DEPARTMENT OF THE ARMY
U.S. ARMY WHITE SANDS MISSILE RANGE
100 Headquarters Avenue
WHITE SANDS MISSILE RANGE, NEW MEXICO 88002-5000

TEDT-WS-CG

02 FEB 2012

MEMORANDUM FOR Team White Sands

SUBJECT: Rapid Action Revision (RAR) of the White Sands Missile Range Command Safety Program (WSMR Regulation 385-18)

1. In order to accomplish our mission at White Sands, we must provide an effective safety and health protection program for our military, civilian employees, contractors, and visitors. Safety is of such importance that I have designated it one of our five key pillars for success.

2. We are providing this updated revision to our Safety Regulation to implement important changes to our occupational safety and health policy that will better protect and preserve personnel and property against injury or accidental loss.

- You will use the guidelines contained in this regulation conjunction with the White Sands Safety Action Plan.
- These instructions are not intended to supersede directives issued by higher authority unless specifically stated. If you find any conflicts immediately inform the Installation Safety Office.
- The occupational safety and health rules in this safety program are applicable to all military and civilian personnel, including activities and contractors.

3. I expect Team White Sands leadership to promote safety in every activity. I expect that a complete composite risk assessment of each activity will be performed and potential hazards identified and mitigated. If hazards cannot be mitigated to acceptable levels of risk, we must focus on alternatives that will allow us to complete our tasks.

4. I also challenge every member of Team White Sands to develop a safety culture off-duty and at home with family. Instill this safety culture within your families.

5. If you have any questions about this regulation or any issue concerning safety, please contact our Installation Safety Director, Mr. Randy Grunow at (575) 678-2305, DSN 258-2305.

JOHN G. FERRARI
Brigadier General, USA
Commanding

OFFICIAL:

DANIEL C. HICKS
Chief of Staff

WHITE SANDS MISSILE RANGE COMMAND SAFETY PROGRAM

WSMR REGULATION 385-18

Rapid Action Revision (RAR)

*This supersedes WSMRR 385-18 • 30 January 2009. This edition publishes a rapid action revision of WSMRR 385-18.

SUMMARY of CHANGE

WSMRR 385-18
This rapid action revision - -

- Updates Table of Contents to reflect page changes due to revisions, pages 1-5.
- Includes reference to Chapter 27, Use of Personal Protective Equipment (PPE) During High Hazard and Manned Firing Test and Evaluation, page 8.
- Includes information pertaining to video on UXO Range Hazards Briefing, page 16
- Includes reference to Chapter 27, Use of Personal Protective Equipment(PPE) During High Hazard and Manned Firing Test and Evaluation, page 26
- Updates to Chapter 7 Accident Reporting And Records, pages 39-44
- Includes reference to Chapter 27, Use of Personal Protective Equipment (PPE) During High Hazard and Manned Firing Test and Evaluation, page 49
- Includes reference to Chapter 26-4, Training for further instruction on safe government vehicle usage while operating on the installations unimproved roads, page 96
- Includes information pertaining to video on UXO Range Hazards Briefing and Oryx alert video, page 101
- Includes addition of Chapter 26, Army Motor Vehicle and Government Operated Vehicle Prevention Program, pages 102-106
- Includes addition of Chapter 27, Use of Personal Protective Equipment(PPE) During High Hazard and Manned Firing Test and Evaluation, pages 106-107

Department of the Army
U.S. Army White Sands Missile Range
White Sands Missile Range, New Mexico 88002

WSMR REGULATION
NO. 385-18*

Safety

WHITE SANDS MISSILE RANGE SAFETY PROGRAM

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Chapter 1
WHITE SANDS MISSILE RANGE COMMAND SAFETY PROGRAM

1-1. PURPOSE: This regulation implements the commander's occupational safety and health policy through the use of rules developed to protect and preserve personnel and property against injury or accidental loss while conducting operations at White Sands Missile Range (WSMR). The occupational safety and health rules and requirements in this safety program are applicable to all military and civilian personnel, including activities and contractors under the cognizance of this command. The guidelines contained in this document shall be used in conjunction with the WSMR Safety Action Plan as safety guidance on all matters of safety. These instructions are not intended to supersede those directives issued by higher authority unless specifically so stated. Any conflicts with such directives shall be referred to the Installation Safety Office (ISO).

1-2. APPLICABILITY: The occupational safety and health rules and requirements in this safety program are applicable to all military and civilian personnel, including activities and contractors under the cognizance of this command.

1-3. CONFLICTS: The guidelines contained in this document shall be used in conjunction with the WSMR Safety Action Plan as safety guidance on all matters of safety. These instructions are not intended to supersede those directives issued by higher authority unless specifically so stated. Any conflicts with such directives shall be referred to the Installation Safety Office (ISO).

1-4. REFERENCES:

See Appendix A.

1-5. ABBREVIATIONS:

See Glossary.

1-6. RESPONSIBILITIES:

a. Team White Sands: Team White Sands and officers-in-charge are responsible for maintaining a safe and healthful work environment for all employees and visitors. This shall include the following:

(1) Establishment of adequate internal procedures and records for the administration, supervision, and evaluation of the organization's safety program.

(2) Written Standing Operating Procedures (SOPs) for all hazardous operations to include risk management of all hazards. All operations that the Fire Department and Police Department respond to shall have, Program of Instruction's (POI's), Field Manuals (FM's) or SOP's.

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(3) Prompt reporting of all injuries, mishaps, near misses and accidents to the ISO. Notification to the Commander and the ISO of any accident which results in a fatality, personnel injury, any unplanned explosive event, or an explosive event that results in injury or property damage.

(4) Ensure safety and health performance standards are critical elements in all supervisory performance plans.

b. Installation Safety Office (ISO): The ISO is responsible for the overall administration of the WSMR Safety Program and for dissemination of other applicable safety information to all personnel. Specifically:

(1) Implementation of the WSMR Safety Program as outlined within AR 385-10, DA PAM 385-40, and the WSMR Safety Action Plan.

(2) Administration of the Installation Accident and Injury Prevention Program as defined by this regulation.

(3) Preparation of safety rules and regulations for installation operations.

(4) Development of a safety and accident prevention training program with emphasis on supervisory, management and employee development.

(5) Review and approval of all plans and specifications for modification to and construction of White Sands facilities.

(6) Serving as the sole installation point-of-contact for WSMR safety matters involving the Department of Labor Occupational Safety and Health Administration (OSHA), DOD Explosives Safety Board, and higher headquarters in our chain of command.

(7) Performing workplace inspections or surveys of all WSMR facilities and operations.

(8) Exercising primary jurisdiction over all ionizing and non-ionizing radiation protection activities at White Sands.

c. Supervisors: Supervisors are responsible for the safety and health of their personnel. Specific supervisory duties include:

(1) Follow the WSMR Safety Action Plan.

(2) Providing a safe and healthful workplace for employees.

(3) Ensuring that operations in their work area are conducted in a safe manner by providing adequate training, supervision and documentation to employees.

(4) Ensuring that subordinates fully understand their individual safety responsibilities.

(5) Instructing new, transferred, temporary personnel, and personnel with disabilities in the safe performance of their duties.

(6) Incorporating safety into job planning through development of job hazard analyses and standard operating procedures.

(7) Reducing and eliminating workplace hazards.

(8) Ensuring that injured personnel receive prompt medical treatment.

(9) Reporting all injuries, mishaps, and accidents to the organization's Safety Coordinator, Director, and the ISO.

(10) Investigating all work related accidents, injuries, mishaps or near misses and requesting assistance as required.

(11) Enrolling employees in required medical surveillance programs.

(12) Correcting unsafe conditions reported by subordinates.

(13) Conducting and documenting monthly employee safety meetings.

(14) Briefing all personnel on new operations or hazards as they are introduced into the workplace.

(15) Providing Personal Protective Equipment (PPE) when required.

d. Employees: Every individual is responsible for accomplishing one's own work in a safe and healthful manner. Employees shall:

(1) Observe all safety procedures and precautions applicable to their work or duty.

(2) Follow SOPs and special procedures.

(3) Report all unsafe or unhealthful conditions and faulty equipment to their supervisors and organization safety coordinators.

(4) Currently use protective clothing or equipment that has been approved for the work being performed. Refer to Chapter 27 for use of Test Specific PPE.

(5) Immediately report all injuries, mishaps, accidents and near misses to supervisors.

e. Contracting Officers: Contracting Officers shall coordinate with the ISO and incorporate the safety requirements of and comply with this regulation in all contracts issued at WSMR. Additionally, COR's must monitor contractors to assure that operations are being performed in a safe and healthful manner.

f. Procurement Officers: Procurement Officer shall coordinate with the ISO to assure that safety requirements are incorporated in all procurements issued from WSMR in accordance with this regulation. (All procurements or contracts involving ionizing and non-ionizing radiation producing equipment shall be approved by the ISO.)

g. Temporaraly Assigned Personnel: All personnel temporarily assigned to WSMR shall comply with this regulation.

Chapter 2
SAFETY COMMITTEES AND SAFETY MEETINGS

2-1. REQUIREMENTS:

a. The following standing committees are required by statutory or regulatory authority. Each will be discussed in the following paragraphs:

(1) The Installation Safety and Occupational Health Advisory Committee (SOHAC)

(2) The Installation Workman's Compensation Subcommittee (IWCS)

(3) The Installation Ergonomic Subcommittee (IES)

(4) The Employee Safety Committee

(5) The Directorate Safety Council

(6) The Radiation Safety Committee

b. Formally scheduled shop and workplace safety meetings are required at White Sands Missile Range. The minimum requirements for these meetings are:

(1) They will be held at the unit, workplace or shop level at least monthly, with weekly scheduling preferred.

(2) Relevant safety issues are presented, discussed, mitigated, and documented.

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(3) Meetings will address and provide training for new work procedures or equipment implemented/obtained, or new workplace hazards that are introduced.

(4) They will be conducted by either the organization Safety Coordinator or the workplace supervisor.

(5) All unit or workplace/shop personnel must receive the scheduled safety briefings and presentations, or (in the event of absence) be informed of the topics discussed and provided copies of subject information.

(6) Supervisors or organization Safety Coordinators shall retain a record of all shop and workplace safety meetings for 3 years after the date of presentation. This record shall include the following:

(a) Attendance roster with the date of the meeting, topic(s) covered, and the name of presenters.

(b) Presentation outline used in the meeting and a copy of all handouts.

(c) A copy of the minutes must be provided to the ISO.

c. Shop and workplace safety meetings will not be used as an alternative or replacement for certification training of employees.

2-2. SAFETY COMMITTEES

a. The WSMR Installation Safety and Occupational Health Advisory Committee (SOHAC) consists of the following members:

(1) The Commanding General/Director (Chairman)

(2) Executive Director/Chief of Staff (Alternate Chairman)

(3) Garrison Commander

(4) Commander, US Army McAfee Health Clinic

(5) Chief, Occupational Health

(6) Commander, Naval Air Warfare Center, WSMR

(7) Deputy for Air Force, WSMR

(8) Employee Safety Committee Chairman

(9) Employee's representatives (Unions)

(10) All WSMR ATEC/IMCOM Directors and Office Chiefs

(11) All activity Commanders

(12) ISO Director

(13) ISO (Secretary)

(14) Inspector General

b. Meets semi-annually or as directed by the Commander/Director.

c. Provides oversight, evaluation and guidance for, and advocacy of, all programs related to safety and occupational health.

d. Reviews unresolved topics from lower organizational level safety meetings (e.g. Employee Safety Committee, Directorate Safety Council, etc.).

e. Makes recommendations to the commander and performs additional tasks as the commander directs.

f. The Secretary will:

(1) Notify members of time and place of meetings.

(2) Publish minutes of meeting within 15 working days following meetings.

g. SOHAC members shall:

(1) Attend all scheduled meetings.

(2) Designate deputies to attend in lieu of member, however, delegation of attendance below the deputy level is not permitted.

h. The Installation Workmans Compensation Subcommittee (IWCS):

(1) Coordinates and administers an effective worker's compensation program through the review and evaluation of compensation claims.

(2) Consider alternatives to return employee to a working status.

i. The members of IWCS are:

(1) The Chief, Occupational Health, McAfee Health Clinic (Chairman)

(2) The Director, Installation Safety Office

(3) A representative, Management Employee Relations

(4) A representative, Directorate Human Resources

(5) A representative, Federal Employee Compensation Act (FECA), Administrator

(6) A representative, Employees with Disabilities

j. The Installation Ergonomic Subcommittee (IES) interfaces with the IWCS for workplace ergonomic intervention -- workplace analyses, hazard prevention and control, health care management, education and training.

k. The members of the IES are:

(1) Chief, Occupational Health, McAfee Health Clinic

(2) Director, Installation Safety Office

(3) A representative, Management Employee Relations

(4) A representative, Directorate Human Resources

(5) A representative, Federal Employee Compensation Act (FECA), Administrator

(6) A representative, Employees with Disabilities

l. Employee Safety Committee: This committee is organized to monitor and assist the White Sands Missile Range Safety and Health Program. It enables an open line of communication between the employees and management regarding safety and health matters. It also provides a method where employees can utilize their knowledge of workplace operations to assist White Sands Missile Range management to improve policies, conditions and practices. The Employee Safety Committee shall:

(1) Have equal representation of management and non-management employees.

