the Garrison Safety Office before the plan can be executed.

11K-3 Personal Fall Arrest Systems (PFAS)

a. Personal fall arrest system places the employee into a body harness that is fastened to a secure anchorage so that he/she cannot fall.

b. Body belts are not acceptable as personal fall arrest systems and will not be authorized for usage. A few key requirements:

(1) There should be no free fall more than six feet.

(2) There should be prompt rescue after a fall.

(3) PFAS's must be inspected prior to each use.

(4) PFAS's must not be used until they have been inspected by a competent person.

11K-4 Guardrail Systems

Guardrail systems provide a barrier to protect the employee from falling:
Top edge of the guardrail must be 39-45 inches above the walking/working level. There must also be protection from falling between the top rail and the walking/working surface. Midrails, screens, mesh, or intermediate vertical members may be used for this protection to include toeboards. There are specific requirements for their Garrison.

The protective barriers must be strong enough to support a falling employee. Wood, chain and wire rope may be used for top rails and midrails.

11K-5 Safety Net Systems Safety net systems catch the employee if he/she does fall. The safety nets must:

a. Be strong enough to support a falling employee.

b. Have sufficiently small mesh openings so the employee cannot fall through the net;

c. Be close enough to the surface of the walking/working surface so that the fall into the safety net will not still injure the employee (never more than 30 feet below the walking/working level);

d. Be close enough to the edge of the working surface (the outer edge of the net between 8-13 feet from the edge of the walking/working surface, depending on the distance to the walking/working surface) so that the falling employee will not slip past the net.

11K-6 Holes

a. Personal fall arrest systems, covers, or guardrail systems shall be erected around holes (including skylights) that are more than 6 feet above lower levels. NOTE- All floor holes must be protected against slips/trips- even if less than six feet above lower levels.

b. Employees on a form scaffold can be exposed to falls of less than 10 feet.

11K-7 Excavation

a. Employees at the edge of an excavation six feet or more deep shall be protected from falling by guardrail systems, fences, barricades, or covers.

b. If walk-ways are used to permit workers to cross over excavations, guardrails are required on the walkway if the fall would be 6 feet or more to the lower level.

11K-8 Roofs If workers are working on roofs with unprotected sides and edges six feet or more above lower levels, they shall be protected from falling by guardrail systems, safety net systems, personal fall arrest systems or a combination of a warning line system and guard-rail system, warning line system and safety net system, warning line system and personal fall arrest system, or warning line system and safety monitoring system.

11K-9 Wall Openings Employees working on, at, above, or near wall openings where the outside bottom edge of the wall opening is 6 feet or more above lower levels and the inside bottom edge of the wall opening is less than 39 inches above the walking/working surface must be protected from falling by the use of either a guardrail system, a safety net system, or a personal fall arrest system.

11K-10 Training

a. Training must be provided to each employee who might be exposed to fall hazards. In construction, and some general industry this will involve most employees. The training by a competent person must enable each employee to recognize the

hazards of falling and train employees in the procedures to be followed to minimize these hazards.

b. The training must include:

(1) The nature of fall hazards in the work area;

(2) The correct procedures for erecting, maintaining, disassembling, and inspecting the fall protection systems to be used;

(3) The 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;

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

(5) The limitations on the use of mechanical equipment during the performance of roofing work on low-sloped roofs;

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

(7) The role of employees in fall protection plans.

(8) The employer must verify compliance with the training requirements by preparing a written record of the training. The employer must retrain any employee, when the employer has reason to believe that the trained employee does not have the understanding and skill required.

11K-11 Requirements for Fall Protection and Arrest Systems OSHA requires employers to provide fall protections systems that must meet certain criteria:

a. Walking and working surfaces must have sufficient strength and structural integrity to support employees safely.

b. Employers must provide protection to employees working in areas with unprotected sides or edges 6 feet or more above a lower level.

c. Specific types of protection are required in work areas with leading edges, in hoist areas, in work areas with holes, ramps, runways, and other walkways, in areas where excavations are being conducted, where dangerous equipment is being used, during overhand bricklaying, in roofing, in precast concrete erection, in residential construction, and in work areas with wall openings.

d. Hard hats are required when workers may be exposed to falling objects.

e. Other requirements include either:

(1) Use of toeboards, screens or guardrail systems; or

(2) Use of a canopy structure; or

(3) Barricading area to which objects could fall and prohibiting employees from entrance.

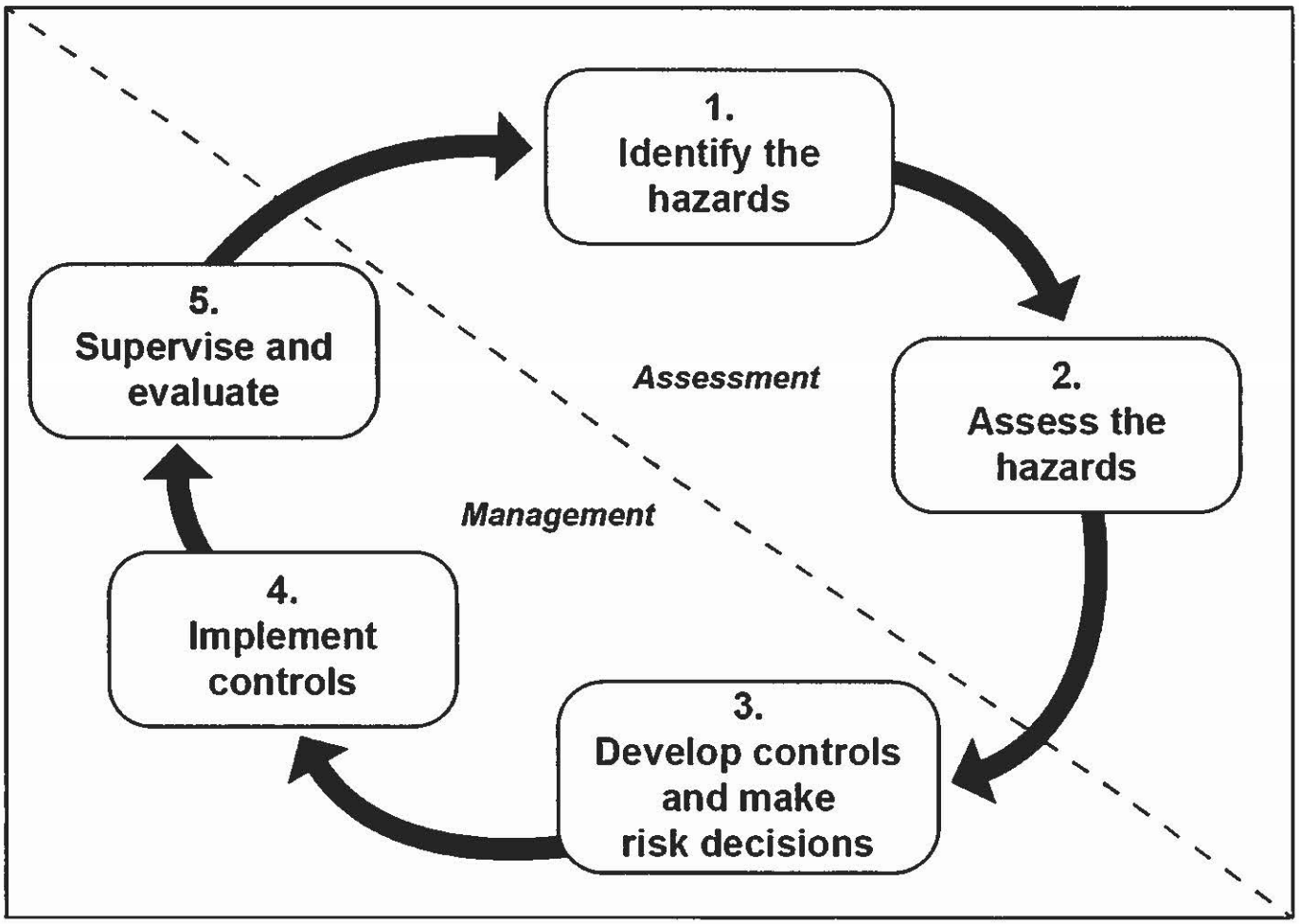
Chapter 12
Deliberate Risk Management

12-1 Risk Analysis/Risk Assessment

a. Commanders will ensure that risk assessments IAW ATP 5-19, Risk Management are completed and approved at the required level prior to all missions and training events 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 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.



12-2 Deliberate Risk Management

a. Deliberate Risk Management (DRM) is a decision-making process. The process of managing risks makes operations safer without compromising mission

accomplishment. The deliberate risk management is a part of the MDMP. Experience indicates that mission-stopping accidents occur when:

(1) Soldiers are unaware of, or do not recognize hazards.
(2) Standards or countermeasures are not followed.
(3) Shortfalls in equipment selection for mission.
(4) Shortfalls in training for mission.

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, training requirements and equipment selection. Good mission analysis makes it possible to systematically and objectively put safety and mission accomplishment 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 key to risk management is hazard identification, development of task to mitigate risk, and enforcement of standards.

e. Leaders at every level must ensure that mission and 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 execution 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.

12-3 Basic Rules of Risk Mitigation

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/subordinates from unnecessary risk. An unnecessary risk is one that, if eliminated, still allows mission accomplishment.

b. Make risk decisions at a level consistent with the commander's guidance. The leader responsible for the mission will make the risk decisions and request/receive approval of the risk from the required level of command.

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 ATP 5-19 Risk Management. Sample risk management work sheets with instructions are found in ATP 5-19.

12-4 Leader Responsibility

a. Detect hazards and associated risks. Determine the risk associated with each operation/task. 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. 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) Ensure 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.

f. After mission completion, evaluate risk decisions and controls for inclusion in lessons learned.

12-5 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.

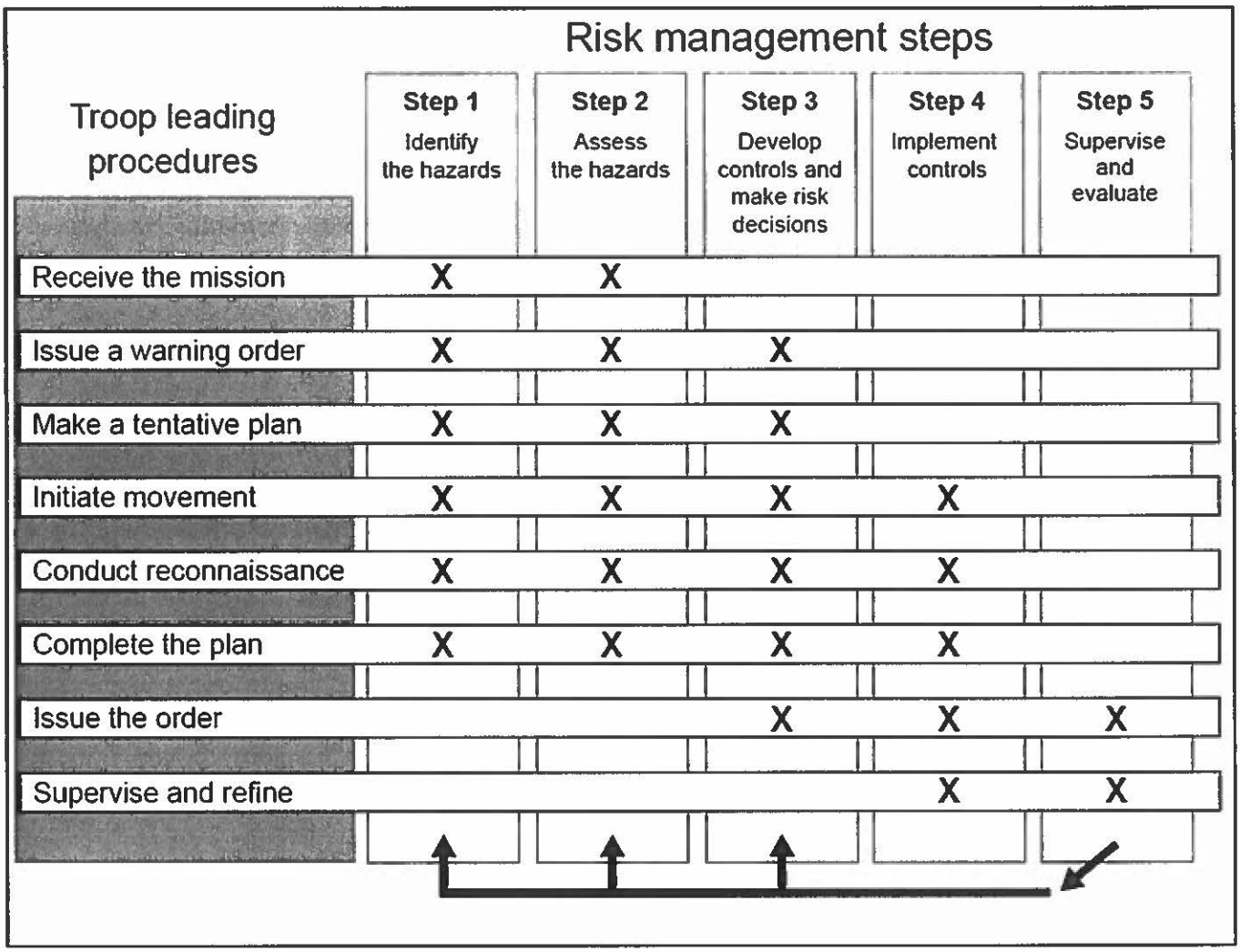
(3) Soldier endurance. Soldier endurance is measured by comparing the length and quality of the mental and physical preparation of the soldiers before the event with adjustment (acclimation) to the area of operation. Highly trained, physically fit soldiers who have adjusted to the climate are less likely 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:

(1) Extremely High (EH)

(2) High (H)

(3) Medium/Moderate (M)
(4) Low (L)

c. Following are definitions of Risk Assessment Matrix: Probability and Severity. These definitions must be applied to fit local conditions and requirements with experience, background information and historical data.

(1) Probability

(a) Frequent, likely to occur frequently in the life of the system, item, facility, etc.

(b) Likely, Will occur several times in the life of an item.

(c) Occasional, Likely to occur sometimes in the life of an item.

(d) Seldom, Unlikely but possible to occur in the life of an item.

(e) Unlikely, Unlikely it can be assumed occurrence may not be experienced.

(2) Severity

(a) Catastrophic. Death, total impairment of mission capability, serious injury (permanent total disability), or loss of an entire facility or system.

(b) Critical. Serious injury (permanent partial or temporary total disability), serious impairment of mission capability, serious damage to critical facility or system.

(c) Moderate. 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) Negligible. First aid injury or minor supportive medical care, minor or no mission impairment, or minor facility or systems impairment.

Risk Assessment Matrix		**Probability** *(expected frequency)*				
		Frequent: Continuous, regular, or inevitable occurrences	**Likely:** Several or numerous occurrences	**Occasional:** Sporadic or intermittent occurrences	**Seldom:** Infrequent occurrences	**Unlikely:** Possible occurrences but improbable
Severity *(expected consequence)*		**A**	**B**	**C**	**D**	**E**
Catastrophic: *Mission failure, unit readiness eliminated; death, unacceptable loss or damage*	**I**	**EH**	**EH**	**H**	**H**	**M**
Critical: *Significantly degraded unit readiness or mission capability; severe injury, illness, loss or damage*	**II**	**EH**	**H**	**H**	**M**	**L**
Moderate: *Somewhat degraded unit readiness or mission capability, minor injury, illness, loss, or damage*	**III**	**H**	**M**	**M**	**L**	**L**
Negligible: *Little or no impact to unit readiness or mission capability; minimal injury, loss, or damage*	**IV**	**M**	**L**	**L**	**L**	**L**
Legend: **EH** - Extremely High Risk **H** - High Risk **M** - Medium Risk L - Low Risk						

12-6 Risk Assessment Approval Authority

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. The highest residual risk remaining is the overall risk.

a. Commanders must be personally involved in the review and approval process of the risk assessment. Risk assessment signature authority will not be delegated unless on Assumption of Command Orders. Risk assessment signature authority levels are as follows:

(1) Extremely High Risk: The first General Officer in the chain of command.
(2) High Risk: Brigade commander (O-6).
(3) Medium/Moderate Risk: Battalion commander (O-5).
(4) Low Risk: Battery or company commander.

NOTE: All EH assessments must be reviewed by the 1AD Safety Office for processing to the General Officer (GO) level. Tenant units will route EH assessments through their respective GO review/approval chains.

c. The Ground Risk Assessment Tool (GRAT) is an interactive, automated online system developed to augment risk management planning and decision making for ground operations. GRAT assists users in identifying, assessing, and controlling hazards associated with specific missions or tasks and also produces a risk management worksheet. GRAT empowers Leaders and Soldiers to reduce accidental loss and injury by incorporating risk management into a quick, user-friendly system that eases the mission planning process. By providing users with up-to-date accident statistics, relevant accident vignettes and guidance including regulations, training circulars, field manuals, and tactics, techniques and procedures, GRAT helps users capture a complete picture of hazards and controls they may not have previously considered. See GRAT tool at: https://grat.safety.army.mil/GRAT/EntryLogin.aspx.

Chapter 13
Hazard Identification and Abatement Program

13-1 General
The identification and correction of unsafe practices and unsafe physical conditions through safety inspections is essential to a successful accident prevention program.

13-2 Inspections
To properly direct efforts to eliminate the cause of accidental injuries and property damage, safety inspections must be conducted at all levels. Minimum requirements for recurring safety inspections are as follows:

a. Administrative Buildings/Offices- **annually**; Classrooms- **annually**; Public Gathering Areas- **monthly**; USAR and ARNG Tenant Unit Facilities- **semi-annually**; Barracks Facilities- **monthly**; Dining Facilities (DFACS)- **semi-annually**; Industrial Plant Operations- **semi-annually**; Heavy Maintenance Facilities- **semi-annually**.

b. Training Areas/Ranges. The DPTMS Range Safety Officer will conduct inspections of high risk ranges and training areas quarterly; medium risk areas, semi-annually; and low risk areas annually. Deficiencies will be reported to Garrison Safety for inclusion on the Fort Bliss Hazard Abatement Log. Using unit of all occupied ranges and training areas will conduct a daily walk-through inspection to ensure that potential hazards are identified and reported to Range Operations Safety officer.

c. Special Safety Inspections. GSO will conduct special safety inspections in response to OSHA/safety violation complaints.

d. All personnel have a responsibility to report safety hazards and safety violations to their supervisor. Additional and Collateral Duty Safety Officers will inspect operations, low risk facilities and record the results of the inspection on DA Form 4754, (Violation Inventory Log) or electronic equivalent.

e. GSO personnel will inspect work sites and facilities on all directorates using the Standard Army Safety and Occupational Health Inspection (SASOHI) procedures described in AR 385-10. These inspections may be conducted with or without prior notification.

(1) A report of deficiencies observed by GSO during the inspection will be provided to the director/chief of the activity inspected. These reports will cite hazard severity, safety program achievements and deficiencies, and recommended corrective action. A copy of all surveys will be maintained by the Directorate/Activity Safety Manager/Officer for a period not less than one year.

(2) The directorate or activity inspected will be required to respond to the GSO in writing concerning corrective action taken on each cited deficiency within the time frame indicated on the inspection report. Follow-up procedures will be established by the directorate/ activity to ensure each deficiency is corrected.

(3) After the prescribed period, the GSO will reinspect a representative sample of noted deficient areas to ensure corrective action/abatement has been put in place, and whether this meets minimum safety standards. Abatement plans will be further followed up to ensure continued compliance on a quarterly basis, and to ensure a proper corrective action plan is being created.

13-3 Abatement Plans

a. The establishment of a site-specific abatement plan is required by 29 CFR Part 1960, Occupational Safety and Health Programs for Federal Employees. These plans are required by DOD and the U.S. Army for all RAC 1 through RAC 3 violations requiring more than 30 days to correct.

b. Each directorate or activity will have its own internal abatement plan unique to its operations and functions, outlined in an SOP, policy letter, or memorandum. The ultimate goal of the internal abatement plan is to identify, abate, correct and prevent

unsafe or unhealthful working conditions. The internal abatement plan will periodically undergo assessment by knowledgeable personnel, results provided to management, and changes/improvements incorporated where necessary to strengthen the plan and improve the organization.

c. Violations often require abatement plans, a completed DA 4756 or electronic equivalent, solely because preparing, processing, scheduling, and actually doing the work requires more than 30 days. The GSO will assign a RAC to the work request and return to the POC for submission to DPW.

d. GSO will track all RAC 1 and RAC 2 hazards using DA Form 4756 (Installation Hazard Abatement Plan).