(2) Consist of a representative from each White Sands Missile Range ATEC/IMCOM directorate.

(3) Have one representative and an alternate from each union.

(4) Nominate and elect a Committee Chairman and other officers, as required, from among the members.

(5) Meet quarterly, or more often if required.

(6) Invite ISO to attend meeting.

(7) Furnish advance notification of meetings to employees and conduct meeting pursuant to a prepared agenda.

(8) Prepare minutes of the meeting, send a copy to ISO within 15 working days of the meeting, and furnish a copy to all interested employees.

m. Radiation Safety Committee (RSC): The RSC is an advisory committee to the Commander/Director, White Sands Missile Range, in all matters pertaining to the Radiation Safety Program (RSP). The RSC will meet once a quarter and consist of the following members:

(1) Commander/Director (Ex officio member)

(2) Director, Installation Safety, (Chairman)

(3) Test Center Safety Office, Chief (Alternate Chairperson)

(4) Installation Radiation Safety Officer (Recorder)

(5) Chief, Occupational Health

(6) RSO, Survivability and Vulnerability Directorate

(7) Test Center Radiation Safety Officer

(8) Installation Safety Office, Director

(9) Director, Material Test Directorate

(10) Director, Range Operations

(11) RSO, Test Measurement and Diagnostic Equipment Support, Region 3

(12) Commander, Army Research Laboratory

(13) Safety Officer, High Energy Laser System Test Facility

(14) Safety Officer, Naval Air Warfare Center, WSMR

(15) Deputy for the Air Force, WSMR

(16) Local 2049 (NFFE) Union representative

(17) Inspector General (Observers)

(18) Staff Judge Advocate (Observers)

(19) Director, Public Safety

(20) Transportation Officer

(21) UXB Safety Officer

(22) NEWTEC Safety Officer

n. All members are expected to attend all regularly scheduled meetings. However, in the absence of other members or in the case of necessity for quick reaction, as a minimum, the following members, or their representatives will constitute a quorum:

(1) Installation Radiation Safety Officer

(2) Chief, Occupational Health

(3) Director, ISO

(4) Test Center Radiation Safety Officer

(5) RSO, Survivability and Vulnerability Directorate

o. The RSC will not exercise the functions of:

(1) A clinical committee on radioisotopes in a medical facility

(2) The Reactor Safety Committee

p. Directorate Safety Council: All White Sands Missile Range ATEC Directors shall establish a Directorate Safety Council consisting of a representative from each organizational unit within the directorate. The council shall meet monthly to:

(1) Review recent lost time and first aid injuries, accidents, mishaps, incidents and recommend countermeasures.

(2) Review safety suggestions from committee members and personnel at the operating level and take action where possible.

(3) Prepare minutes and forward a copy to ISO within 15 working days of the meeting.

(4) Invite ISO to attend meetings.

(5) Publish meeting dates in advance to enable all employees to submit requests, concurrence, comments or recommendations.

q. Each directorate shall appoint at least one Safety Coordinator to provide liaison with ISO and continuity of the director's safety program. The safety coordinator shall:

(1) Schedule and chair directorate safety meetings at least monthly.

(2) Attend a collateral duty safety officer's course or equivalent.

(3) Work closely with ISO in hazard recognition, record keeping, countermeasures, work site inspections, hazard analysis working group (HAWG) and conduct safety meetings.

(4) Assist the Installation Safety Office with accident investigations within their directorate by: identifying victims, collecting names of witnesses, obtaining SOPs, TM's and other needed material.

(5) Promote safety by copying and distributing safety promotional items, posters, countermeasures, etc., for their organization.

r. Establish a safety bulletin board which should have the following mandatory items:

(1) DD Form 2272

(2) OSHA Poster Supplement

(3) Command Safety Policy Letter

(4) DA Form 4755

(5) Form CA 10

Chapter 3
RANGE SAFETY

3-1. RESPONSIBILITIES:

a. The Commander will appoint qualified range control personnel to monitor and enforce range safety and operational requirements commensurate with AR 385-63 and ATECR 385-1.

b. The Range Control Officer and personnel shall:

(1) Enforce the installation range safety program.

(2) Publish local SOPs for the safe operation and use of range and facilities (i.e., how a given range should be operated to comply with Range Control guidance).

(3) Ensure ranges are policed and maintained to include maneuver areas and training facilities.

(4) Notify McAfee, installation personnel and public of firing and exercises involving possible hazards to the public.

(5) Survey and post range boundaries and off-limit areas to prevent trespassing and entry by unauthorized personnel into surface danger zones and impact areas.

(6) Ensure explosive ordnance disposal (EOD) has cleared the ranges of duds from ranges before allowing people to enter.

(7) Coordinate with Garrison DPTMS to post range guards, barriers, limit of fire markers, and signals.

(8) Establish and maintain detailed records that describe the range areas and boundaries, including detailed permanent charts and overlays.

(9) Provide information on the types and amounts of ammunition fired into the range areas.

(10) Record known or estimated number of duds located in range impact areas.

(11) Educate all on-post and off-post personnel on the dangers of trespassing in impact areas and the handling of unexploded ordnance (UXO) or duds. A video providing the current UXO Range Hazards Briefing is available on the Safety Office link located on the White Sands Missile Range Home Page.

(12) Clear temporary impact areas.

(13) Perform other duties and activities related to safe operation of ranges.

(14) Coordinate with Garrison DPTMS.

c. Installations Safety Office shall:

(1) Monitor the enforcement effectiveness of the installation range safety program.

(2) Review, make recommendations and approve SOPs for the safe operation and use of ranges and training facilities.

(3) Assist and review training programs for on-post and off-post personnel.

(4) Review all construction drawings prior to any digging or trenching on the range.

(5) Quality Assurance Specialist, Ammunition Surveillance (QASAS) will investigate incidents or accidents involving weapons or ammunition with firing units in accordance with (IAW) AR 75-1.

d. Warheads Branch shall:

(1) Provide dud information on the types and amounts of ammunition fired into impact areas to range control personnel.

(2) Survey and establish boundaries for all hazardous UXO areas.

(3) Provide and maintain detailed records including charts and overlays to range control personnel.

(4) Clear all impact areas.

e. UXO Contractor shall:

(1) Support Warheads personnel by destroying UXO.

(2) Assist Warheads in surveying and establishing boundaries of all UXO areas.

f. EOD shall perform Phase I and Phase II responses.

g. Public Affairs Office shall:

(1) Provide training information to the local community for dissemination.

(2) Serve as liaison between the local community and the range.

h. Directorate of Emergency Services shall be the lead in prevention of:

(1) Unauthorized personnel entering the range.

(2) Personnel trespassing on target range during a mission.

(3) Unauthorized personnel handling or removal of UXO (duds).

Chapter 4
GENERAL WORKPLACE SAFETY

4-1. RESPONSIBILITIES: All personnel are responsible for maintaining a safe, healthy and hazard-free work environment.

a. The Installation Safety Office (ISO) shall:

(1) Inspect all work places periodically based on the degree of hazards present.

(2) Conduct inspections of work places with or without notice. No-notice inspections will be used when it is determined by the Director, ISO, that a significantly more meaningful assessment of actual operating conditions and practices will be gained.

(3) Confiscate or render useless equipment or items that, if left at the work site, could cause a significant unsafe or unhealthful condition for an employee (i.e., unsanitary or worn-out (defective) respirators, electrical cords, etc.) and notify the supervisor if possible.

(4) Invite supervisors, representatives of civilian employees, and union representatives of civilian employees to accompany the inspectors during the physical inspection of the workplace.

(5) Invite Occupational Health, McAfee Health Clinic, to participate in inspections when appropriate.

(6) Provide employees the opportunity to discuss and identify unsafe and unhealthful working concerns or conditions without fear of retribution. Employees can request to remain anonymous. Guidance for "Complaints by Employees" is provided in 29 CFR 1903.11 and special attention for protection of employees is also provided at 4-5.d.6 of this chapter.

(7) Stop any operation, work process, etc., that is considered "Immediately Dangerous to Life and Health" (IDLH) and report to the Installation Safety Director.

(8) Provide written notification of any deficiencies, inspections, or recommendations to the head of the organization inspected.

(9) Ensure all Employee "Reports of Unsafe or Unhealthful Working Conditions", DA Form 4755 (Appendix B), are investigated and written results of

investigation are provided to the originator within 10 working days. A summary and schedule of actions taken to correct hazards will be included in the investigation results. The identity of persons requesting anonymity will be protected.

(10) Inform supervisor and post notices of "Unsafe or Unhealthful Working Conditions", DA Form 4753 (Appendix C), for all hazards having a risk assessment code (RAC) of one (1) or two (2).

b. Directors shall:

(1) Comply with the Installation Safety Action Plan.

(2) Ensure supervisors and employees have the necessary training and equipment to perform their job in a safe manner.

(3) Ensure that all supervisors have a complete and current Job Hazard Analysis documented and on file (Appendix E and F) for all work functions and hazards and assure that all hazards are identified and mitigated. Ensure that the Job Hazard Analyses are reviewed monthly and revised accordingly.

(4) Ensure supervisors and employees participating in OSHA's Voluntary Protection Program (VPP) are in compliance with VPP principles (Appendix G).

c. Supervisors shall:

(1) Comply with the WSMR Safety Action Plan.

(2) Participate in inspections of their work areas monthly.

(3) Initiate appropriate actions to correct noted safety deficiencies and discrepancies.

(4) Provide the ISO with a report on the status of abatement actions taken to resolve identified safety deficiencies and discrepancies in the time frame specified.

(5) Remove personnel from identified IDLH situations.

(6) Institute interim safety measures while awaiting correction of deficiencies and discrepancies.

(7) Inform employees and post notices of "Unsafe or Unhealthful Working Conditions", DA Form 4753 (Appendix C).

(8) Ensure a current Workplace Hazard Assessment/Job Safety Hazards Analysis (Appendices E and F) has been completed, reviewed, and concurred on by the

ISO, and is maintained on file. (Mandated for any operation requiring the use of PPE&C.)

(9) Ensure all assigned personnel are instructed in the safe performance of their assigned duties. All newly assigned and reassigned personnel shall be instructed about any hazards that are inherent to the job or task assignment. A training form that can be used to record all safety training is provided at Appendix D.

(10) Ensure visitors in restricted, explosive, or other hazardous locations are accompanied by a competent White Sands Missile Range employee.

(11) Ensure work spaces and office equipment are arranged for a safe, healthy, and ergonomically correct working area.

(12) Provide current employee roster and employee ID number to the ISO or Occupational Health reviewers upon request.

(13) Investigate all employee reports of unsafe or unhealthful working conditions. If the hazard severity is likely to cause death, severe injury, severe occupational illness or major property damage, the condition will be immediately corrected and/or operation stopped . If the condition cannot be immediately eliminated, the supervisor will notify the Director, ISO.

(14) Ensure copies of DA Form 4755, Employee Report of Alleged Unsafe or Unhealthful Working Conditions (Appendix B), are available and readily accessible to all employees.

(15) Not take retributive action against any employee who reports potential safety hazards or concerns.

d. Employees shall:

(1) Follow and comply with safety rules, regulations, instructions, and SOPs applicable to their position.

(2) Report all injuries to their supervisor, no matter how minor.

(3) Correct any unsafe or unhealthful working condition within their purview.

(4) Report any unsafe or unhealthful working condition, environment or imminent danger situation to their immediate supervisor without delay.

(a) If unsatisfied with the action taken by the immediate supervisor to correct an unsafe or unhealthful working condition, the employee may call or submit a written report directly to the ISO using DA Form 4755 (Appendix B) .

(b) The identity of persons requesting anonymity will be protected.

(5) Not interfere with the inspection surveys of the work site.

(6) Advise and discuss with the safety inspector any potential unsafe or unhealthful working conditions without fear of *retribution*.

Note:
According to 29 CFR 1903.11.d, "No person shall discharge or in any manner discriminate against any employee because such employee has filed any complaint or instituted or caused to be instituted any proceeding under or related to this Act or has testified or is about to testify in any such proceeding or because of the exercise by such employee on behalf of himself or others of any right afforded by this Act."

e. Safety Coordinators: Primary and Alternate Safety Coordinators shall conduct a monthly safety meeting and provide minutes to the Installation Safety Office for review and signature by the Garrison and Test Center commanders once a month.