13-4 Reports of Unsafe or Unhealthful Working Conditions

a. Reports of unsafe or unhealthful working conditions will be handled at the operational level using the recognized Chain of Command whenever possible to ensure timely correction in the following order of priority:

(1) Oral reports directly to the supervisor.

(2) Reports through operational channels.

(3) Phone calls or memos to the GSO.

(4) The Army Hazard Reporting System.

b. The Army Hazard Reporting System provides a route for personnel to bring complaints directly to the Garrison level, by passing intermediate commands or supervisory elements.

(1) If an employee is not satisfied with the action taken to correct the alleged condition, they may make a written report to the GSO Director, on DA Form 4755 (Employee Report of Alleged Unsafe or Unhealthful Working Conditions) or telephonically to the GSO at (915) 568-2510. DA Form 4755 is available at the Army Publications Directorate at http://armypubs.army.mil. Refer to the organization's DD Form 2272, DOD Safety and Occupational Health Protection Program, posted on directorate and workplace bulletin boards for reporting hazards. DD Form 2272 will be current, signed, prominently displayed and available for review by all personnel.

(2) Reports submitted to the GSO will be investigated per AR 385-10 and DA PAM 385-10.

(3) All reports will be investigated by a safety or health professional. The originator, if known, will be notified of the results of the investigation in writing within 10 working days following receipt of the hazard report.

(4) If the originator is dissatisfied with the Garrison Safety Director's response, they may appeal to the Garrison Commander who will review the findings and take appropriate action.

(5) If the originator is dissatisfied with the Garrison Commander's response, they may appeal in accordance with DA PAM 385-10.

(6) Substantiated conditions will be documented on a DA Form 4753, Notice of Unsafe or Unhealthful Working Condition and posted at the location by the GSO until the condition is mitigated or repairs are made to eliminate the unsafe condition or hazard requiring the DA Form 4753. Once posted, only GSO personnel may remove the DA Form 4753.

c. Reports of unsafe or unhealthful working conditions may be reported directly to the U.S. Department of Labor via an OSHA complaint procedure under the provisions of the Occupational Safety and Health Act of 1970, Public Law 91-596. OSHA poster 3165, Job Safety and Health, It's the Law will be prominently posted in a central location in all work areas and on administrative bulletin/information boards to explain the process and outline general worker rights.

Chapter 14
Rail Safety

14-1 Introduction
There are many hazards that exist during railway train operations, including human errors, recklessness, mechanical failures, collisions, and wrecks. Operating rules and safety rules have been formulated over time to mitigate those dangers and are outlined TM 4-14.21, Rail Safety. In addition to those requirement, units conducting rail operations will adhere to the following standards:

14-2 Standards
Commanders and all Leaders will ensure:

a. Prior to mission training, key leaders and trainers are familiarized with the rail head site, all operational and local SOPs, site opening and clearance procedures.

b. Company Commander or First Sergeant will be present at all times.

c. No POV's present at the railhead.

d. Soldiers are in the prescribed PPE (ACH, Gloves, Eye protection and a reflective vest/belt).

e. No use of personal cell phones or electronic devices by Soldiers executing rail load operations.

f. No horse playing at rail head site.

g. Soldiers follow safety procedures required in TM 4-14.21, Rail Safety.

h. Rail load Safety OIC and NCOIC (E-7/above) appointed specifically for oversight of rail load safety. These two personnel will not be the OIC/NCOIC of the operation.

i. A thorough pre-operation safety brief and walk-through is conducted.

j. Soldiers know ground guide procedures.

k. Soldiers never ground guide from the same train car as the one the moving vehicle is on.

l. Soldier never walk backwards while ground guiding.

m. Soldiers have adequate time to safely accomplish the mission.

n. A Deliberate Risk Assessment is conducted, approved by the Commander, briefed and available on site.

Chapter 15
Tactical Safety

See Fort Bliss Regulation 385-63, Fort Bliss Training Center Range Operations, Annexes L, M, and Map H-9.

Appendix A
References

Section I
Required Publications
Unless otherwise stated, all publications are available at http://www.apd.army.mil/.
AR 9-11
U.S. Army Radiation Safety Program
AR 385-10
The Army Safety Program
AR 385-63
Range Safety
AR 750-43
Army Test, Measurement, and Diagnostic Equipment (TMDE)
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 385-25
Occupational Dosimetry and Dose Recording for Exposure to Ionizing Radiation
DA Pam 385-26
Army Electrical Safety Program
DA Pam 385-30
Mishap Risk Management
DA Pam 385-40
Army Accident Investigations and Reporting
DA Pam 385-64
Ammunition and Explosives Safety Standards
DA Pam 385-65
Explosives and Chemical Site Plan Development and Submission
DA Pam 385-90
Army Aviation Accident Prevention Program
FB REG 5-13
Fort Bliss Training Complex Ammunition Regulation
FB REG 190-5
Military Police: Motor Vehicle Traffic Supervision
FB Regulation 385-63
Fort Bliss Training Center Range Operations
FB ISCP 5285043
U.S. Army Corps of Engineers – Tulsa District – Installation Spill Contingency Plan – Fort Bliss 5285043
ANSI N13.30
American National Standards Institute, Performance Criteria for Radio Bioassay

ANSI Z136.1
American National Standards Institute, American National Standards for Safe Use of Lasers
DODI 6055.11
Protection of DOD Personnel from Exposure to Radiofrequency Radiation and Military Exempt Lasers
FM 8-50
Prevention and Medical Management of Laser Injuries
SB 11-206
Personnel Dosimetry Supply and Service for Technical Ionizing Radiation Exposure Control
SB 742-1
Radiation Explosive Safety Program
IEEE C95.3
Institute of Electrical and Electronics Engineers, IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields

Section II
Related Publications
A related publication is a source of additional information. The user does not have to read a related reference to understand this publication. Unless otherwise stated, all publications are available at: http://www.apd.army.mil/. Executive orders and the Federal Register are available at: http://www.archives.gov/federal-register/. The CFR is available at: http://www.gpo.gov/fdsys/. USC is available at http://uscode.house.gov/.
AR 11-34
The Army Respiratory Protection Program
AR 15-6
Procedures for Investigating Officers and Boards of Officers
AR 27-20
Claims
AR 40-5
Preventive Medicine
AR 40-10
Health Hazard Assessment Program (HHA) in Support of the Army Materiel Acquisition Decision Process
AR 40-13
Medical Support – Nuclear/Chemical Accidents and Incidents
AR 40-21
Medical Aspects of Army Aircraft Accident Investigation
AR 40-66
Medical Record Administration
AR 40-501
Standards of Medical Fitness

AR 50-5
Nuclear Surety
AR 50-7
Army Reactor Program
AR 70-1
Systems Acquisition Policy and Procedure
AR 75-1
Malfunctions Involving Ammunition and Explosives
AR 95-30
Participation in a Military or Civil Aircraft Accident Safety Investigation
AR 190-5
Motor Vehicle Traffic Supervision
AR 190-30
Military Police Investigations
AR 190-54
Security of Nuclear Reactors and Special Nuclear Materials
AR 195-2
Criminal Investigation Activities
AR 200-1
Environmental Protection and Enhancement
AR 200-2
Environmental Effects of Army Actions
AR 215-1
Morale, Welfare and Recreation Activities and Nonappropriated Fund Instrumentalities
AR 360-5
Public Information
AR 385-16
System Safety Engineering and Management
AR 420-1
Army Facilities Management
AR 600-55
The Army Driver and Operator Standardization Program (Selection, Training, Testing, and Licensing)
AR 608-1
Army Community Service
AR 608-10
Child Development Services
AR 725-50
Requisition, Receipt and Issue System
AR 750-1
Army Materiel Maintenance Policy
AR 750-6
Army Equipment Safety and Maintenance Notification System

DA Pam 40-11
Preventive Medicine
DA Pam 40-21
Ergonomics Program
DA Pam 40-501
Hearing Conservation Program
DA Pam 40-503
Industrial Hygiene Program
DA Pam 40-506
The Army Vision Conservation and Readiness 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 750-8
The Army Maintenance Management System (TAMMS) User's Manual
ACGIH TLV(r)/BEI(r)
American Conference of Government Industrial Hygienists Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices (Available for purchase at http://www.acgih.org.)
ADP 5-0
The Operations Process
ADP 6-0
Mission Command
AFARS 5101.3
Agency Acquisition Regulations
AFARS 5101.4
Deviations from the FAR
ANSI Z88.2
Respiratory Protection (Available for purchase at http://www.ansi.org.)
ANSI Z88.6
Respiratory Protection – Respirator Use – Physical Qualifications for Personnel (Available for purchase at http://www.ansi.org.)
ANSI Z136
Safe Use of Lasers (Available for purchase at http://www.ansi.org.)
ANSI/ISEA Z87.1 (2010)
Occupational and Educational Personal Eye and Face Protection Devices (Available for purchase at http://www.ansi.org.)
ANSI/ASSE Z244.1-2003 (R2014)
Control of Hazardous Energy – Lockout/Tagout & Alternative Methods
ATP 4-16
Movement Control

ATP 5-19
Risk Management
DFARS 201.3
Agency Acquisition Regulations (Available at http://www.acq.osd.mil/dpap/dars/dfarspgi/current/index.html.)
DFARS 201.4
Deviations from the FAR (Available at http://www.acq.osd.mil/dpap/dars/dfarspgi/current/index.html.)
DOD 4145.26-M
DOD Contractors' Safety Manual for Ammunition and Explosives
DOD 4160.28
Defense Demilitarization
DODD 6055.9E
Explosives Safety Management and the DOD Explosives Safety Board
DODI 5154.30
Armed Forces Institute of Pathology Operations
DODI 6055.1
DOD Safety and Occupational Health (SOH) Program
DODI 6055.04
DOD Traffic Safety Program
DODI 6055.07
Mishap Notification, Investigation, Reporting, and Record Keeping
DODI 6055.08
Occupational Ionizing Radiation Protection Program
DODI 6055.15
DOD Laser Protection Program
DODI 6060.2
Child Development Programs
DODI 6060.3
School-Age Programs
DODI 6060.4
Youth Services Programs
DOD Manual 6055.09-M, Volume 7
DOD Ammunition and Explosives Safety Standards: Criteria for Unexploded Ordnance, Munitions Response, Waste Military Munitions, and Material Potentially Presenting an Explosive Hazard
DTR 4500.9, part II
Cargo Movement
DOT Safety Standard No. 218
Helmet Test Data for FY 2008 (Available at http://www.nhtsa.gov/cars/testing/comply/fmvss218/.)
EM 385-1-1
Safety and Health Requirements (Available at http://www.usace.Army.mil/.)
Emergency Response Guidebook
(Available at http://phmsa.dot.gov/hazmat/library/erg.)