4-2. GENERAL SAFETY PRACTICES: These recommended safe work practices have been derived from the most common safety deficiencies noted during safety inspections.

a. Fire Protection:

(1) All Personnel will follow emergency fire and evacuation procedures posted throughout the building or facility.

(2) Smoking is prohibited in all facilities except in areas where designated. Outside areas for smokers shall be located at least 50 feet from entrances to the building.

(3) No fire or flame producing devices will be permitted within 50 feet of flammable or explosive materials.

(4) Matches or lighters are not permitted in explosive areas.

(5) Fire hydrants, fire extinguishers, hose racks, or fire alarm boxes shall not be obstructed.

(6) All fire extinguishers will be checked monthly by the building fire warden. A log will be maintained which identifies the location and type of each extinguisher and the monthly inspection annotated on the log.

(7) Any electrical heat producing devices or equipment (i.e., coffeepots, etc.) shall be placed on a fire resistive base and unplugged after use. Microwaves are excluded. Hot plates are prohibited. All types of electrical timers or timing devices are prohibited.

b. Housekeeping:

(1) Work areas shall be kept free of equipment, materials, and tools which are not essential to the work being performed.

(2) Rags, clothing, and waste materials contaminated with oil or flammable materials shall be placed in non-combustible containers with lids. These containers shall be provided in work areas and materials separated by type and the container labeled, e.g., "Combustible Only," or "Contaminated Waste."

(3) Oily clothing or waste materials is not to be stored in lockers.

(4) All trash receptacles or wastebaskets will be made of non-combustible material.

(5) Materials shall not be stored on top of cabinets or lockers. A clearance of 18 inches shall be maintained from ceiling mounted fire sprinklers to top of storage containers, file cabinets, or bookcases.

(6) All mops and brooms shall be stored in racks or hung, preferably outside the building, with the mop and broom end free from contact with any combustible material and stored in a manner to allow air circulation on all sides.

(7) Trash dumpsters shall not be located or placed within 25 feet of any structure, parked vehicles or flammable storage area. NOTE: This will prevent fire damage to property in case of dumpster fire.

c. Floors, Walking and Working Surfaces:

(1) All floors and walkways shall be maintained in a clean and dry condition. All walkways, passageways, aisles, and exits will be free of clutter, trash, and obstructions. Materials shall not be permitted to protrude or be stored in walkways, passageways, or aisles.

(2) Floors shall be adequate for the loads placed upon them. Special consideration shall be given to heavy, concentrated loads such as safes, refrigerators, and other heavy items. All mezzanine floors shall be load tested and conspicuously labeled as to floor load limits.

(3) Building entrances surfaced with smooth flooring which could become slippery during inclement weather shall be provided with suitable storm mats.

(4) All spills (wet or dry) shall be cleaned up immediately or barricaded until the condition is corrected.

(5) Differences of elevations in floors, aisles, corridors, and other walkways shall be clearly indicated and marked. Railings shall be provided if necessary. Stairs with three (3) or more steps require hand railing.

(6) Stairways shall be kept clear of all materials and properly illuminated. They shall be kept clean, dry, and in good repair. Broken or cracked step nosing, loose or peeling non-slip pads, worn rugs, or broken tiles shall be replaced. Snow and ice should be removed and appropriate deicer applied.

(7) Power and telephone cords, wires, and furniture shall be arranged to prevent trip or fall hazards and fire evacuations.

(8) Desk and file cabinet drawers shall be kept closed when not in use.

(9) Filing cabinet loading shall be redistributed if they become top heavy.

(10) To retrieve or place items stored above their normal reach, personnel will be provided approved step stools or ladders equipped with non-slip treads and feet.

(11) Rugs and carpets shall be taped or permanently installed. Special attention should be given to the edges to prevent rolling and bunching.

d. Collision Prevention:

(1) Two-way traffic around blind corners in buildings shall be controlled by use of lines painted on the floor or parabolic mirrors.

(2) Solid swing doors shall have clear glass observation panels and/or proper signs posted such as "Open Door Slowly" to protect unseen traffic on swinging door side of exit/entrance.

e. Fan Guards: Unguarded or improperly guarded electric fans shall be located at least 7 feet above the floor and securely anchored. All other fans must have a guard with an opening no larger than 1/2 inch.

f. Two Person Rule (Two Man Rule):

(1) Working Alone

(a) Employees are required to periodically report to the supervisor or his designated representative (mission controller, colleague at base facility, etc.) using any means available (i.e., phone, radio, email, text message, etc.).

(b) In the event of an emergency, if the employee has not made contact as required or the employee did not return within the estimated time, the supervisor or

designee will initiate contact, and if unsuccessful, will contact the Director of Emergency Services via Central Dispatch (678-1234) to check on the person's safety and health.

(2) Traveling Alone (Non-Isolated Areas)

(a) Non-Isolated Travel: This condition applies to well-traveled areas where traffic patterns indicate high probability of visual observation or voice communication in the case of an emergency. Baseline areas include the WSMR cantonment area, Highway 70, Small Missile Range (SMR), Nike Avenue, Range Roads 5, 6, 7 and 10 during normal duty hours, and launch complexes. Also any other areas at the discretion of the supervisor.

(b) Two-person rule is strongly encouraged.

(c) Effective radio or cellular communication is encouraged everywhere.

(d) A supervisor may require two person rule at his or her discretion

(e) Anytime an employee does not feel comfortable doing a task alone, (ie., driving up range in icy conditions) he/she can request a second person to assist in the task.

(3) Isolated Travel: Any area not designated as "non-isolated travel" shall be considered isolated travel.

(a) Two-person rule is strongly recommended.

(b) Effective radio or cellular communication equipment will be considered mandatory.

(c) Supervisors may require two person rule at their discretion.

(d) Anytime an employee does not feel comfortable doing a task alone (i.e., driving up range in icy conditions) he/she can request a second person to assist in the task.

(e) Supervisors are responsible for ensuring employees understand and adhere to the two person rule, as well as associated policy and reporting procedures. The supervisor has the authority to require two people in the vehicle; the determination will be based on a variety of factors to include mission, location, and terrain, and travel conditions, length of day, extreme weather or combinations thereof.

(f) Employees are responsible for performing a Risk Management Process and ensuring that they have the right vehicle for the trip/mission, and have completed a vehicle inspection to include, tire pressure, fire extinguisher, fuel, fluids, etc. The Risk Hazard Analysis is best performed as a team or group whenever possible. Employees

should also have potable water and cell phone or two way radio as required above; have determined the safest route for the trip and understanding of potential hazards; have planned adequate time for the trip; and, are physically able and adequately rested/prepared to make the trip. If you feel you are not adequately rested/prepared to perform work related travel, report this to the supervisor or his designated manager.

(g) For situations that require an employee to work alone, the Supervisors will ensure the employee has performed a Risk Management Process of the required task/s and provide it to the supervisor for review and approval. Supervisors will use the analysis provided to ensure the employees are aware of the risks associated with working alone and cautioned against attempting anything that under normal working conditions would require two individuals to prevent serious injuries. Examples include lifting heavy objects, moving bulky equipment/instrumentation, working on high ladders in isolated areas or work sites, etc.

(4) Mandatory Two Person Rule:

(a) All Hazardous Work Tasks Require use of the Two Person Rule - Examples:

(1) Oxygen Deficiency Hazard Work (ODH) Caves, enclosures, confined spaces

(2) Lockout Tagout Work (LOTO)

(3) Explosive Operations

(4) Stored Energy such as: Compressed Gas, Electrical and Cryogenics (supercooled liquids).

(b) The two person rule applies whenever there is reason to believe that a situation may develop where the person could not summon assistance within a reasonable time or where assistance from another person would not be available in the event of an accident or mishap.

(c) Hazardous work in isolated areas including uninhabited buildings after regular working hours requires the presence of at least two people.

(d) Supervisors responsible for assigning an employee to duties which require working alone in an isolated area shall require the employee to report periodically by telephone or two-way radio to the shop or office accountable for the employee. The supervisor and employee will establish a clear understanding of the established communication necessary to monitor the employee's safety.

g. Manholes and Storage Tanks: The Directorate of Emergency Services (Fire Department) shall be requested to perform or arrange for a confined space permit for underground cavities or storage tanks before personnel enter them. The procedures for confined space entry are addressed in chapter 12 of this regulation.

h. Walk-in Spaces: A walk-in space is any space, which may be entered by one or more persons and has a door lock, closing mechanism, or other device that may prevent voluntary egress of personnel. Walk-in Spaces can sometimes be considered confined space. Information on Confined Space Entry is located in Chapter 12.

(1) For operations other than maintenance and repair work, only trained personnel familiar with the walk-in space and safety precautions, including emergency exit procedures, shall be assigned work which requires entry.

(2) Walk-in space safety devices shall be inspected for safe and effective operation the first time it is entered each day. The employee shall record the inspection on a log located at the entrance.

(3) Each door shall be equipped with an operable inside door handle or bump bar for releasing the door fasteners or to force the door open from within the walk-in space.

(4) Locking doors shall be installed in a manner to allow all locks to be completely opened from inside the walk-in space.

(5) Locks operated independently of inside-opening mechanisms shall not be permitted.

(6) Appropriate instructions (evacuation plan) regarding emergency escape procedures/routes shall be posted in a conspicuous place for viewing by employees and visitors in all buildings.

i. Personal Protective Equipment: For use of Test Specific PPE see Chapter 27.

(1) Personal protective equipment (PPE) can be used to protect the eyes, face, head, lungs, and extremities. Examples are: protective clothing, respiratory devices, protective shields, and barriers. The use of personal protective equipment does not relieve the requirement for management to engineer controls or manage the hazardous exposure administratively. Personal protective equipment will be provided to WSMR employees when engineering controls are not feasible. PPE is necessary when :

(a) Industrial Hygiene (IH) has directed PPE requirements based on worksite surveys.

(b) PPE is specifically required by regulation or public law.

(c) Safety has determined PPE is required.

(2) The supervisor shall ensure employees utilizing PPE have been trained in the following:

(a) What type of PPE is necessary;

(b) How to properly don, doff, adjust, and wear PPE;

(c) The limitations of the PPE;

(d) And the proper care, maintenance, useful life and disposal of the PPE.

(3) The supervisor will retrain an employee when he has reason to believe that an already trained employee does not have the understanding or skill required to use the PPE.

(4) The supervisor shall verify that each affected employee has received and understood the training.

(5) A certification record of training must be maintained by the supervisor for the duration of employment. This record must identify each employee trained, date(s) of training, subject, name of the instructor, and the statement "Personal Protective Equipment Certification Training".

(6) The supervisor shall ensure and enforce the wearing, use, and maintenance of personal protective equipment.

(7) A hazard analysis must be completed for all PPE.

(8) Supervisors will provide PPE that Safety or IH has identified as necessary.

j. Work Clothing:

(1) Static generating synthetic fabrics, such as nylon, shall not be worn by operators or visitors in areas containing explosives, pyrotechnics or explosive air vapor mixtures. Cell phones and radio transmitters will not be worn in these areas. Cotton garments are required in these operations.

(2) Rings, wristwatches, or other jewelry, shall not be worn for any job involving moving or rotating machinery, exposed electric currents, materials handling, and explosives type operations.

(3) Employees shall wear clothing suitable for the weather, work environment, task, and location. The minimum in an industrial or test setting is short sleeve shirt, long trousers or pants, and leather or other protective work shoes or boots. Neck ties and other loose items will not be worn around moving machinery. Canvas, tennis, deck shoes, or sandals are not acceptable.

(4) Personnel involved in field or outdoor operations shall wear long trousers or pants and enclosed leather or other protective work shoes or boots. It is recommended

that clothing made of natural fibers be worn. Long sleeves, a hat, sunglasses and liberal use of sunscreen are encouraged.

(5) Personnel with long hair involved in operations with moving machinery shall restrain hair with a hair net, cap, or other device.

(6) Foot protection providing protection against impact, compression forces, conductive hazards, electrical hazard and sole puncture shall be worn. This foot protection must meet the requirements of ANSI Z41. The type of foot protection will be dependent on the hazards present.

(7) Personnel involved in activities which expose them to vehicular traffic shall wear a highly visible vest during daylight and reflection belt or vest during reduced visibility or night.

(8) Eye and face protection are addressed in chapter 18.

k. Compressed and High Pressure Air:

(1) Compressed air shall be limited to less than 30 psi for dusting purposes. Special safety nozzles or regulators, which reduce the pressure or deflect the air blast, shall be used.