EO 12196
Occupational safety and health programs for Federal employees (Available at http://www.archives.gov/.)
EO 13043
Increasing Seat Belt Use in the United States (Available at http://www.archives.gov/.)
FAR, Subparts 1.3
Agency Acquisition Regulations (Available from http://www.acquisition.gov/far/.)
FAR, Subparts 1.4
Deviations from the FAR (Available from http://www.acquisition.gov/far/.)
FAR 52.236-13
Accident Prevention (Available from http://www.acquisition.gov/far/.)
FM 1-02
Operational Terms and Graphics
FM 3-35
Army Deployment and Redeployment
FM 4-01.45
Multi-Service Tactics, Techniques, and Procedures for Tactical Convoy Operations
FM 7-22
Army Physical Readiness Training
FM 10-67-1
Concepts and Equipment of Petroleum Operations
FM 21-60
Visual Signals
FM 55 (Series)
Transportation
HSPG Number 1
Periodic Motor Vehicle Inspection (Available at http://www.nhtsa.gov/nhtsa/whatsup/tea21/tea21programs/.)
HSPG Number 4
Driver Education (Available at http://www.nhtsa.gov/nhtsa/whatsup/tea21/tea21programs/.)
HSPG Number 8
Impaired Driving (Available at http://www.nhtsa.gov/nhtsa/whatsup/tea21/tea21programs/.)
HSPG Number 20
Occupant Protection (Available at http://www.nhtsa.gov/nhtsa/whatsup/tea21/tea21programs/.)
Manual on Uniform Traffic Control Devices for Streets and Highways, Revision 1
(Available at http://mutcd.fhwa.dot.gov/.)
MIL-HDBK-828B
Department of Defense Laser Range Safety on Ranges and in Other Outdoor Areas (Available at http://quicksearch.dla.mil/.)
MIL-STD-882E
System Safety (Available at http://quicksearch.dla.mil/.)

MIL-STD-1180B (1), Change Notice 1
Safety Standards for Military Ground Vehicles (Available at http://quicksearch.dla.mil/.)
National Incident Management System
(Available at http://www.fema.gov/pdf/emergency/nims/NIMS_core.pdf.)
National Response Framework
(Available at http://www.fema.gov/pdf/emergency/nrf/nrf-core.pdf.)
National Response Framework Worker Safety and Health Support Annex
(Available at
http://www.osha.gov/SLTC/emergencypreparedness/nrp_work_sh_annex.pdf.)
NFPA 30
Flammable and Combustible Liquids Code (Available for purchase at http://www.nfpa.org.)
NFPA 70
National Electrical Code(r) (Available for purchase at http://www.nfpa.org.)
NFPA 70B
Recommended Practice for Electrical Equipment Maintenance (Available for purchase at http://www.nfpa.org.)
NFPA 70E
Standard for Electrical Safety in the Workplace(r) (Available for purchase at http://www.nfpa.org.)
NFPA 101
Life Safety Code(r) (Available for purchase at http://www.nfpa.org.)
PL 91-596
Occupational Safety and Health Act of 1970, amended 5 November 1990 (Available at http://www.gpo.gov/fdsys/.)
Snell M2005
2005 Standard for Protective Headgear for Use with Motorcycles and Other Motorized Vehicles (Available at http://www.smf.org.)
TM 3-261
Handling and Disposal of Unwanted Radioactive Material
TB 9-639
Passenger-Carrying Capacity of Tactical and Administrative Vehicles Commonly Used to Transport Personnel
(Available at https://www.logsa.army.mil/.)
TB 43-0108
Handling, Storage, and Disposal of Army Aircraft Components Containing Radioactive Materials (Available at https://www.logsa.army.mil/.)
TB 700-2
Department of Defense Ammunition and Explosives Hazard Classification Procedures (Available at https://www.logsa.army.mil/.)
TB 750-25
Maintenance of Supplies and Equipment: Army Test, Measurement and Diagnostic Equipment (TMDE) Calibration and Repair Support (C&RS) Program (Available at https://www.logsa.army.mil/.)

TB 750-43
Army Test, Measurement, and Diagnostic Equipment (TMDE) Calibration and Repair Support 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
Control of Hazards to Health from Laser Radiation
TB Med 575
Swimming Pools and Bathing Facilities
TC 21-305-20
Manual for the Wheeled Vehicle Operator
TC 21-306
Tracked Combat Vehicle Driver Training
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 (Available at https://www.logsa.army.mil/.)
Unified Facilities Criteria (UFC) 3-560-01
Electrical Safety, O & M (Available at www.wbdg.org/.)
Unified Facilities Guide Specifications 01525
Safety and Occupational Health Requirements (Available at http://www.hnd.usace.army.mil/techinfo/engpubs.htm.)
9 CFR
Animals and Animal Products
10 CFR, Chapter I
Nuclear Regulatory Commission
18 CFR
Conservation of Power and Water Resources
21 CFR, Subchapter J
Radiological Health
29 CFR 1904
Recording and Reporting Occupational Injuries and Illnesses
29 CFR 1910
Occupational Safety and Health Standards
29 CFR 1926
Safety and Health Regulations for Construction
29 CFR 1960
Basic Program Elements for Federal Employee Occupational Safety and Health Programs and Related Matters
32 CFR 655
Radiation Sources on Army Land
39 CFR
U.S. Postal Service

40 CFR
Environmental Protection Agency
42 CFR
Public Health
46 CFR
Shipping
48 CFR
Federal Acquisition Regulations System
49 CFR
Transportation
5 USC Chapter 81
Compensation for Work Injuries
42 USC 6901
Resource, Conservation, and Recovery Act
49 USC
Transportation

Section III
Prescribed Forms
Unless otherwise indicated, DA forms are available on the Army Publishing Directorate Web site (www.apd.army.mil) and SFs are available on the U.S. General Services Administration Web site (www.gsa.gov).
DA Form 2696
Operational Hazard Report
DA Form 7305
Worksheet for Telephonic Notification of Aviation Accident/Incident
DA Form 7306
Worksheet for Telephonic Notification of Ground Accident
SF 91
Motor Vehicle Accident Report

Section IV
Referenced Forms
Unless otherwise indicated, DA forms are available on the Army Publishing Directorate Web site (www.apd.army.mil);
DD forms are available on the Office of the Secretary of Defense Web site (www.dtic.mil/whs/directives/infomtg/
forms/index.htm); and SFs are available on the U.S. General Services Administration Web site (www.gsa.gov).
DA Form 67-9
Officer Evaluation Report
DA Form 87
Certificate of Training
DA Form 1119-1
Certification of Achievement in Safety

DA Form 2028
Recommended Changes to Publications and Blank Forms
DA Form 2166-8
NCO Evaluation Report
DA Form 2397-AB
Abbreviated Aviation Accident Report (AAAR) for All Class C, D, E, F, Combat A and B, and All Aircraft Ground
DA 3020-R
Magazine Data Card
DA Form 3946
Military Police Traffic Accident Report
DA 4604
Security Construction Statement
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 (Sample of ULLS-generated form available from DA Pam 750–8, The Army Maintenance Management System (TAMMS) User's Manual.)
DA Form 7222
Senior System Civilian Evaluation Report
DD Form 250
Materiel Inspection and Receiving Report
DD Form 626
Motor Vehicle Inspection (Transporting Hazardous Material)
DD Form 836
Dangerous Goods Shipping Paper/Declaration and Emergency Response Information for Hazardous Materials Transported by Government Vehicles
DD Form 1391
FY __ Military Construction Project Data
DD Form 2272
Department of Defense Safety and Occupational Health Protection Program
DD Form 2796
Post Deployment Health Assessment (PDHA)
DD Form 2977
Deliberate Risk Assessment Worksheet
OF 346
U.S. Government Motor Vehicle Operator's Identification Card (Available from GSA Global Supply; Federal agencies can order by calling 800–525–8027, Option 3 on the phone menu. Stock number is 7540–00–634–3999.)
SF 50-B
Notification of Personnel Action

SF 368
Product Quality Deficiency Report
OSHA-2H Form
Notice of Unsafe or Unhealthful Working Conditions (Form generated by OSHA and unavailable for non OSHA use.)
OSHA Form 300
Log of Work-Related Injuries and Illnesses (Available at http://www.osha.gov.)
OSHA Form 300A
Summary of Work-Related Injuries and Illnesses (Available at http://www.osha.gov.)

Appendix B
Glossary

Section I
Abbreviations

AA&E
arms, ammunition, and explosives
A&E
ammunition and explosives
ACGIH
American Conference of Governmental Industrial Hygienists
ACV
Army combat vehicle
ADR
Automated Dosimetry Report
ADSC
Additional Duty Safety Course
ADSO
Additional Duty Safety Officer
AFARS
Army Federal Acquisition Regulation Supplement
AFMES
Armed Forces Medical Examiner System
AGAR
Abbreviated Ground Accident Report
AHA
ammunition holding area
AHTP
ammunition holding and transfer point
AIB
Accident Investigation Outbrief
AIRDC
Army Ionizing Radiation Dosimetry Center
ALARA
As Low as Reasonably Achievable
ALI
annual limit intake
AMV
Army motor vehicle
ANSI
American National Standards Institute
ARA
Army Radiation Authorization

ARAP
Army Readiness Assessment Program
ARC
Advanced Rider Course
ARP
Army Radiation Permit
ARSC
Army Radiation Safety Council
ARSO
Army Radiation Safety Officer
ASARC
Army System Acquisition Review Council
ASAT
Army Safety Action Team
ASO
Aviation Safety Officer
ASP
ammunition supply point
ATSTP
Army Traffic Safety Training Program
ATTP
Army Tactics, Techniques, and Procedures
ATV
all-terrain vehicle
BAAF
Biggs Army Airfield
BEI
Biological Effectiveness Index
Bkd
background
BRC
Basic Rider Course
CAI
Centralized Accident Investigation
CBRN
Chemical, Biological, Radiological, and Nuclear
CCR
Certificate of Compelling Reason
CDRR
Central Dosimetry Records Repository
CDSC
Collateral Duty Safety Course
CDSO
Collateral Duty Safety Officer

CEDE
committed effective dose equivalent
CETASM
Canine Explosive Training Aid Storage Magazine
CFR
Code of Federal Regulations
CG
Commanding General
Cm
centimeter
COR
contracting officer representative
COTS
commercial off-the-shelf
CPR
cardio pulmonary resuscitation
CSC
Command Safety Course
CYSS
child, youth, and school services
DA
Department of the Army
DAC
derived air concentration
DARA
Deviation Approval and Risk Acceptance
DARAD
Deviation Approval and Risk Acceptance Document
DAS
Director of Army Staff
DASAF
Director of Army Safety
DASOHAC
Department of the Army Safety and Occupational Health Advisory Council
DD
Department of Defense (Form)
DDESB
Department of Defense Explosives Safety Board
DFARS
Defense Federal Acquisition Regulation Supplement
DHR
Directorate of Human Resources
DOD (DoD)
Department of Defense

DODAC
Department of Defense ammunition code
DODD
Department of Defense directive
DODI
Department of Defense instruction
DODIC
Department of Defense identification code
DODM
Department of Defense manual
DOT
Department of Transportation
Dpm
disintegration's per minute
DPTMS
Directorate of Plans, Training, Mobilization and Security
DPW
Directorate of Public Works
DRM
deliberate risk management
EIR
Equipment Improvement Report
EM
engineer manual
EMF
electromagnetic frequency
EMR
electromagnetic radiation
EO
Executive Order
EOD
explosive ordnance disposal
EPA
Environmental Protection Agency
ERC
Experienced Rider Course
ESMP
Explosive Safety Management Program
ESS
explosives safety siting
Ev
electron volt
FAR
Federal Acquisition Regulation

FARP
forward arming and refueling point
FASP
field ammunition supply point
FDA
Food and Drug Administration
FECA
Federal Employee Compensation Act
FOA
field operating agency
FOD
foreign object damage
FOIA
Freedom of Information Act
FORSCOM
U.S. Army Forces Command
FRB
Fatality Review Board
GBL
government bill of lading
GCMCA
general court-martial convening authority
GFE
government furnished equipment
GHz
Gigahertz
GSD
Garrison Safety Director
GSO
Garrison Safety Office
Gy
gray
H
hour
HAZCOM
Hazard Communication Standard
HAZMAT
hazardous materials
HBV
hepatitis B virus
HCV
hepatitis C virus
HD
hazard division

HERF
hazards of electromagnetic radiation to fuel
HERO
hazards of electromagnetic radiation to ordnance
HERP
hazards of electromagnetic radiation to personnel
HHA
health hazard assessment
HHIM
health hazard information module
HIV
human immunodeficiency virus
HMIS
Hazardous Materials Identification System
HSPG
Highway Safety Program Guidelines
Hz
hertz
IAI
Installation Accident Investigation
ICS
individually controlled sources
IDLH
immediately dangerous to life and health
IEEE
Institute of Electrical and Electronics Engineers
IEO
Installation Ergonomics Officer
IESC
Installation Explosive Safety Council
IESS
Installation Explosives Safety Specialist
IH
industrial hygiene
IMA
Installation Medical Authority
IMCOM
U.S. Army Installation Management Command
IR
ifrared
IRPD
Installation Respiratory Protection Director
IRS
Installation Respirator Specialist

JHA
Job Hazard Analysis
JP
joint publication
JWG
joint working group
KBq
Kilo Becquerel
KHz
kilohertz
Km
kilometer
LEL
lower explosive limit
LPS
lightning protection system
LRC
Logistics Readiness Center
LSO
Laser Safety Officer
M
Meter
MARS
Military Auxiliary Radio System
MC
motorcycle
mCi
millicurie
MDMP
military decision making process
MDAS
material documented as safe
MDEH
material documented as explosives hazard
MEDCOM
U.S. Army Medical Command
mg
milligram
MHE
material handling equipment
MICC
U.S. Army Mission and Installation Contracting Command
millirem
milliroentgen equivalent man

MIL–STD
military standard
ml
milliliter
Mm
millimeter
MMR
military munitions rule
MPE
maximum permissible exposure
Mrad
milliard
MRT
motorcycle refresher training
MSDS
Material Safety Data Sheet (see SDS)
MSF
Motorcycle Safety Foundation
MSHA
Mine Safety and Health Administration
MSRC
Military Sportbike Riders Course
MSv
millisievert
MTF
military treatment facility
MTS
maintenance testing specifications
NARM
naturally occurring radioactive material
NCRP
National Council on Radiation Protection and Measurements
NDI
nondestructive inspection
NDT
nondestructive testing
NEC
National Electrical Code
NETA
National Electrical Testing Association
NEW
net explosive weight
NFPA
National Fire Protection Association

NGB
National Guard Bureau
NHCS
non-hazardous confined space
NIOSH
National Institute for Occupational Safety and Health
Nm
nanometer
NRC
Nuclear Regulatory Commission
NRP
Non-ionizing Radiation Program
ODASAF
Office of the Director of Army Safety
O&E
ordnance and explosives
OF
optional form
OHR
other hard rock
OL
operating location
OSH
occupational safety and health
OSHA
Occupational Safety and Health Administration
PCE
protective clothing and equipment
PEL
permissible exposure limit
PES
potential explosives site
PHC
Public Health Command
PHz
petahertz
PMS
Preventative Medicine Services
PMV
private motor vehicle
POM
private owned motorcycle
PPE
personal protective equipment

PPM
parts per million
QASAS
Quality Assurance Specialist, Ammunition Surveillance
QD
quantity distance
QDR
Quality Deficiency Report (product)
RAC
Risk Assessment Code
RAM
radioactive material
rem
roentgen equivalent mammal
RC
Reserve Component
RDT&E
research, development, test, and evaluation
RF
radio frequency
RFR
radio frequency radiation
RFSO
Radio Frequency Safety Officer
RM
risk management
RPD
respiratory protection device
RPE
respiratory protection equipment
RPP
respiratory protection program
RSC
Radiation Safety Council/Committee
RSP
Radiation Safety Program
RSO
Radiation Safety Officer
SASOHI
Standard Army Safety and Occupational Health Inspection
SCBA
Self-contained breathing apparatus
SDDC
Surface Deployment and Distribution Command

SDS
Safety Data Sheet
SF
standard form
SOH
safety and occupational health
SOHAC
Safety and Occupational Health Advisory Council
SOP
standing operating procedure
SSRA
system safety risk assessment
SSSP
Site Safety Submission Plan
STEL
Short-Term Exposure Limit
Sv
Sievert
TB
technical bulletin
TC
tank commander / track commander
TDA
table of distribution and allowance
TEDE
total effective dose equivalent
THz
terahertz
TIG
The Inspector General
TLD
Thermo-Luminescent Dosimeter
TLV
Threshold Limit Value
TM
technical manual
TMDE
test, measurement, and diagnostic equipment
TOE
table of organization and equipment
TRADOC
U.S. Army Training and Doctrine Command
TRiPS
Travel Risk Planning System

TSG
The Surgeon General
UAS
Unmanned Aircraft System
UL
Underwriters Laboratories
URSO
Unit Radiation Safety Officer
USACE
U.S. Army Corps of Engineers
USACR/Safety Center
U.S. Army Combat Readiness/Safety Center
USAIPH
U.S. Army Institute of Public Health
USATCES
U.S. Army Technical Center for Explosives Safety
USC
United States Code
UV
ultraviolet
UXO
unexploded ordnance
VC
vehicle commander
WMSD
work-related musculoskeletal disorders
WSERB
Weapon Systems Explosive Review Board

Section II
Terms

Absorbed dose- The energy imparted by ionizing radiation per unit mass of irradiated material. The units of absorbed dose are the rad and the gray (Gy).
Administrative dose- The total effective dose equivalent that a radiation safety officer assigns when dosimetry is inaccurate or has been misused or lost.
Agreement State Any State with which the Atomic Energy Commission or the NRC has entered into an effective agreement in which the State assumes many of the NRC's functions.
ALARA- Acronym for as low as is reasonably achievablell means making every reasonable effort to maintain exposures to radiation as far below applicable dose limits as is practical consistent with the purpose for which the activity is undertaken, taking into account the state of technology, the economics of improvements in relation to benefits to the public health and safety, and other societal and

socioeconomic considerations and in relation to utilization of nuclear energy, radioactive materials, and ionizing radiation in the public interest.
Army regulation - A directive that sets forth missions, responsibilities, and policies, and establishes procedures to ensure uniform compliance with those policies.
Army Reserve facilities - Pertains to those facilities normally employed for the administration and training of Army Reserve units, in any entire structure or part thereof, including any interest in land, Army Reserve Center, and storage and other use areas.
Background radiation- Radiation from cosmic sources; naturally occurring radioactive material, including radon (except as a decay product of source or special nuclear material); and global fallout as it exists in the environment from the testing of nuclear explosive devices or from past nuclear accidents such as Chernobyl that contribute to background radiation. Background radiation does not include radiation from source, byproduct, or special nuclear materials that the NRC regulates or from NARM that the Army regulates.
Becquerel (Bq) - The SI unit of radioactivity equivalent to one nuclear transformation per second.
Bioassay- The purpose of bioassay is to determine the dose contribution from internal intake of radioactive material. This may be by whole-body counting, selected organ counting, or by analysis of materials excreted or removed from the human body.
Condition - The status of personnel and equipment (readiness) as they interact with the operational environment during mission planning and execution.
Control - Action taken to eliminate hazards or reduce their risk.
Curie (Ci) - A unit of radioactivity equal to 37 billion Becquerels.
Develop the Force - One of the Army's four core capabilities. This capability includes the processes of developing doctrine; developing requirements; acquiring, training and sustaining people; and identifying and developing leaders. This core capability encompasses the various functions that must be accomplished to create tactical units that comprise the Operational Force.
Deviation - A departure from the requirements of this regulation.
Direct and Resource the Force - One of the Army's four core capabilities comprised of four core processes: planning and policy Development; direction and assessment; financial management; and information management. These processes have six functions: Leadership; Human Resource Management; Force Management; Military Strategy; Acquisition and Logistics Management; and Installations & Facilities Management.
Dose equivalent - The product of absorbed dose in tissue, quality factor and all other necessary modifying factors at the location of interest in tissue. The units of dose equivalent are the rem and Sievert (Sv).
Electromagnetic radiation - Electric and magnetic fields that oscillate at right angles to each other and to their direction of propagation and that travel at the speed of light in a vacuum (300,000 kilometers per second). Electromagnetic radiation includes