(2) Machinery, floor, and clothes will be cleaned with a brush or vacuum cleaner. Only machinery that cannot be cleaned in any other manner, as designated by the supervisor, may be cleaned by compressed air.

(3) Supervisors shall ensure that all personnel using high pressure or compressed air are authorized to do so, are fully aware of the dangers involved, and thoroughly familiar with the safety precautions.

(4) To reduce hazards involving high-pressure air, the following shall be adhered to:

(a) Testing, inspection, and repairs to high-pressure air facilities shall only be accomplished by competent personnel.

(b) All pressure gauges shall be calibrated and relief valves tested annually.

(c) All low pressure (below 500 psi) and high-pressure (501-6000 psi) compressors will be inspected at 12-month intervals or anytime a malfunction or erratic operation dictates. Service basis on high-pressure compressors shall be considered as having a maximum total life of 5 years.

(d) Prior to repairs and maintenance on high-pressure air systems, the system shall be locked or tagged out in accordance with chapter 11.

l. Material Storage:

(1) Raw materials shall be brought into work areas in no greater quantity than is necessary.

(2) Flammable liquids and similar materials shall be stored in NFPA-approved containers or flammable cabinets.

(3) All eyewashes shall be inspected once a week and initialed by inspector.

(4) Additional information and guidance can be obtained from TB 43-0151, 17 Mar 89, Inspection and Test of Air and Other Gas Compressors, Reference 53, Appendix A.

m. Welding, and Brazing:

(1) Supervisors shall be responsible for ensuring that all gas welding and burning equipment has been inspected, tested, and tagged IAW TB 43-0151, 17 Mar 89, Inspection and Test of Air and Other Gas Compressors

(2) All gauges, regulators, and hoses shall be inspected prior to being placed in service and annually to ensure their accuracy IAW with TB 43-0151, 17 Mar 89, Inspection and Test of Air and Other Gas Compressors

n. Cranes, Rigging, and Weight Handling (Lifting) Equipment:

(1) Periodic inspections and testing of lifting equipment are the only methods available for the detection of unsafe slings, hooks, rings, clevises, pendants, crane cables, hoisting ropes, boom ropes, and similar lifting equipment. All lifting equipment shall be inspected and tested in accordance with TB 43-0142, Safety Inspection and Testing of Lifting Devices, Reference 52, Appendix A.

(2) Crane, rigging and weight handling operations will be performed in accordance with TB 43-0142, Safety Inspection and Testing of Lifting Devices and recognized trade practices.

4-3. SAFETY AND OCCUPATIONAL HEALTH INSPECTIONS: Periodic inspections are conducted to maintain a safe and healthful work environment, identify potential safety deficiencies and discrepancies, and in response to an employee complaint. All safety discrepancies are given a Risk Assessment Code. (Refer to Appendix E, for an explanation of the Risk Assessment Code (RAC) matrix.)

4-4. SAFETY AND OCCUPATIONAL HEALTH ASSESSMENTS

a. An evaluation (assessment) of building and operations will be performed by the Industrial Hygiene (IH) Section, Occupational Health Clinic, McAfee Army Medical Clinic.

This evaluation is conducted for the purpose of determining the presence of health hazards resulting from operations. Health hazards data gathered on operations and information on employees is included in the Department of the Army (DA) computerized Health Hazards Information Module (HHIM) database. In addition the data is recorded on appropriate forms and a copy retained in the IH Section official file. Title 5 US Code, Section 301, Executive Order 9297 authorizes the use of Social Security Number as identification. This information is needed to identify and monitor data relating to individual DA civilian and military employees exposed to hazardous workplaces or operations and to provide histories of exposures for any given worker. Disclosure of social security numbers is not mandatory; however, nondisclosures may result in untimely provision of proper medical monitoring. In addition, the HHIM assists IH by providing the following:

(1) A database for the effective management of IH services at the installation level.

(2) A database for implementation of a medical surveillance program at the installation level.

(3) Management information for responding to Office of the Surgeon General (OTSG) and major Army Commands (MACOMS) on matters relating to industrial operations, exposures, and controls.

b. Upon receipt of a completed survey, contact Occupational Health at 678-3134 to determine if any personnel are required to schedule an appointment with Occupational Health Of Medical Surveillance. Notify Occupational Health at 678-3134 of any personnel changes, to include new hires, transfers and/or retirees. It is the responsibility of each supervisor to share the comments and recommendations of IH surveys with each employee.

c. As per OSHA 1960.9 Supervisory Responsibilities- Employees who exercise supervisory functions shall, to the extent of their authority, furnish employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm. As per OSHA 196019b, Employee Responsibilities and Rights- Employees shall use safety equipment, personal protective equipment, and other devices and procedures provided or directed by the agency and necessary for their protection.

d. All IH reports are based on the information available at the time of the survey. Should additional information become available, IH may revise the opinions, conclusions and recommendations, if necessary, as warranted by the discovery of additional information. The hazards listed and any recommendations noted are intended for use in the practice of industrial hygiene as guidelines to assist in the control of potential workplace health hazards and should not be solely relied upon as the only precautions to use during hazardous operations.

e. Due to the wide variety of toxic hazardous materials (adhesives, solvents, aerosols, etc.) required by personnel to properly accomplish a task, IH recommends thoroughly reviewing MSDSs for Personal Protective Equipment (PPE) requirements prior to performing a task. IH recognizes that some individuals may be more sensitive to a hazard than others: therefore, if a concern is expressed by an employee or upon request, IH will perform the following:

(1) Perform a specific evaluation on an individual's workplace.

(2) Prior to purchasing new operation equipment and/or office furniture contact IH for an ergonomic evaluation

f. If there are any further questions concerning PPE requirements or for further technical assistance contact the Industrial Hygiene Section, telephone 678-1724.

Chapter 5
SAFETY AWARD PROGRAM

5-1. GENERAL:

a. The Secretary of the Army established the Army Accident Prevention Awards Program to personally recognize organizations and individuals that have demonstrated exceptional operational excellence by sustained mission success with simultaneous exemplary safety performance. (See AR 385-10, chapter 8, for more information on this program). Safety awards are recognized as an essential part of an effective safety program. This chapter establishes policy, requirements, responsibilities and procedures for a safety awards program at WSMR. These provisions apply to all Commanders, Directors, Staff Offices and tenant activities on WSMR.

b. The objective of this awards program is to promote excellence in mission readiness by accident and hazard reduction. An active safety awards program will recognize effective safety programs, integration of CRM principles, and foster a sound safety culture. Organizations and individuals should be recognized for extraordinary commitment to a command-wide safety focus that demonstrates effective CRM integration in operational readiness and mission success.

5-2. AWARDS PROGRAM:

a. The Installation Safety Director (ISD) administers the joint safety awards program for WSMR. Tenant commanders and directors of WSMR activities are encouraged to establish a safety awards program within their areas of responsibility to recognize safety achievements not provided for in this regulation. Safety award programs for WSMR activities will be reviewed and approved by the ISD prior to implementation. The following criteria will apply when applying for the awards listed in paragraph 5-6 thru 5-12.

b. The Executive Safety Awards Committee (ESAC) will be chaired by the ISD or his designee. Members will include the Command Sergeant Major (CSM), Test & Garrison, two members of the Installation Safety Office will serve as voting members the ISD or his designee will serve as the committee recorder and provide ESAC minutes to the command group for approval.

c. The ESAC will meet quarterly, or more frequently at the call of the chairperson, to review the effectiveness of the safety program initiatives, define needs, assign responsibilities, direct staff actions, and resolve issues as they relate to the Safety Program.

5-3. RESPONSIBILITIES:

a. Initiators: Unit commanders/activity directors shall send nominations to the ESAC.

b. Nominations: ESAC shall vote on nominations and recommend award through their chain of command for approval.

c. Approval authority.

(1) Commander, US Army Test Center

(2) Commander, US Army Garrison.

(3) Assigned, attached, and other units and activities - Unit commander/activity director.

5-4. PRESENTATION: The approving authority will present the awards at the appropriate ceremony.

5-5. AWARDS: Department of the Army (DA) Certificate of Merit for Safety (DA Form 1118), U. S. Army Safety Award (1119-1), Individual Cash Award (DA Form 1256), Time Off Award (DA Form 1256).

a. The use of promotional items can substantially enhance accident prevention programs. Installations must maintain a safety awareness program pursuant to AR 385-10, chapter 8-8. Small promotional items conveying safety messages may be part of the safety awareness program and their use is encouraged to influence safe performance of duties. Appropriated funds may be used to purchase such promotional items as a necessary expense to carry out the safety awareness program mission unless otherwise prohibited by law.

b. Promotional items for safety must be distributed for valid reasons, to promote safety awareness, and not with such frequency that the intent is lost.

c. Promotional items for purchase by Commanders, Directors, Staff Offices and tenant activities on WSMR will be coordinated with the ISD prior to purchase.

d. All promotional items will be clearly identified as safety items via printing, logos, or other means.

e. Use small, inexpensive items to recognize day-to-day safe performance. These individual items will not exceed $25.00 in cost. Examples are pencils, pens, gym bags, key chains, cups, etc. The ISD must approve distribution schemes.

f. Use items to recognize significant contributions that have a positive effect on the safety of an organization. These individual items will be less than $50.00 in cost. Examples are pen and pencil sets, jackets, calculators, etc.

g. Promotional items will not be recorded on property books. For this reason, Commanders, Directors, Staff Offices and tenant activities on WSMR must secure these items and establish internal controls to maintain accountability.

h. Compliance with the above criteria will be inspected during the annual safety and health program evaluation.

5-6. SAFETY COORDINATOR RECOGNITION: Commander's, Director's and heads of activities are highly encouraged to recognize individuals serving in the critical safety role as a safety coordinator. Recognition can be in the form of a Department of the Army (DA) Certificate of Merit for Safety (DA Form 1118), U. S. Army Safety Award (1119-1), Individual Cash Award (DA Form 1256), Time Off Award (DA Form 1256), or a write-up in the annual performance appraisal are a few examples.

5-7. SENIOR COMMANDER'S SAFETY AWARD:

a. Purpose. WSMR Senior Commander's Safety Awards recognize organizations and other WSMR activities for meeting accident prevention goals and making significant contributions to the Army Safety Program.

b. General.

(1) This program provides a quantitative system to evaluate WSMR commands, directorates and tenant activities with similar missions and personnel strengths to identify which programs are deserving of recognition.

(2) The Senior Commander's Safety Award will be presented at the semi-annual SOHAC or other appropriate command wide function.

c. Categories. For purposes of the WSMR Senior Commander's Safety Awards Program, WSMR commands and tenant activities are divided into three categories. The

WSMR Commander's Safety Award will be presented to first place (highest score) in each of the three personnel assigned strength categories.

(1) Large: 100 and above personnel assigned

(2) Medium: 30 to 99 personnel assigned

(3) Small: 29 and below personnel assigned

d. Awards Period. The WSMR Senior Commander's Safety Awards are based on the previous fiscal year (1 October through 30 September) data.

e. Award nomination and selection criteria.

(1) Nominations. Commanders/Directors and tenant activities will forward nominations to Commander, wsmr.installation.safetyoffice@us.army.mil NLT 15 December of each year. The WSMR Installation Safety Director will review nominations and recommend award winners for each category to the WSMR Senior Commander for approval.

(2) Selection Criteria. The Senior Commander's Safety Awards criteria are based upon the following:

(a) Successful safety program management as indicated in the results of the annual safety program evaluation conducted by the Installation Safety Office.

(b) Accident prevention efforts.

(c) Accident rate reduction experience as measured against the WSMR Accident Prevention Goals. Goals are based upon WSMR accidents only and rates are computed IAW AR 385-10, paragraph 3-32b and Headquarters, Department of the Army (HQDA) guidance, except for the Army motor vehicle (AMV) rate, which will be computed based upon miles driven versus population. WSMR category, measure, and goals as follows:

(1) Military injuries (Class A-C). Measure. Disabling injury rate; the number of military injuries per 1000 population. Goal. A reduction of 5 percent from the activity or command's preceding 5-year average military disabling injury rate.

(2) AMV accidents (Class A-D). Measure. AMV rate; the number of AMV accidents (Class A-D) per 1,000,000 miles driven. Goal. A reduction of 5 percent from the activity or command's preceding 5-year average AMV rate.

(3) Aviation accidents (Class A-C). Measure. Aviation accident rate; the number of Class A-C aircraft accidents per 100,000 flight hours. Goal. A reduction of 5 percent from the activities preceding 5-year average aviation accident rate.

(4) Special initiatives in motor vehicle safety.

(5) Special initiatives in off duty safety.

(6) Safety program enhancements.