gamma rays, x rays, ultraviolet radiation, visible light, infrared radiation, radiofrequency radiation, and extremely low frequency electromagnetic radiation.
Electron volt (eV) - A unit of energy equal to 1.6E+19 joules.
Exposure - In risk management, the frequency and length of time subjected to a hazard.
Extremely low frequency (ELF) electromagnetic radiation - Electromagnetic radiation with a frequency less than 3 kHz.
Garrison - The Garrison is a table of distribution allowance (TDA) organization that operates the installation and provides base operations services to tenant organizations. The Garrison normally belongs to the IMCOM.
Gray (Gy) - The SI unit of absorbed dose. One gray is equal to an absorbed dose of 1 joule/kilogram (100 rads).
Hazard - Any real or potential condition that can cause injury, illness, death of personnel, damage to or loss of equipment or property, or mission degradation.
Hazard of Electromagnetic Radiation to Fuel - (HERF) is the hazard associated with the possibility of igniting fuel or other volatile materials through RF energy induced arcs or sparks.
Hazard of Electromagnetic Radiation to Ordnance - (HERO) refers to the susceptibility of electro-explosive devices (EEDs) and electrically initiated devices (EIDs) used to detonate explosives to RF energy.
Hazard of Electromagnetic Radiation to Personnel - (HERP) is the danger to personnel from the absorption of electromagnetic energy by the human body. Personnel hazards are associated with the absorption of RF energy above certain power levels in certain frequency bands for certain lengths of time. DoD Instruction 6055.11 defines the allowable amounts in terms of how long personnel may be exposed to RF fields of particular intensities at particular frequencies.
Hertz (Hz) - The SI unit of frequency equivalent to one vibration (cycle) per second.
High radiation area - An area, accessible to individuals, in which radiation levels could result in an individual receiving a dose equivalent in excess of 0.1 rem (1 mSv) in 1 hour at 30 centimeters from the radiation source or from any surface that the radiation penetrates.
Infrared (IR) electromagnetic radiation - Electromagnetic radiation with a wavelength between 760-780 nm and 1 mm.
Installation - An aggregation of contiguous or near contiguous, common mission-supporting real property holdings under the jurisdiction of DOD or a state, the District of Columbia, territory, commonwealth, or possession, controlled by and at which an Army unit or activity (active, USAR, or ARNG) is permanently assigned.
Installation Radiation Safety Council - The Installation RSC is the advisory body to the Senior Commander that gathers and disseminates information about the status of the Installation Radiation Safety Program.
Ionizing radiation - Charged subatomic particles and ionized atoms with kinetic energies greater than 12.4 eV, electromagnetic radiation with photon energies greater than 12.4 eV, and all free neutrons and other uncharged subatomic particles (except neutrinos and antineutrinos).

Job Hazard Analysis – (JHA) A job hazard analysis is a technique that focuses on job tasks as a way to identify hazards before they occur. It focuses on the relationship between the worker, the task, the tools, the work environment, and the supervisor. Ideally, after uncontrolled hazards are identified, steps are taken to eliminate or reduce them to an acceptable risk level. Supervisors use the findings of a job hazard analysis to eliminate and prevent hazards in their workplaces. This is likely to result in fewer worker injuries and illnesses; safer, more effective work methods; reduced workers' compensation cost; and increased worker productivity. The analysis also can be a valuable tool for training new employees in the steps required to perform their jobs safely. See annex F of this regulation for the JHA Process and JHA record Form.
Kilo- (k) - An SI unit prefix indicating a factor of 1000.
Low-level radioactive waste - Material the NRC classifies as low-level radioactive waste; waste not classified as high-level radioactive waste (spent nuclear fuel), as transuranic waste, or as uranium or thorium tailings and waste; material acceptable for burial in a land disposal facility.
Member of the public - Any individual except when that individual is receiving an occupational dose.
Non-ionizing radiation - Electromagnetic radiation with photon energies less than 12.4 eV.
Occupational dose - The dose received by an individual in the course of employment in which the individual's assigned duties involve exposure to radiation or to radioactive material from regulated and unregulated sources of radiation, whether in the possession of the employer or other person. Occupational dose does not include dose received from background radiation; from any medical administration the individual has received; from exposure to patients administered radioactive material and released in accordance with applicable regulations; from voluntary participation in medical research programs; or as a member of the public.
Optical radiation - See Visible light.
Probability - The likelihood that an event will occur.
Project the force - One of the Army's four core capabilities. This capability includes the processes of tailoring, mobilizing and projection of land power, and supporting organizational training. Recognized as the overriding capability by which the Army will be measured is the ability to rapidly deploy ready forces into a distant area of operations and keep them coming as dictated by the tempo of battle.
Rad - A unit of absorbed dose. One rad is equal to an absorbed dose of 0.01 joule/kilogram (0.01gray).
Radiation - For the purposes of this regulation, unless otherwise specified, radiation includes both ionizing and non-ionizing radiation.
Radiation area - An area, accessible to individuals, in which radiation levels could result in an individual receiving a dose equivalent in excess of 0.005 rem (0.05 mSv) in 1 hour at 30 centimeters from the radiation source or from any surface that the radiation penetrates.
Radiation safety - For the purposes of this regulation, a scientific discipline whose objective is the protection of people and the environment from unnecessary exposure

to radiation. Radiation safety is concerned with understanding, evaluating, and controlling the risks from radiation exposure relative to the benefits derived. Same as health physics and radiation protection.
Radiation Safety Committee - An advisory committee for the commander to assess the adequacy of the command's Radiation Safety Program.
Radiation Safety Officer - The person that the Commander designates in writing as the executive agent for the command's Radiation Safety Program (same as "radiation protection officer"). These individuals are provided training commensurate with the radiation hazards they manage. Types of RSOs discussed in this regulation include:

a. 1AD RSO. The RSO on the staff of the Senior Mission Commander of the installation (Fort Bliss) not managed by the IMCOM.

b. Garrison RSO. The RSO on the staff of the Garrison Commander (Fort Bliss). The Garrison RSO is managed by the IMCOM.

c. Unit / Directorate RSO. The RSO in an Army unit (typically a brigade, battalion, company, detachment or TDA organization).

Radiation Safety Program - A program to implement the objective of radiation safety.

a. The Army Radiation Safety Program includes all aspects of:

(1) Measurement and evaluation of radiation and radioactive material pertaining to protection of personnel and the environment.

(2) Army compliance with Federal and DOD radiation safety regulations.

(3) The Army's radiation dosimetry, radiation bioassay, radioactive waste disposal, radiation safety training, and radiation instrument TMDE and calibration programs.

b. A command's radiation safety program includes all aspects of:

(1) Measurement and evaluation of radiation and radioactive material within the command as they pertain to protection of personnel and the environment.

(2) Compliance with Federal, DOD, and Army radiation safety regulations.

Radioactive commodity - An item of Government property made up in whole or in part of radioactive material. A national stock number (NSN) or part number is assigned to commodities containing radioactive material greater than 0.01 Ci.
Radioactive waste - Solid, liquid, or gaseous material that contains radionuclide's regulated under the Atomic Energy Act, as amended, or is of sufficient quantity to require an Army radiation authorization, and is of negligible economic value considering the cost of recovery. Radioactive waste, low-level - Material the NRC classifies as low-level radioactive waste (see 10 CFR 62.2); waste not classified as high-level radioactive waste (spent nuclear fuel), as transuranic waste, or as uranium or thorium tailings and waste; material acceptable for burial in a land disposal facility (10 CFR 61).
Radiofrequency (RF) electromagnetic radiation - Electromagnetic radiation with frequencies between 3 kHz and 300 GHz.
Radiofrequency (RF) controlled environment - Locations where RF exposure may be incurred by persons who are aware of the potential for occupational exposure, by other cognizant persons, or as the incidental result of transient passage through areas where analysis shows the exposure levels may be above those shown in DODI

6055.1, table 6-2-1, but do not exceed those shown in DODI 6055.1, table 6-1-1. Existing physical arrangements or areas, such as fences, perimeters, or weather deck(s) of a ship may be used in establishing a controlled environment.

Radiofrequency (RF) uncontrolled environments - Locations where RF exposures do not exceed permissible exposure levels in DODI 6055.1, table 6-2-1. Such locations generally represent living quarters, workplaces, or public access areas where personnel would not expect to encounter higher levels of RF energy.

Recorder, RSC - The person directly responsible for the accuracy and completeness of the RSC minutes. The recorder may designate someone else to take notes at RSC meetings (for example, an assistant or secretary); however, the minutes must meet regulatory requirements.

Rem - A unit of any of the quantities expressed as dose equivalent. The dose equivalent in rems is equal to the absorbed dose in rads multiplied by the quality factor (1 rem = 0.01 sievert).

Residual Risk - The level of risk remaining after controls have been identified and selected for hazards that may result in loss of combat power. Controls are identified and selected until residual risk is at an acceptable level or until it cannot be practically reduced any further.

Restricted Area - An area access to which is limited by the RSO for the purpose of protecting individuals against undue risks from exposure to radiation and radioactive materials.

Risk - Chance of hazard or bad consequences; exposure of chance of injury or loss. Risk level is expressed in terms of hazard probability and severity.

Risk assessment - The identification and assessment of hazards (first two steps of the risk management process).

Risk decision - The decision to accept or not accept the risk(s) associated with an action; made by the commander, leader, or individual responsible for performing that action.

Risk management - A logical five step thought process, applicable to any situation or environment, for identifying and controlling hazards to protect the force.

Risk management integration - The process by which individuals or organizations develop plans to embed risk management into all that they do.

Severity - The expected consequence of an event in terms of degree of injury, property damage, or other mission impairing factors (loss of combat power, adverse publicity, and so on), that should occur.

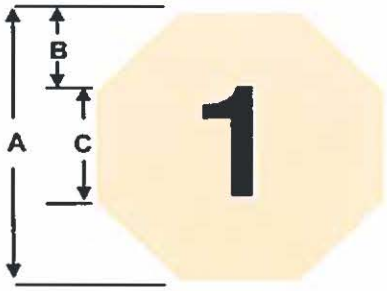
Sievert (Sv) - The SI unit of any of the quantities expressed as dose equivalent. The dose equivalent in Sieverts is equal to the absorbed dose in grays multiplied by the quality factor (1 Sv = 100 rem).

Sustain the Force - One of the Army's four core capabilities. This capability includes the Processes of acquiring, maintaining and sustaining equipment; maintaining and sustaining land operations; acquiring and sustaining infrastructure and operating installations.