5-8. GROUND SAFETY UNIT AWARD:

a. Eligibility. Military members/US (DAC) civilian/Master Labor Contract (MCL)/Indirect Hire Agreement (IHA) personnel assigned, attached and other units and activities personnel are eligible for safety awards.

b. Requirement. Units which complete 365 consecutive days without experiencing a Class A, B, or C accident, as defined in DA PAM 385-40, are eligible and must demonstrate exemplary safety performance for a period of no less than1 year. Exemplary performance examples include proactive accident prevention activities, exceptional dedication and experience in conducting physical safety inspections, superior training or coaching personnel in safety and occupational health topics, investigating accidents, attending safety meetings, and presenting safety orientations to newly assigned personnel. Personnel who complete the following driving requirements without an at-fault accident or traffic violations are eligible.

5-9. ARMY MOTOR VEHICLE (AMV) SAFE DRIVER AWARD:

a. Eligibility. Military members/US (DAC) civilian/Master Labor Contract (MLC)/Indirect Hire Agreement (IHA) personnel who regularly drive AMVs in the performance of their daily duties are eligible for the AMV Safe Driver Award.

b. Requirement. A person must demonstrate exemplary safety performance for miles driven as outlined below. Exemplary performance examples include proactive accident prevention activities, exceptional dedication and experience in conducting physical safety inspections, superior training or coaching personnel in safety and occupational health topics, investigating accident, attending safety meetings, and presenting safety orientations to newly assigned personnel. The nominee must have completed one of the following without an "at-fault" on-duty vehicle accident or a moving violation:

(1) 10,000 miles of administrative vehicle operation, or

(2) 3,000 miles of tactical vehicle operation, or

(3) 1,500 miles of tracked vehicle operation, or

(4) 1,500 hours of material handling equipment operation

5-10. SAFE EMPLOYEE AWARD:

a. Eligibility. Military members/US (DAC) civilian/Master Labor Contract (MLC)/Indirect Hire Agreement (IHA) personnel are eligible.

b. Requirement. Personnel who complete 365 consecutive days without any mishaps or incidents causing personnel injury or damage to government property are eligible. A person must demonstrate exemplary safety performance for a period of no less than1 year. Exemplary performance examples include proactive accident prevention activities, exceptional dedication and experience in conducting physical safety inspections, superior training or coaching personnel in safety and occupational health topics, investigating accidents, attending safety meetings, and, presenting safety orientations to newly assigned personnel.

5-11. SAFE MATERIAL HANDLING EQUIPMENT AWARD:

a. Eligibility. Military members/US (DAC) civilian/Master Labor Contract (MLC)/Indirect Hire Agreement (IHA) personnel are eligible who regularly operate material handling equipment (forklifts, mobile cranes, lifts, etc.) in the performance of their daily duties.

b. Requirement. Personnel who complete 365 consecutive days without any mishaps or incidents causing personnel injury or damage to government property in operation of material handling equipment are eligible. A person must demonstrate exemplary safety performance for a period of no less than 1 year. Exemplary performance examples include proactive accident prevention activities, exceptional dedication and experience in conducting physical safety inspections, superior training or coaching personnel in safety and occupational health topics, investigating accidents, attending safety meetings, and, presenting safety orientations to newly assigned personnel.

5-12. SAFE SUPERVISOR AWARD:

a. Eligibility. Military members/US (DAC) civilian/Master Labor Contract (MLC)/Indirect Hire Agreement (IHA) personnel are eligible.

b. Requirement. Supervisors who manage and supervise personnel within their section for 365 consecutive days without any mishaps or incidents causing personnel injury or damage to government property are eligible. A person must demonstrate exemplary safety performance for a period of no less than 1 year. Exemplary performance examples include proactive accident prevention activities, exceptional dedication and experience in conducting physical safety inspections, superior training or coaching personnel in safety and occupational health topics, investigating accidents, attending safety meetings, and, presenting safety orientations to newly assigned personnel.

5-13. SAFETY AVIATION AWARD:

a. Eligibility. US Army aviators and crew members.

b. Requirement. The completion of 250, 500, and 1000 consecutive flying hours without any aviation mishaps resulting in injury to personnel or damage to property and equipment are eligible. A person must demonstrate exemplary safety performance for a period of no less than 1 year. Exemplary performance examples include proactive accident prevention activities, exceptional dedication and experience in conducting physical safety inspections, superior training or coaching personnel in safety and occupational health, topics: investigating accidents: attending safety meetings; and presenting safety orientations to newly assigned personnel.

5-14. US ARMY DRIVER/MECHANIC BADGE: Military units are encouraged to utilize this award IAW AR 600-8-22 for eligible military personnel. Prior to submitting the request for orders, nominations should be submitted to ISD for verification that the nominee has not been involved in a disqualifying accident.

Chapter 6
HAZARD COMMUNICATION PROGRAM (HAZCOM)

6-1. RESPONSIBILITIES :

a. Directors are responsible for implementing the HAZCOM program in accordance with the WSMR Hazard Communication Program/Handbook (Reference 59, Appendix A) document. They are ultimately responsible for ensuring individual supervisory areas are in compliance with the program, and for guaranteeing that all employees receive HAZCOM training as it applies.

b. The supervisor or the responsible designee must ensure that all requirements and procedures outlined in the HAZCOM program are appropriate to the individual work areas under their supervision and are carried out properly by the following actions:

(1) Maintain a current listing of all hazardous materials in the work area.

(2) Provide access to MSDSs.

(3) Maintain a copy of the WSMR Hazard Communication Program.

(4) Maintain current training documentation specific to the materials to which they may be exposed.

(5) Ensure the WSMR HAZCOM Program along with site specific information be made available to employees, contract personnel, as well as visitors.

(6) Ensure that hazardous materials are labeled in accordance with the WSMR HAZCOM Program.

(7) Ensure that those who may be exposed to hazardous materials are informed of the personnel protective requirements.

(8) Ensure that all employees, contract personnel, and visitors are properly trained in accordance with the HAZCOM program. All visitors must be trained on site-specific hazards prior to entry into a location that contains hazardous materials. Visitors that will be at a site for longer than one week shall be trained IAW all HAZCOM requirements.

(a) Employees are responsible for following and observing all appropriate practices and procedures contained in the WSMR HAZCOM Program, including required training, understanding of the training, and applying the training received. It is also the employees' responsibility to report unsafe conditions, illnesses, injuries, and near-misses to their supervisors.

(b) The Installation Safety Office is responsible for reviewing and overseeing the implementation of the Hazard Communication Program. This includes coordinating the compliance effort, acting as a consultant for areas regarding implementation and enforcement, evaluating work practices and personal protective equipment, providing program materials to different areas, tracking employee training, and ensuring that all levels of supervisory personnel are informed of their HAZCOM program responsibilities in accordance with 29 CFR 1910.1200.

(c) Logistics will provide an MSDS for all materials distributed through the Hazardous Materials Minimization Center (HMMC). The HMMC is responsible for establishing procedures ensuring that all hazardous materials transported onto the installation are properly identified and labeled. The HMMC will bar code the materials, obtain MSDSs from the distributor, notify the user when materials are available for pick-up, and tracking the material while at WSMR.

(d) The WSMR Industrial Hygienist at McAfee Health Clinic (678-4025) in conjunction with the WSMR occupational health physician will guarantee medical surveillance is conducted where necessary. This office will track and schedule required physicals and maintain health records. If a supervisor or employee has any concerns about a specific job function they should contact the WSMR Industrial Hygienist immediately.

(e) Contractors:

(9) Contractors who work in areas in which no WSMR personnel are currently employed, e.g., construction of new facilities and/or renovation of cleaned and evacuated areas, shall comply with the WSMR Hazard Communication Program for their employees.

(10) Contractors who work in an area in which WSMR personnel are using or storing hazardous materials shall be provided with a list of hazardous materials in use in that area, access to MSDS for those materials, a copy of the WSMR Hazard Communication Program, and training specific to the hazardous materials to which they may be exposed.

(11) Contractors that use hazardous materials in areas where WSMR personnel or other contractors may be exposed shall maintain a copy of the WSMR Hazards Communication Program, hazardous material inventory list, and have copies of the MSDSs available at the site for each hazardous material used in that area.

Chapter 7
ACCIDENT REPORTING AND RECORDS

7-1. REQUIRED FORMS:

a. HSHM-MHC-7 - Occupational Health Permit: Used to record treatment and appointments at the McAfee Health Clinic - Appendix I

b. STE Form 1416 - Record of Injury: Required for all injuries. (Appendix J)

DA Form 285 - US Army Accident Report: Required for all class A and B accidents.

c. DA Form 285-AB-R - Abbreviated Ground Accident Form: Required for all class C and D accidents. (Appendix L)

d. DA Form 2397-AB-R - Abbreviated Aviation Accident Report (AAAR): Required for all aircraft ground accidents (regardless of class) and all Class C, D, E and F (turbine engine FOD) aviation accidents/incidents. (Appendix M).

e. Refer to Appendix Z "Installation Safety_ ACCIDENT REPORTING MEMO_ 01 Jan 2012 " for further instruction.

7-2. RESPONSIBILITIES:

a. Employees shall:

(1) Immediately notify the supervisor of a work injury no matter how minor.

(2) Seek medical treatment if necessary. Employees are encouraged to be treated at McAfee Health Clinic. An employee may be treated by their private physician; however, the employee must report (or have supervisor report) as soon as practical, all injuries to McAfee Health Clinic to facilitate documentation of a work related injury.

(3) When working at remote sites, obtain medical treatment from the nearest source, then notify the supervisor. Employees who are assigned to Stallion Range Center and Holloman AFB will obtain medical treatment and report per local policy.

(4) Return the Occupational Health Permit (Appendix I) and copy 1 of the Record of Injury to the supervisor.

(5) If an injury occurs while on travel or TDY, report to the nearest Government Medical Facility (if available). Otherwise, report to the nearest hospital or physician and request treatment. In such situations, the employee should take action to report the injury to the supervisor as soon as possible.

b. Supervisors shall:

(1) Complete Occupational Health Permit (HSHM-MHC-7) and section 1 (omitting block 7) of the Record of Injury (STE Form 1416) upon being notified of a work injury. Note: In emergency situations where delay in treatment could be detrimental to the employee, the forms may be completed after initial treatment. When the employee returns, complete section 1, block 7 and sections III and IV of the Record of Injury and send a copy to the Installation Safety Office. Note: If the employee is not returned to work the supervisor will pick up copy 1 of the Record of Injury from the clinic not later than the next workday and send a copy to the Installation Safety Office not later than the close of business the following work day.

(2) Give both forms to the employee to take to McAfee Health Clinic to receive treatment.

(3) Use the original Occupational Health Permit for all follow-up treatment.

(4) Prepare additional accident reporting forms for any accident meeting the criteria of a class A, B, C, D, E, or F accident as outlined in 7-1, reference c,d, or e.

c. Governmental Medical Officers or attendants shall:

(1) Complete the Occupational Health Clinic Permit.

(2) Complete section II of the Record of Injury.

(3) Return the Occupational Health Clinic Permit and copy 1 of the Record of Injury to the employee.

Note.If the employee is not returning to work, copy 1 of the Record of Injury will be maintained by the clinic and picked up by the supervisor.

(4) Maintain copy 2 for the Installation Safety Office to pick-up.

(5) File copy 3 in employee's occupational health record.

d. Contractors shall:

(1) Immediately report all accidents or injuries to the Contracting Officer's Representative (COR) or Project Representative.

(2) Forward a written report through the COR or Project Representative (using contractor's format) to the Installation Safety Office within 7 working days.

e. Contracting Officer's Representative (COR) or Project Representative shall:

(1) Immediately notify the Installation Safety Office telephonically (678-1211) of a contractor accident or injury.

(2) Ensure a written accident report (using the contractor's format) is sent to the Installation Safety Office within 7 working days.

f. The Installation Safety Office shall:

(1) Investigate reports of injuries.

(2) Complete section V of the Record of Injury.

(3) Maintain the OSHA 300 Log of Injuries and Illness.

(4) Develop accident trends and analysis.

(5) Institute an accident prevention program.

(6) Maintain files of contractor's accidents and injuries.

(7) Report all statistical information to OSHA and respective higher commands.

7-3. ACCIDENTS/INCIDENT INVESTIGATIONS

a. Investigations of Accidents and Near Misses. Supervisors shall assign a subordinate to investigate all accidents and near misses in their areas and maintain written reports of the investigations. The Installation Safety Office will provide support as needed.

b. Accident and near-miss investigations should: :

(1) Be conducted by personnel trained in accident investigation techniques. Personnel who were not involved in the accident or who do not supervise the injured employee(s) should conduct the investigation to minimize potential conflicts of interest.

(2) Document the entire sequence of relevant events.

(3) Identify all contributing factors, emphasizing failure or lack of hazard controls.

(4) Determine whether the safety and health management system was effective, and where it was not, provide recommendations to prevent recurrence.

(5) Not place undue blame or reprisal on employees, although human error can be a contributing factor.

(6) Assign priority, time frames, and responsibility for implementing recommended controls.

(7) The result of investigations should include, at a minimum, a description of the incident and the corrections made to avoid recurrence.

7-4. COMMANDER'S CRITICAL INFORMATION REPORTING

a. The Commander's Critical Information Reporting (CCIR) is that information the Senior Commander (SC) feels is of such importance that it will be reported as soon as practical.

b. The following CCIR items of interest (1-7 meet "wake-up" criteria and 8-15 are considered appropriate for reporting immediately during duty hours):

(1) Accidents:

(a) Any security incident at the SV Radiological Facilities (including the Fast Burst Reactor (FBR) involving Nuclear Equipment or Special Nuclear Material (SNM)).

(b) Serious injury or death of key personnel or immediate family member, such as Spouse (on or off post).

(c) Serious injury of military or civilian personnel during testing

(d) Any incident resulting in serious damage to test equipment, test materials, and/or facilities, resulting in significant delays in mission schedule, particularly with regard to our war effort.

(e) Any accident or incident that damages private property or injures civilians or non-DOD personnel., particularly when there is a prospect of such incident or injury creating adverse actions and publicly for the Army/DOD.

(2) Any change in Force Protection, but particularly elevation in FPCON.

(3) Any Force Protection incident that appears to be associated with civil unrest.

(4) Any incident that requires a Serious Incident Reports (SIR) to any organizations higher or external headquarters.

(5) Any aircraft incident resulting in damage to aircraft or US property.

(6) Any loss of a weapon or sensitive item or material.

(7) Breaches of our IT information assurance protocols and protections, especially by outside influences.

(8) Requests for deployment and redeployment of WSMR personnel and/or organizations into and around the CENTCOM Theater of Operations..

(9) Emergency leave of senior leadership or key leaders particularly directors, division chiefs, and key and essential personnel.

(10) All active duty and civilian employee injury resulting in loss of duty time.

(11) Live fire test anomalies.

(12) Any accidental weapons discharges.

(13) Brigadier General/SES (07) or higher visitors (including Congressional Delegates/Staffers) to include notification of visits and results of completion of visits.

(14) Inspections by external organizations.

(15) All Class B and C accidents.

(16) Accidents, injuries, or hostile incidents involving ATEC personnel in theater of operations.

(17) Any event not covered above that will result in closure or will severely impact the ATEC mission.

(18) Any test data of a system in use by service members that shows a previously unknown system vulnerability that places service members at risk of death or injury.

(19) Any test data of a system in use by service members that shows a previously unknown system vulnerability that creates risk of mission failure.

(20) Proposed formal business/test relationship above the level of customer test.

(21) Any request for information by political appointees of the Army Secretariat or OSD, four- star general/admiral or equivalent SES member.

(22) Knowledge (observed or from reliable source) that negative comments were provided to SECDEF, SECARMY, CSA, or VCSA regarding White Sands or ATEC.

(23) Surety program position vacancies/equipment shortages that impact surety mission completion/security posture.

(24) Intelligence products from NGICF, G2 or other intelligence agencies that indicate testing may be inadequate or invalid as compared to current threats.

(25) Suspected Anti-Deficiency Act violation (also requires flash report).

c. CCIR reporting does not reduce or eliminate the need to process SIR's or safety, security, and other reporting requirements.

d. Format for a CCIR is enclosed at Appendix B. See WSMR Policy Letter #2: Commanders Critical Information Reporting (CCIR) Policy for further guidance or additional requirements.

7-5. FATALITY REVIEW BOARD

a. This section establishes the White Sands Missile Range (WSMR) procedures for conducting a Fatality Review Board (FRB) on the death of any Military Service Member (on or off the installation), DA Civilian or Contract Employee within the boundaries of WSMR.

c. Any Commander, Director, or Office Chief of Team White Sands experiencing the death of any Military Service Member (on or off the installation), Family Member, DA Civilian or Contract Employee within the boundaries of WSMR will notify the commander as outlined in 7-4.

d. The SC or designee will convene a FRB within 10 working days of the incident. The Secretary of the General Staff (SGS) will provide notification as to the time and place of the FRB and briefing slide suspense date. The purpose is to ensure these personnel losses are investigated in a timely manner, to identify causes or contributing factors, and determine necessary leader actions to prevent recurrences. The FRB will address, at a minimum, personal data on the victim or involved individuals, pre-incident phase (chronological sequence of events occurring within 72 hours prior to the incident), synopsis of the event, causative and contributing factors, maps, diagrams, medical findings, and casualty affairs status, corrective actions taken, and any

recommendations to prevent recurrence (see Appendix O for a complete list of requirements).

e. The FRB will not be delayed waiting on toxicology, autopsy, police, or other technical reports. The safety accident investigation board or AR 15-6 investigation officer will conduct a more detailed investigation to address those aspects as appropriate. Use available information to assess what happened (if practical to do so without having to speculate), identify what lessons can be learned, and share that information as quickly as possible. Supplemental data, FRB taskers, and information may be submitted in follow-up reports, as appropriate to the SGS.

f. The FRB will be chaired by the SC or the Garrison Commander as a minimum, and will be comprised of the following members:

(1) Unit/organization chain of command/supervision from first-line supervisor to brigade commander or equivalent.

(2) Installation Safety Director.

(3) Medical Treatment Facility Commander/Officer-in-Charge for Clinical Services.

(4) Staff Judge Advocate.

(5) Commanders, Directors, Office Chiefs of Team White Sands (information sharing).

f. Other members, as required (e.g. Criminal Investigative Division, Alcohol and Drug Counseling representative, Directorate of Emergency Services, Casualty Affairs representative, Public Affairs Officer, Mental Health Services).

g. Exemptions from this requirement must be approved by the SC or the WSMR Chief of Staff. An example warranting exemption would be commercial transportation accident (commercial airlines, bus, etc., not under contract to or under operational control of the Army) in which a Military Service Member or DA Civilian is fatally injured.

Chapter 8
STANDING OPERATING PROCEDURES

8-1. RESPONSIBILITIES:

a. Director, Installation Safety Office shall:

(1) Assist in the identification of hazards and required protective measures upon request.

(2) Review and recommend approval of all hazardous, explosive and ammunition SOPs prior to submitting for Command approval.

(3) Maintain an inventory of current hazardous and explosives SOPs.

b. Directors shall:

(1) Ensure all hazardous operations or areas are identified.

(2) Ensure that SOPs are developed for all explosives, ammunition and hazardous operations.

(3) Ensure a hazard analysis is prepared and included as part of the SOP.

(4) Review and ensure SOPs are signed by the branch and section chiefs prior to submittal to the Installation Safety Office (ISO).

(5) Ensure that a copy of the approved SOP is available at the site of the operation(s).

(6) Ensure hazardous operations are not conducted without an approved SOP. (SOP signature cover pages can be found at Appendices Q and R.)

c. Supervisors shall:

(1) Provide surveillance of operations to ensure prompt identification of actual or potential hazards.

(2) Ensure a hazard analysis is prepared for all hazardous and explosives operations. (Appendix Q)

(3) Ensure all pages of the hazard analysis is signed and dated by the preparer and approver.

(4) Maintain current SOP files for hazardous and explosives operations and enforce their requirements.

(5) Ensure compliance with safety requirements by all operators and visitors.

(6) Ensure SOP is reviewed and sign the "Supervisors Statement" when:

(a) First assigned to the operation.

(b) An approved formal or interim change is made to an SOP.

(c) An operation is started up after an extended period of inactive status (15 or more working days).

(d) At least once a quarter, as a minimum.

(7) Review SOPs annually to determine need for changes and request an extension if necessary.

(8) Submit SOP with changes, if any, (with new signature page) for renewal, 2 years from the previous approval date.

d. Employees shall:

(1) Follow the procedures outlined in the SOP.

(2) Review SOP and sign the "Operators Statement" when:

(a) He/she is first assigned to the operation.

(b) An approved formal or interim change is made to an SOP.

(c) An operation is started up after an extended period of inactive status (15 or more working days).

(d) At least once a quarter, as a minimum.

8-2. GUIDELINES FOR SOP DEVELOPMENT PROCEDURE: Prior to starting any operation involving ammunition, explosives or other hazardous operations, adequate SOPs will be developed. Due to the stringent health physics, technical and internal safety standards used in the development of the operational procedures for the Fast Burst Reactor (FBR), these procedures are accepted in lieu of an SOP.

a. A Hazard Analysis is the first step in preparing an SOP. Hazard Analyses provide the users with identification and assessment of potential hazards and the formulation of necessary measures to control identified hazards. The form used to document this information is EWS 1178 and can be found under WSMR Forms on the Z Drive, (Z:\Forms\WSMR Forms\EWS\EWS1178.frp). Additional guidance is found in AR385-10, DA Pam 385-10 and DA Pam 385-30.

b. A Hazard Analysis Working Group (HAWG) is an alternative in finalizing the hazard analysis prior to signature by proponent and development of SOP. Directors, Activity Chiefs, Supervisors, and Test Directors will convene the HAWG, Operational Test Readiness Review (OTRR), or similar technical review committee. Safety managers will ensure that HAWG's, OTRR's or technical review committees are convened and properly staffed to support the risk management process. A detailed description of responsibilities can be found in ATEC Regulation 385-1, Chapter 13.

c. SOPs will address safety requirements and precautions; Personal Protective Equipment (PPE); environmental treatment; storage; disposal; spill requirements; personnel and explosive or material limits; equipment designation and location; emergency telephone numbers and contacts; sequence of operations and any other pertinent information to make the operation safer. No deviation from the SOPs shall be permitted without the approval of the WSMR Commander or his designated representative.

d. SOPs for any operation that pose potential personnel hazards or generate potential pollutants as indicated by the hazard analysis will be validated by performing a dry run, pathfinder or similar process (not a tabletop exercise) prior to final SOP approval. The purpose of the validation is to verify the instructions in the SOP are clear to the operators and the execution of the steps in the SOP create no conditions that would constitute an unacceptable risk to the health or safety of personnel or to the environment.

e. Supervisors and operators will read the SOP and sign the appropriate Supervisor's or Operator's statements when thoroughly familiar with SOP instructions.

8-3. REQUIREMENTS FOR PREPARATION OF HAZARDOUS AND EXPLOSIVE SOPs:

a. SOPs describe and prescribe how a procedure is to be performed. It is a written guide indicating who (by job title) performs various steps in a procedure and in what sequence the steps are carried out. The hazard analysis is the basic tool for writing the SOP.

b. Operations involving ionizing and non-ionizing radiation must be completed in accordance with chapter 21 of this regulation.

c. Hazardous, explosives and ammunition SOPs must be written in accordance with ATEC-R 385-1 and contain all information elements identified in AMC R 700-107,Conventional Ammunition Section.

d. Cover sheet must be signed by the branch and section chief and (as applicable) the Project Sponsor.

e. For explosives/ammunition SOPs, the Supervisors and Operators statements will contain the statement "All Personnel Performing Ammunitions/Explosives Operations/Functions Will Be Ammunition certified IAW ATEC 385-1, Chapter 14."

f. For explosives and ammunition operations: The White Sands Missile Range SOP number will be assigned by the ISO.

g. Hazardous Operations: The White Sands Missile Range SOP number will be assigned by the ISO.

h. Hazard analysis (Appendices E & F): Each page must be signed and dated by the preparer and approver. The hazards and exposures shall be qualitatively evaluated by applying the 5-step Composite Risk Assessment Process (Risk Assessment Matrix specified in Chapter 13, ATECR 385-1, see Appendix E). Risk Assessment codes will be assigned IAW Table 13-1, Test Risk Assessment Matrix, ATECR 385-1 (see Appendix E).

i. The SOP shall contain detailed operating instructions for each hazardous operation and shall specify:

(1) Personal protective clothing and equipment. Refer to Chapter 27 for use of Test Specific PPE.

(2) Grounding requirements.

(3) Safety inspection and equipment requirements.

(4) Other applicable safety requirements and necessary warnings/precautions.

(5) Minimum number of personnel required for task and maximum number allowed in the area while the task is being performed.

(6) Minimum amount of hazardous material, explosives or ammunition required for the task and the maximum allowed in the area while the task is being performed.

(7) Emergency containment procedures for the hazardous materials.

j. Manufacturer's operating and maintenance instructions, technical publications, and engineering orders, may be submitted for approval as enclosures to SOPs.

k. Material Safety Data Sheets (MSDS) as required.

l. A copy of the signed SOP shall be given to each member of the organization that has signed the SOP. The Installation Safety Office will return one copy of the SOP to the originator.