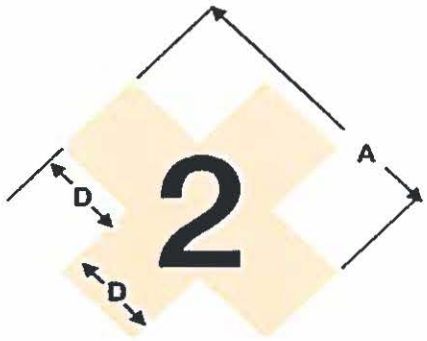
Total effective dose equivalent - The sum of the deep-dose equivalent (for external exposures) and the committed effective dose equivalent (for internal exposures).

Type classification - A designation the Army uses to indicate acceptability for service use (AR 70-61).
Ultraviolet (UV) electromagnetic radiation - Electromagnetic radiation with wavelengths between 100 nm and 380-400 nm.
United States Army Reserve Center - A home station facility, activity, or installation utilized for administration and training of United States Army Reserve units and personnel.
Unrestricted area - An area, access to which is neither limited nor controlled (for the purposes of ionizing radiation safety).
Very high radiation area - An area, accessible to individuals, in which radiation levels could result in an individual receiving an absorbed dose in excess of 500 rads (5 grays) in 1 hour at 1 meter from a radiation source or from any surface that the radiation penetrates.
Visible light - Electromagnetic radiation with wavelengths between 380-400 nm and 760-780 nm.

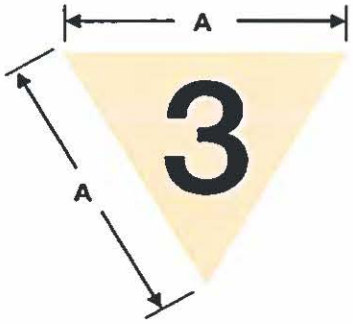
Annex A-1
Fire Symbols



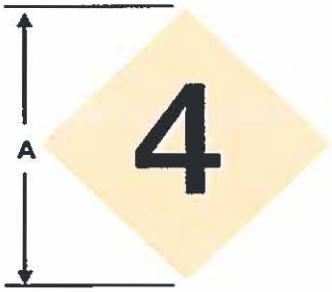
Fire Symbol 1
Hazard Class 1 Division 1 and 5
24" NSN 7690-01-082-0290
12" NSN 7690-01-081-9581



Fire Symbol 2
Hazard Class 1 Division 2 and 6
24" NSN 7690-01-082-0289
12" NSN 7690-01-087-7340



Fire Symbol 3
Hazard Class 1 Division 3
24" NSN 7690-01-081-9583
12" NSN 7690-01-081-9582



Fire Symbol 4
Hazard Class 1 Division 4
24" NSN 7690-01-082-6709
12" NSN 7690-01-081-9584

Colors (per Federal Standard 595A and GSA Catalog)
Background: Orange #12246 Numbers: Black # 17038

Dimension	Large Symbol (inches)	Small Symbol (inches)
A	24	12
B	7	3.5
C	10	5
D	8	4
Number (height)	10	5
Number (thickness)	2	1

Annex B-1
Examples of Hazard Classification Signs

(Danger Signs)

(Caution Signs)

Annex B-2

Examples of Hazard Classification Signs (cont.)

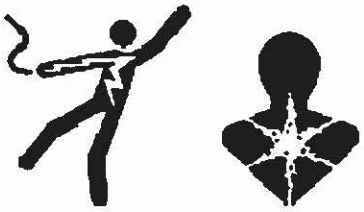
(Warning Signs)

(Safety Signs)

Annex B-3

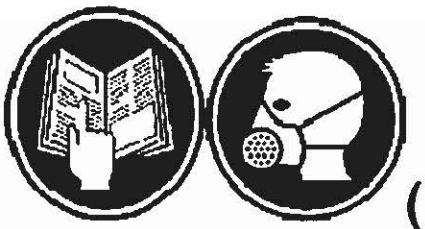
Examples of Hazard Classification Signs (cont.)

Symbols

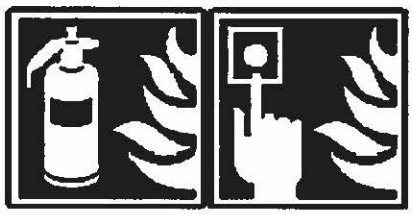


(Alerting Symbols)

(Prohibition Symbols)



(Mandatory Action Symbols)



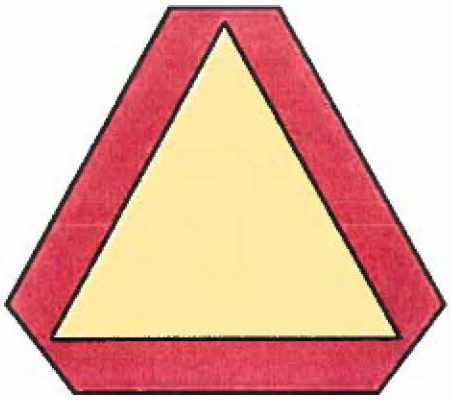
(Information Symbols)

Annex B-4

Examples of Hazard Classification Signs (Cont.)

(Other Signs)

Slow Moving Vehicle Sign



FIRE HAZARD SIGNS

- *CHEMICAL HAZARD SIGNS*: The storage of chemical agents and chemical munitions requires the use of chemical hazard signs. With exceptions as outlined in the Standard. (6055 9 C8.3 3)
  - The signs consist of 5 major and 4 supplemental symbols indicating chemical hazards. All are circles of varying colors displaying either symbols or letters.
  - If a particular AE presents a fire and chemical hazard, both sign types should be displayed. (6055 9 C8.4)

MAJOR CHEMICAL HAZARD SIGNS

Annex C

Fort Bliss Label 5

IN CASE OF

FIRE DIAL 911

CELL PHONE USERS AND
OCCUPANTS OF GOVERNMENT FAMILY HOUSING

DIAL

915-744-9545
915-744-9544
915-744-2115

FOR

FIRE/AMBULANCE/MILITARY POLICE

When reporting an emergency- give dispatcher the following information:

NAME _____

BLDG _____

FLOOR _____

WING _____

ROOM _____

FB LABEL 5 (DES) 1 JAN 2013 Previous editions of this form are obsolete

Annex D-1

FORT BLISS CONFINED SPACE ENTRY PERMIT

Location: _____ Date: _____

Description of Confined Space: _____ Time: _____

Purpose of Entry: _____ Expiration: _____

Person in Charge of Work: _____

Authorized Entrant (s): _____

Attendant: _____ Stand-by Person: _____

Successfully Completed Training: Yes No (Circle One) Yes No (Circle One)
Successfully Completed First Aid: Yes No (Circle One) Yes No (Circle One)

SPECIAL REQUIREMENTS

	YES	NO
Lockout De-Energize		
Lines Broken/Capped/Blanked		
Ventilation		
Purge – Flush & Vent		
Secure Area		

HAZARDOUS WORK

	YES	NO
Burning		
Welding		
Brazing		
Open Flames		
Non Sparking Tools		
Burning/Welding Permit		
Other		

HAZARDS EXPECTED

	YES	NO
Corrosive Material		
Hot Equipment		
Flammable Materials		
Toxic Materials		
Drains Open		

	YES	NO
Cleaning (Ex: Chemical or water lance)		
Non-Spark Producing Operations		
Spilled Liquids		
Pressure Systems		
Other		

VESSEL CLEANED

Deposits: _____
Method: _____
Inspection:
Neutralized With: _____

Fire Safety Precautions: _____

PERMIT VALID FOR ONE SHIFT (8 HOURS ONLY). ALL COPIES WILL REMAIN AT JOBSITE UNTIL JOB IS COMPLETED.

Annex D-2

FORT BLISS CONFINED SPACE ENTRY PERMIT (continued)

PERSONAL SAFETY

	YES	NO		YES	NO
Respirators			Lighting (Explosive Proof)		
Protective Clothing			Communications		
Head, Hand, & Foot PPE			Buddy System		
Shields			Standby Person		
Lifelines			Emergency Egress Procedures		
Full Body Harness w/ D-ring			Emergency Retrieval Equipment		
Fire Extinguishers			Fire Department Notified		

TEST(S) TO BE TAKEN

	Permissible Entry Level	Reading and Time						
% of Oxygen	19.5% to 23.5%							
Carbon Monoxide	+35 PPM							
Hydrogen Sulfide	+10 PPM * 15 PPM							
Sulfur Dioxide	+ 2 PPM * 5 PPM							
Ammonia	* 35 PPM							
Hydrogen Cyanide	(Skin) * 4 PPM							
Lower Flammable Limit	Under 10 %							

*** Short-term exposure limit: Employee may work in the area up to 15 minutes.**
+ 8 hr. Time Weighted Avg.: Employee may work in area 8 hrs. (or longer with appropriate respiratory protection).
Note: 1- Continuous/periodic monitoring/tests shall be established before beginning job.
2- Contact the Garrison Safety Office or the Industrial Hygienist with any questions pertaining to test requirements. 3- Completed original permit to Entry Supervisor and completed copy to Garrison Safety Office. Retain for 1 year.

INSTRUMENTS USED: _____ **CALIBRATION DATE:** _____

Communication Procedure: (Radio, Verbal, Visual, etc.)

Remarks: _____

Test Performed By: _____
SIGNATURE

AUTHORIZATIONS: Entry and Emergency Procedures Understood: (initial)

Attendant: _____ Stand-By: _____ Rescue: _____

Telephone Numbers: _____

All entrants have exited the permit space, entry is complete, and the permit space has been secured.

Entry Supervisor: _____ Date: _____ Time: _____

Annex E-1

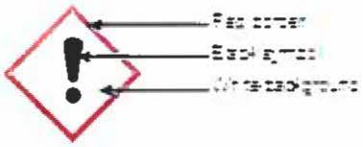
GHS Pictogram Reference Chart

1 2 3 4 5

6 7 8 9

1: Health Hazard. Carcinogen, mutagenicity, reproductive toxicity, respiratory sensitizer, target organ toxicity, aspiration toxicity.
2: Exclamation Mark. Irritant (skin and eye), acute toxicity (harmful), narcotic effects, skin sensitizer, respiratory tract irritant, hazardous to ozone layer (non-mandatory).
3: Corrosion. Skin corrosion/ burns, eye damage, corrosive to metals.
4: Flame over Circle. Oxidizers.
5: Environment. Aquatic toxicity, environment toxicity (non-mandatory).
6: Flame. Flammables, pyrophorics, self-heating, emits flammable gas, self-reactives, organic peroxides.
7: Gas Cylinder. Gases under pressure.
8: Exploding Bomb. Explosives (unstable, Divisions 1.1, 1.2, 1.3 and 1.4), self-reactives, organic peroxides.
9: Skull and Crossbones. Acute toxicity (fatal or toxic).