8-4. REVIEWS, CHANGES, AND REVISIONS:

a. Active SOPs shall be reviewed annually to determine the need for changes or additions. If no revisions have been made and the SOP is still required, a request for an extension of 1 year must be submitted to the ISO. All SOPs shall be updated, including the signature page, 2 years after the date of approval. Requests for an extension past 2 years without updating will not be accepted. Review dates shall be computed from the date of approval.

b. Revisions shall be prepared and published in the same manner as the original SOP. Each revised page shall bear the same number as the original page. Changes shall be annotated by a bar on the side and the revision number noted at the top of the page. When a revision has been approved, the original page shall be withdrawn and the revised page inserted within the SOP.

8-5. ADMINISTRATIVE PROCEDURES FOR REVIEWING SOPS:

a. Request for annual review and extension/continued use of an SOP must be submitted to the Installation Safety Office (ISO) 21 working days prior to the date an ISO approval is required. Request for review of a new SOP must be provided to the Installation Safety Office 60 (sixty) days prior to the date an ISO approval is required. New SOP's that are submitted within less than 45 working days of a required test will be supported by an impact statement or statement of criticality signed by the Commanding General/WSMR Commander. This will facilitate continuity of operations while changes and reviews are being performed, if required. Each reviewer of an organization required to review an SOP will be allowed adequate time (no less than 5 working days) for their review.

b. Active SOPs will be reviewed annually by the ISO. Every two years, all affected organizations are required to resubmit the SOP for Command approval. SOPs not renewed will be purged from the ISO files.

c. Extensions will be granted only with written approval of the Commander. Request for extension beyond the expiration date or deviation, will be in writing from the proponent's Director to Director, ISO for approval by the Commander. Request for "short fused" SOP reviews will also be in writing from the proponent's Director to Director, ISO for the Commander's appoval

d. Request for extensions should include the following:

(1) SOP Title

(2) Expiration date of the SOP

(3) Length of extension being requested

(4) Reason the proponent cannot update the SOP

e. The Command Group and/or Director, Installation Safety Office will grant the request to the proponent (which will be in writing with a copy furnished to the Installation Safety Office) or provide to the Installation Safety Office for review of request and recommendation.

8-6. CANCELLATIONS: When a program is completed or canceled and a SOP is no longer required, ISO shall be notified, in writing, to rescind the SOP.

Chapter 9
SYSTEM SAFETY ENGINEERING AND MANAGEMENT

9-1. RESPONSIBILITIES:

a. Director, Test Center Safety (TEDT-WS-TC-OS) shall provide adequate funding and resources for the implementation and maintenance of an effective system safety verification program. Adequate resources include both the funds and a qualified system safety engineer (SSE) to manage the system safety verification program (SSVP) to ensure that the requirements of DA PAM 385-16 with supplements are implemented.

b. The Materiel Test Directorate Director shall:

(1) Provide the services of a qualified MANPRINT evaluator.

(2) Ensure that funding for overtime pay and temporary duty (TDY) expenses will be included in project cost estimates.

(3) Use safety and health data from similar test programs and US Army Safety Center data files, the Safety Assessment Report (SAR), the initial safety and health inspection(s), and safety release information, whenever available, in preparing system safety documentation.

(4) Provide, Test Center Safety, System Safety Engineer with the following documentation for review and concurrence:

(a) Hazard Analyses - Hazard Analyses for new and existing systems to include new facilities will be conducted by the developer. Examples of the different Hazard Analyses that are required are: Preliminary Hazard Analysis, Subsystem Hazard Analysis, System Hazard Analysis, Failure Modes and Effects Analysis, Operating Support and Hazard Analysis, Sneak Circuit Analysis, and Software Hazard Analysis.

(b) SARs within 7 workdays following receipt

(c) Detailed Test Plans (DTP)

(d) Safety Related Test Incident Reports (TIRs)

(e) Safety Release Recommendation (SRR) - A draft SRR copy shall be provided for concurrence and comments prior to submittal. A final copy will be provided to the SSE to maintain in the system safety verification files.

(f) Test Reports

(g) Test Operating Procedures (TOPs)

*This supersedes WSMRR 385-18 • 30 January 2009. This edition publishes a rapid action revision of WSMRR 385-18.

c. Test Center Safety (TC-OS) shall:

(1) Ensure the system safety approach utilized in the procurement of equipment, materiel, and services are safe.

(2) Ensure safety, consistent with White Sands Missile Range mission requirements, is designed into systems in a timely and cost-effective manner.

(3) Assign a qualified SSE to implement the White Sands Missile Range SSVP.

(4) Assign a qualified SSE to review test program manager's (PM), test conductor's , program engineer's, and contracting officer representative's (COR) safety documentation to determine the adequacy of that documentation.

(5) Provide the services of qualified safety personnel to assist in facilities and test systems operational readiness inspections.

(6) Report accidents and safety related test incidents to the Director, Test Center Safety (TC-OS).

d. The System Safety Engineer assigned shall:

(1) Manage the SSVP, to include development of local program policy.

(2) Review test documentation (e.g., test directives, test plans, test reports, program introductions (PI), operational requirements (OR), SAR, DTP, TIR, safety release recommendations (SRR), TOP, etc.).

(3) Verify the adequacy and completeness of the system test package (e.g. equipment, manuals, hazard analysis, standing operating procedures (SOPs), etc.).

(4) Verify hazards associated with each system are identified, tracked, evaluated, and eliminated, or the associated risk reduced to a level acceptable throughout the entire life cycle of the system.

(5) Verify safety data documented by "lessons learned" are submitted as proposed changes to applicable design handbooks and specifications.

(6) Use historical safety data, including lessons learned from other systems in the evaluation of Army systems.

(7) Ensure actions taken to eliminate hazards or reduce risk to an acceptable level are documented.

(8) Provide technical assistance to the Materiel Test Directorate's MANPRINT evaluator in performing materiel system safety inspections for the purpose of issuing

SRR, Safety Confirmation Recommendations (SCR). Inspections are not limited to work being performed on White Sands Missile Range.

(9) Develop safe acceptable work-arounds for identified hazards and implement these procedures in the SRR.

(10) Ensure changes in design, configuration, or mission requirements are accomplished in a manner that maintains minimal risk level.

(11) Ensure actions are taken to minimize the use of hazardous materials.

(12) Verify the adequacy and completeness of the testing (e.g., elements to correct identified hazards, safeties, and interlocks, etc.).

(13) Verify corrective actions to the system.

(14) Participate in pre-design and design reviews, pre-planning and planning test meetings, and in-process reviews for systems being tested or facilities planned on White Sands Missile Range.

(15) Participate in special task forces, study groups, and work groups (e.g., system safety working group (SSWG), and test integrated working group (TIWG), etc.) to address safety issues and concerns and review system safety program activity. In the event a special task force, study group, or work group is formed to address safety issues and concerns and to review system safety program activity, contact Industrial Hygiene, McAfee Clinic for inclusion in group.

(16) Provide formal training in the form of classroom presentations on subjects such as System Safety Procedures and Responsibilities and System Safety Hazard Analysis Techniques to test conductors and test engineers.

e. Contractor system safety program requirements will be tailored according to the guidance contained in Military Standard (MIL-STD) 882E "Standard Practice for System Safety". Some general system safety requirements are:

(1) Eliminate identified hazards or reduce associated risk through design by material selection or substitution. When potentially hazardous materials are used, select those with least risk throughout the life cycle of the system.

(2) Design to minimize risk created by human error in the operation and support of the system.

(3) Consider alternate approaches to minimize risk from hazards that cannot be eliminated. Such approaches include interlocks, redundancy, fail-safe design, system protection, fire suppression, and protective clothing, equipment, devices, and procedures.

(4) When alternate design approaches cannot eliminate the hazard, provide warning devices, warning and caution notes in assembly instructions, operations, maintenance, repair instructions, and distinctive markings on hazardous components, materials, equipment, and facilities.

(5) Design software controlled or monitored functions to minimize initiation of hazardous events or mishaps.

(6) Review design criteria for inadequate or overly restrictive requirements regarding safety. Recommend new design criteria supported by study, analyses, or test data.

Chapter 10
Training Requirements

10–1. Required safety training. All military and Department of the Army civilian personnel will be provided CRM training in those areas needed for safe and efficient execution of their task. Training is facilitated by the Installation Safety Office. This training shall specifically address:

a. The PPE required.

b. General safety requirements particular to the operation.

c. Risk mitigation techniques and controls.

d. Special safety requirements.

e. Lessons learned from previous operations.

f. Procedures for reporting and responding to accidents.

g. Identification of all known and perceived hazards.

10–2. Risk management in training

a. Leaders and managers are responsible for integrating CRM into all Army processes and operations. Safety and occupational health staffs will provide mishap risk management component of CRM training, tools and other related assistance. Risk reduction through application of controls by training, procedures, cautions, and warnings help reduce accident probability.

b. Team White Sands leaders ensures that the CRM process is incorporated into training plans.

10–3. Safety and occupational health training. All Active Army, ARNG, USAR, and Army civilian employees will be provided the training and education necessary to achieve the skills listed in this paragraph. This training, as a minimum, will be in accordance with 29 CFR 1960.

a. Each agency shall provide appropriate safety and health training for employees including specialized job safety and health training appropriate to the work performed by the employee, for example: clerical; printing; welding; crane operation; chemical analysis, and computer operations.

b. Such training also shall inform employees of the agency's occupational safety and health program, with emphasis on the employees' rights and responsibilities.

10–4. Leadership training Army leaders, commanders, directors, managers and supervisors will be provided specialized training to enable them to execute their safety and occupational health and CRM leadership responsibilities properly.

10–5. Commanders/Directors

a. Commanders are required to complete the Commanders Safety Course (CSC). The CSC provides commanders the tools to manage their unit safety programs effectively and to incorporate CRM into all unit planning and activities. It leverages multimedia, web-based distance learning technology, and, as such, is accessible and easily retained for everyday use. The CSC is accessible through the Combat Readiness University online.

b. Company grade officers must complete the CSC prior to assuming command. Brigade commanders, or first 0–6 in the chain of command, will certify that their officers have successfully completed the CSC prior to assignment as company commanders. Brigade and battalion level command designees must complete the CSC prior to attending the Fort Leavenworth pre–command course. The USACRC is the course proponent for the CSC. A copy of training will be retained in the training file.

c. Additional training is available for supervisors (The Supervisor's Safety Course) and managers (The Manager's Safety Course) at the Combat Readiness University (https://safetylms.army.mil/user/mycourse.asp).

10–6. Additional duty safety personnel

a. Additional duty safety personnel are required to complete an online ADSC. The course focuses on additional duty safety personnel from company through brigade level. The ADSC course establishes the Army standard for trained and qualified additional duty safety personnel. Course completion will also satisfy the requirements for completing a local unit safety officer course. The course will require approximately 16 hours to complete.

b. Local safety offices should provide supplemental, installation specific training for ADSOs where needed.

c. Additional duty safety personnel on active duty are required to complete the ADSC within 30 days of appointment. Non–active duty guard and reserve personnel are afforded 90 days to complete the course. The new ADSC is hosted on the USACRC learning management system. The USACRC course certificates and resource CDs are provided to users upon successful completion of the course.

10–7. Educational material Safety education and promotional materials such as posters, films, technical publications, pamphlets, incentive items, and related materials are proven cost-effective safety awareness tools and therefore will be budgeted for and used at all levels of the Army to promote safety. The USACRC will provide educational material upon request.

10–8. Specialized training requirements The DASAF is the proponent of specialized safety training in accordance with AR 600–3. Various functions within the Army Safety Program require specialized training. DA Pam 385–10 will include a list of the requirements as well as the ACTEDS plan.

a. *Radiation training.* The training and experience of the RSO and the alternate RSO must be commensurate with the radiation program for which they will be responsible with formal radiation training completed before assuming duties. The dynamic aspects of the radiation protection program require that each Installation RSO be provided radiation protection training annually to ensure that he or she is adequately trained. Annual training will be scheduled and funded by the commander in accordance with DA Pam 385–24.

b. *Explosives safety.* Workers involved with explosives and ammunition will be provided training in accordance with the requirements of DA Pam 385–64.

c. *Chemical agent workers.* Workers involved with chemical agent operations will be provided training in accordance with the requirements of DA Pam 385–61.

10–9. US Army Combat Readiness/Safety Center The USACRC provides extensive safety training and a complete list of their available courses is located at https://crc.army.mil/home/. Safety and Occupational Health Intern Training as well as Aviation Safety Officer Training are conducted at the USACRC. Another source of safety training available to commanders is the USACRC mobile training team. The team will come to the unit's location and conduct a 3–day or 5–day Army Safety and Composite Risk Management Training.