Parts of a Pictogram:



Annex E-2
GHS Transport Pictogram Reference Chart

**** Used on shipping containers and shipping documents.**

1: Flammable liquid, flammable gas, flammable aerosol.
2: Flammable solid, self-reactive substances.
3: Pyrophorics (spontaneously combustible), self-heating substances.
4: Substances, which in contact with water, emit flammable gases (Dangerous When Wet).
5: Oxidizing gases, oxidizing liquids, oxidizing solids.
6: Explosive divisions 1.1, 1.2, 1.3.
7: Explosive division 1.4.
8: Explosive division 1.5.
9: Explosive division 1.6.
10: Compressed gases.
11: Acute toxicity (poison): Oral, dermal, inhalation.
12: Corrosive.

Annex F-1
Job Hazard Analysis Process

Job Hazard Analysis Process:

Job Hazard Analysis (JHA) is the process of taking a close, critical look at each step of a process or operation with an eye toward identifying and correcting the hazards or potential accidents in each step. It's a simple technique which creates a "buy-in" on the part of people doing the job and ensures that they will do the job the same way and safely each time.

A JHA can also be conducted as part of the planning for a new job or process. Prospective operators can sit in a planning session with engineers, designer, technical staff (e.g., safety, environmental, occupational health), and supervisors to talk through how a new operation should work. This can eliminate the hazards before the cost of development makes it much more expensive and it gives clear work steps for use in debugging and training.

The benefits of a JHA of existing jobs are many: • Many accident-causing hazards are eliminated. • It provides a standard, written, carefully considered, safe directions for how to do the job for use in job orientation/training. • It allows for refresher instructions on infrequent/periodic jobs. • Workers, teams, and supervisors know better how the total job is done. • Job methods improve, efficiency increases, quality is enhanced and costs drop. • The operator is kept closely involved in safety.

Before the JHA is started, decide who's going to be involved. Ideally, all those involved with the job should work together on the project so that there is comprehensive input and complete buy-in. If that is not possible, be sure that those doing the job at least have the opportunity to provide input and review.

STEP ONE: Select the job. Don't make it too broad (e.g., make a desk) nor too narrow (e.g., pushing a button). Those suitable would be those a line supervisor would normally assign. Priority should be given to those with the worst accident record, those which tend to produce disabling injuries, ones with a high severity potential, and new jobs.

STEP TWO: Break the job into successive steps. Describe concisely what is being done. Pick an operator who is experienced and cooperative to help and tell him/her that the objective is to study the job, not the individual, to make it safer for them. Work through the process, asking the operator what he/she does next and why. Record the observation in the left-hand column of the attached form using action words (lift, pull,

Annex F-2
Job Hazard Analysis Process (continued)

close) and tell what object is receiving the action (lever, cover, arm). Finally, check with the operator to be sure that the steps are correct and in the right order.

STEP THREE: Identify the hazards in each step of the process. Can anyone be caught in, on, or by the objects? Can they slip or trip? Is straining possible? Are there environmental hazards? Is layout or placement a problem? Are tools and equipment adequate and in good repair? Will a change in one step create a hazard in another? Once the hazards are identified, check again with the operator and anyone else familiar with the job.

STEP FOUR: Eliminate the hazards. Find creative and effective ways to eliminate the hazards and prevent the potential accidents. Find a better way to do the job. Start with the goal of the job and work along several routes to the goal finding the one which is not only the safest, but the most economical and practical. Change the physical conditions which create the problem; move something; change a work height; replace a guard. Change the job procedure. Have the job done less frequently if exposure is a problem (especially in maintenance operations). As with the previous steps, check solutions with the operator. Watch him/her in operation and carefully evaluate whether the steps and actions match the completed JHA. At this stage, it might also be helpful to record the steps on video for use in future training.

Once the JHA is complete, use it, and don't just file it away. If possible, post it on the job, such as near the operator controls. Make it an integral part of the job write-up. Review and update it periodically, perhaps each year. Consult with others whenever an accident occurs on a JSA-covered job and either revise it or insure that the correct procedure is being followed. Record your official Job Hazard Analysis on the JHA form provided on the next page of this annex. Maintain a copy at the worksite (where the job is performed) and in the employee's personnel file.

Annex F-3
Job Hazard Analysis Process (continued)

Job Hazard Analysis Form

Prepared By:	Date:	Bldg.:	Office/Room:
Work Activity/Task:		Section/Department:	

Task Step:	Potential Hazard:		Hazard Controls		Required PPE	
	☐ Blood Borne Pathogen ☐ Carcinogen ☐ Chemical Agent ☐ Chemical Hazard ☐ Confined Space ☐ Crush Hazard ☐ Excavation ☐ Explosives ☐ Eye Hazard ☐ Fall Hazard ☐ Falling Objects ☐ Fire Hazard ☐ Foot Hazard ☐ Forklift/Heavy Equip. ☐ Hazardous Atmosphere ☐ Hazardous Energy Source Specify:_____ ☐ Head Hazard ☐ Heat Stress/Cold Temps ☐ High Noise	☐ Hot Surfaces ☐ Lifting:_____ ☐ Manual/Mechanical ☐ Pinch Point ☐ Poor Lighting ☐ Power Tools ☐ Radiation ☐ Remote Work Area ☐ Respiratory Hazard ☐ Rigging/Material Handling ☐ Rough/Sharp Material ☐ Scaffold Use ☐ Slip/Trip Hazard ☐ Traffic/Vehicles ☐ Underground Utilities ☐ Welding Fume/Arc ☐ Work Overhead ☐ Workers Below ☐ No Hazards ☐ Other:_____ _____ ☐ Other:_____ _____	☐ Lockout/Tagout ☐ Electrical Work Permit ☐ Hot Work Permit ☐ Confined Space Permit ☐ Excavation Permit ☐ Fall Protection Plan ☐ Lifting/Rigging Plan ☐ Mechanical Ventilation ☐ Review MSDS ☐ Barricades/Tags *Danger *Caution *Hard or Flashing Light ☐ Heat Stress Stay Times Stay Time:_____ ☐ Non-Sparking Tools	☐ Additional Lighting ☐ Portable Eyewash ☐ Wet Work Methods (Dust Control) ☐ GFCI Protection ☐ Scaffolding ☐ Wash Hands/Face ☐ Special Training ☐ Fire Blanket ☐ Welding Screen ☐ Safety Observer ☐ Inspect Tools ☐ Inspect Cords ☐ Inspect Scaffold ☐ Housekeeping ☐ Other:_____	☐ Hard Hat ☐ Safety Glasses ☐ Welding Hood ☐ Face Shield ☐ Chemical Goggles ☐ Leather Gloves ☐ Chemical Gloves ☐ Electrical Gloves ☐ Cut-Resistant Gloves ☐ Heat-Resistant Gloves ☐ Substantial Footwear ☐ Metatarsal Guards ☐ Chemical Boots ☐ Splash Hood ☐ Fall Protection (harness) ☐ Chemical Apron	☐ Coveralls (cotton) ☐ Tyvek ☐ Tychem ☐ Respirator: Type:_____ ☐ Respirator Cartridge Type:_____ Cartridge Changeout: _____ ☐ Electrical Clothing Type:_____ ☐ Traffic Vest ☐ Ear Plugs ☐ Ear Muffs ☐ Other:_____ _____ ☐ Other:_____ _____

Preparer (Signature):	Preparer (Print):	Date:
Manager/Supervisor (Signature):	Manager/Supervisor (Print):	Date:
Safety (Signature):	Safety (Print):	Date:

Annex G-1
Safety Toolbox Links

U.S. Army Forces Command (FORSCOM) Safety
https://fcportal.forscom.army.mil/sites/G1/G1-Safety/default.aspx

U.S. Army Installation Management Command (IMCOM) Safety
http://www.imcom.army.mil/Organization/Safety.aspx

U.S. Army Training and Doctrine Command (TRADOC) Safety
http://www.tradoc.army.mil/safe/index.htm

III Corps and Fort Hood Safety
http://www.hood.army.mil/safety/index.aspx

U.S. Army Combat Readiness/Safety Center
https://safety.army.mil/

U.S. Army Public Health Command
http://phc.amedd.army.mil/Pages/default.aspx

Army Readiness Assessment Program (ARAP)
https://arap.safety.army.mil/

Army Explosives Safety Knowledge Network (AESKN)
https://www.us.army.mil/suite/designer

Army Accident Reporting System (ReportIt)
https://reportit.safety.army.mil/

Fort Bliss Safety Website
https://www.bliss.army.mil/safety/index.html

1AD Safety Portal
https://forscom2.bliss.army.mil/1ADHQ/1ADSAFETY/SitePages/Home.aspx

Travel Risk Planning System (TRiPS)
https://trips.safety.army.mil/

U.S. Army IMCOM Traffic Safety Training Program (Army IMCOM Registration System) (AIRS)
https://imc.army.mil/airs/usg_disclaimer.aspx

Fort Bliss Garrison Safety Portal
https://imcom2.bliss.army.mil/so/SitePages/Home.aspx

Army Electronic Publications Directorate
http://armypubs.army.mil/

Annex G-2
Safety Toolbox Links (continued)

TACOM-Unique Logistics Support Applications (TULSA)
https://tulsa.tacom.army.mil

U.S. DOT National Highway Traffic Safety Administration
http://www-odi.nhtsa.dot.gov/
http://www.safercar.gov/#

U.S. Department of Labor- Occupational Safety and Health Administration (OSHA)
https://www.osha.gov/

Consumer Product Safety Commission
http://www.cpsc.gov/

Federal Emergency Management Agency (FEMA)
http://www.fema.gov/

National Fire Protection Association
http://www.nfpa.org/

Knowledge Magazine
https://safety.army.mil/MEDIA/Knowledge.aspx

Drivers Training Toolbox
https://safety.army.mil/ON-DUTY/DriversTrainingToolbox.aspx

Range and Weapons Safety Toolbox
https://safety.army.mil/ON-DUTY/RangeandWeaponsSafetyToolbox.aspx

Workplace Safety Toolbox
https://safety.army.mil/ON-DUTY/Workplace.aspx

Off-Duty Safety Toolbox
https://safety.army.mil/OFF-DUTY.aspx

Aviation Safety Toolbox
https://safety.army.mil/ON-DUTY/Aviation.aspx