Chapter 11
LOCKOUT AND TAGOUT PROCEDURES

11-1. REQUIREMENTS: Supervisors or managers are required to approve procedures for employees who will use, service, or maintain machines or equipment.

11-2. RESPONSIBILITIES:

a. The Installation Safety Office shall:

(1) Review and approve supervisors' or managers' lockout/tagout procedures.

(2) Conduct periodic inspections, at least annually, of supervisors' log to ensure that the approved procedures are strictly adhered to.

b. Supervisor or managers shall:

(1) Develop lockout/tagout procedures for machines, systems and equipment.

(2) Give advance written or verbal notification to users of lockout and tagout machines and equipment by authorized employees.

(3) Ensure lockout devices are attached in such a manner as to hold the energy-isolating device in a safe position.

(4) Maintain a certification log for all lockout/tagout actions.

(5) Review lockout/tagout procedures, at least annually.

(6) Ensure all affected and authorized employees are trained in the purpose and use of lockout/tagout procedures.

(7) Provide retraining to all authorized and affected employees whenever there is a change in job assignments, a change in machines, equipment or processes that presents a new hazard, or when there is a change in the energy control procedures.

(8) Ensure that each lockout and tagout device is removed from each energy-isolating device only by the authorized employee who applied the device.

(9) Clear their personnel lock and tag protection in the event that authorized employee is not available to remove the lock and tag.

(10) Ensure the equipment or machine has been tested prior to placing in operational service.

(11) Notify affected government or contractor personnel prior to the pre-arranged release of the equipment of the lockout/tagout action.

(12) Ensure that all employees under their direct supervision are aware of lockout/tagout requirements and that applicable materials are available for use.

c. Authorized Employees shall:

(1) Familiarize themselves with organizational lockout/tagout procedures.

(2) Check machines and equipment to ensure they are inoperable before start of any repair or maintenance.

(3) Use blocks, braces, or other physical restraints to guarantee total immobilization of certain machine or equipment.

(4) Use their own lockout/tagout devices when locking out machines or equipment.

(5) Ensure that the log and lockout/tagout device entries:

(a) Made each time a device is applied or removed.

(b) Use complete signatures and not initials.

(c) Do not contain ditto marks, arrows and lines on multiple lines.

(6) Ensure their own lock and tag is in place if more than one individual is working on the equipment.

(7) Ensure trainees or helpers assigned to work on a locked out and tagged out machine or equipment work under a journeyman's lock and tag.

(8) Remove their lockout/tagout devices if they are transferred to another job and another authorized employee lockout/tagout device immediately installed on the machine or equipment. The appropriate logs shall reflect this transfer.

(9) Under no circumstances allow the equipment to be tested or operated until all tags or locks have been removed.

(10) Monitor lockout and tagout machines and equipment to ensure their lock or tag has not been removed.

d. Affected Employees shall:

(1) Turn off or return to the standby, or neutral mode, all affected equipment or machines by using appropriate shutdown procedures.

(2) Review and comply with lockout/tagout procedures.

(3) Under no circumstances operate any lockout/tagout machine or equipment until all tags or locks removed.

(4) Be located in a safe area during equipment or machine testing.

e. Contractor personnel shall:

(1) Comply with reference 6 requirements.

(2) Provide White Sands Missile Range contracting officer representative a copy of their respective lockout/tagout procedures.

f. WSMR Contracting Officer Representative shall:

(1) Notify government supervisors of the contractors lockout/tagout procedure.

(2) Monitor contractor operations and assume lockout/tagout procedures are in place and enforced.

(3) Report to ISO violations of this requirement.

(4) Responsible for adhering to established lockout/tagout regulatory requirements, policies and procedures.

11-3. PROCEDURES:

a. Equipment:

(1) Lockout/tagout materials will be provided to each employee required to perform lockout/tagout procedures.

(2) Electricians and qualified maintenance and service personnel will have lockout/tagout materials on their involvement vehicles at all times.

b. Shutdowns:

(1) Prior to servicing, repairing or replacing equipment, the equipment will be placed in a neutral or zero mechanical state.

(2) Authorized employee performing shutdown must have knowledge of the type of and magnitude of the energy, associated with the type of energy to be controlled and the means to control the energy.

(3) Notify all affected employees that the equipment or process will be out of service.

(4) Equipment will be turned off or shut down utilizing specific operating procedures for the equipment. An orderly shutdown will be utilized to avoid additional or increased hazard to employees as a result of equipment de-energization.

c. Equipment Isolation:

(1) All energy control devices that control the energy to the machine or equipment will be physically located and operated in such a manner as to isolate the equipment from the energy source.

(2) Move switch or panel arms to "OFF" or "OPEN" positions and close all valves or other energy isolating devices so that the energy source(s) is disconnected or isolate from the equipment.

(3) Stored or residual energy must be dissipated or restrained utilizing measure such as grounding, repositioning, blocking, bleeding etc., as prescribed by manufacturers.

(4) After ensuring that no employee will be placed in danger, verify equipment disonnnect from every source by operating the power initiating device on the equipment. Return the controls to the "OFF" positions after verification.

(5) Install lockout/tagout devices.

(6) Where the re-accumulation of stored energy to a hazardous energy level is possible, verification of isolation procedures will be continued until the maintenance or servicing of the equipment is completed.

d. Device Application.

(1) Lockout/tagout devices will be affixed to energy isolating devices by only authorized employees.

(2) Lockout/tagout devices will be affixed in a manner that will hold the energy isolating devices in the "safe" or "off" position.

(3) Where tagout devices are utilized, they will be affixed in such a manner that will clearly state that the operation or movement of the energy isolating devices for the "safe or "off" position is prohibited.

(4) Tagout devices will be attached to the same point a lock would be attached. If the tag cannot be affixed at that point, the tag will be located as close as possible to the device in a position that will be immediately obvious to anyone attempting to operate the device.

(5) Lockout/tagout devices shall be substantial enough to prevent removal without the use of excessive force techniques, such as with the use of bolt cutters or metal cutting tools.

(6) Lockout/tagout devices shall indicate the identity of the employee attaching the device. This shall be accomplished by attaching a tag with the employee's name and contact information on it, to the lock.

(7) The lock will have only 1 KEY. To reduce the chance of inadvertent removal of locks by unauthorized personnel, duplicate keys are not allowed.

(8) Tagout devices shall be constructed and printed so that exposure to weather conditions will not cause the tag to deteriorate or the message on the tag to become illegible.

(9) Tags must warn against hazardous conditions if the machine or equipment is energized and must include a legend such as the following: DO NOT START, DO NOT OPEN, DO NOT CLOSE, DO NOT ENERGIZE, DO NOT OPERATE.

e. Extended lockout/tagout. Should a shift change occur before the equipment can be restored to service, the lock and tagout must remain. If the task is reassigned to the next shift, those employees must lock and tagout before the previous shift may remove their lock and tag.

f. Release from lockout/tagout.

(1) Work area will be thoroughly inspected to ensure that nonessential items have been removed and that equipment components are operational.

(2) Work areas will be checked to ensure that all employees have been safely positioned or removed. Before lockout/tagout devices are removed, the affected employees will be notified that the devices are being removed.

(3) Each lockout/tagout device will be removed from the energy isolating device by the employee who applied the device.

g. Management Removal of lock and tagout: Should the employee responsible for the placing of the initial lockout/tagout device leave the facility prior to removing the lock and/or tag, the responsible manager supervisor may remove the lock and tag. The manager/supervisor must ensure that all tolls have been removed, all guards have been replaced, and all employees are free from any hazard before the lock and tag are

removed and equipment or processes are returned to service. Notification of the employee who placed the lock is required prior to removal.

h. Multiple Lockout/tagout. If more than one employee is assigned to a task requiring implementation of lockout/tagout procedures, each use his/her own locks and tags on the energy isolation device.

i. Electrical Plug-Type Equipment.

(1) Unplug equipment from wall socket or in-line socket.

(2) Attach "DO NOT OPERATE" tag on plug box and on end of power cord.

(3) Test equipment to ensure power source has been removed by depressing "START" or "ON" switch.

(4) Perform required operations.

(5) Removed lock & plug tag.

(6) Inspect power cord and socket before plugging equipment into power source. Any defects must be repaired before placing the equipment back in service.

j. Training:

(1) Conducted initially and on annual basis.

(2) Content.

(a) Purpose and function of lockout/tagout program.

(b) Recognition of hazardous energy sources.

(c) Methods for isolation and control of energy.

k. Retraining.

(1) Whenever an inspection reveals there are inadequacies in the employee's knowledge or utilization of the lockout/tagout program.

(2) Change in job assignments.

(3) Change in equipment.

(4) Change in lockout/tagout program procedures.

l. External Personnel: Personnel external to the Directorates (to include augmentation contractor personnel) engaged in activities covered by this Standing Operating Procedure, will ensure that supervisory or lead personnel contact the appropriate personnel and inform them of their lockout/tagout procedures. In the event of a joint project involving personnel external to the Directorate, the senior employee will determine the lockout/tagout procedures to be utilized during the operation.

m. Record Keeping and Publications: Each activity within each Directorate is required to implement lockout/tagout and will maintain a Standing Operating Procedure tailored to their specific activity. SOP's and their supplements must be reviewed annually or when changes occur in procedures and/or equipment.

Chapter 12
ELECTRICAL AND ELECTRONICS

12-1. REQUIREMENTS: Supervisors or managers are required to develop procedures for employees who will work on or maintain electrical and electronic equipment.

12-2. RESPONSIBILITIES:

a. The Installation Safety Office shall:

(1) Review supervisors or managers safety procedures.

(2) Monitor training provided to supervisors and employees on electrical and electronics safety.

b. Supervisors shall:

(1) Prepare written procedures for work performed on electrical/electronic equipment designated as hazardous.

(2) Ensure that qualified and unqualified personnel are trained in recognizing electrical hazards in their work area.

(3) Maintain electrical equipment free of electrical hazards.

(4) Ensure qualified personnel are certified in cardiopulmonary resuscitation (CPR) and that the names of these personnel are provided in writing to Occupational Health.

(5) Ensure personnel are trained annually on the safety precautions applicable to the electrical work they do.

(6) Maintain an emergency safety kit which contains items for use in electrical emergencies and first aid to electrical shock victims.

(7) Inspect and document emergency kit monthly to ensure all items are available and in good condition.

c. Qualified employees shall:

(1) Ensure all circuits are de-energized prior to start of repair or installation of new electrical systems. Voltages under 50 volts to ground need not be de-energized.

(2) Be trained in and familiar with the following:

(a) Skills and techniques necessary to distinguish and determine nominal voltages from exposed live parts.

(b) Minimum safe distance from electrical hazards.

(3) Lockout and tagout exposed parts not deenergized (for reasons of increased or additional hazards or infeasibilty) in accordance with chapter 11.

(4) Never close a switch unless certain that it is safe to energize the circuit and all equipment connected to it.

(5) Never wear conductive articles of jewelry and clothing.

(6) Never use portable ladder with conductive siderails.

(7) Never work on exposed electrical circuits in a confined or enclosed workspace without protective shields, barriers, or insulating materials.

(8) Ensure grounding and bonding of equipment meets the National Electrical Code or 29 Code of Federal Regulation, Subpart S requirements.

(9) Never perform maintenance or repair on x-ray equipment unless grounded and bonded in accordance with the National Electrical Code.

(10) Maintain and repair non-ionizing and ionizing equipment in accordance with chapter 21.

(11) De-energize and ground large capacitors or pulse forming networks prior to maintenance and repair.

(12) Employ one of the following alerting techniques to warn and protect employees from hazards which could cause injury due to electric shock, burns, or failure of electric equipment or parts:

(a) Safety signs and tags

(b) Barricades

(c) Attendants

(13) Be familiar with the location and content on the safety board or emergency kit.

d. All employees shall:

(1) Inspect power tools, extension cords, or other electrical equipment for exposed electrical hazards such as bare wires, exposed wires, and improper grounding before use.

(2) Not handle portable equipment in a manner that may cause damage to the power cord.

(3) Avoid using electrical equipment or tools when there is potential for water contact to either person or equipment.

(4) Use only approved electrical insulated tools.

(5) Remove damaged equipment from service until the equipment has been repaired and retested by qualified personnel.

(6) Not operate any system switch, circuit breaker, or other disconnecting devices unless they are thoroughly familiar with the equipment involved.

(7) Use load rated switches, circuit breakers, or other devices specifically designed as disconnecting means for opening, reversing, or closing of circuits under load conditions.

(8) Use approved electrical insulated tools.

(9) Wear nonconductive headgear wherever there is a danger of head injury.

(10) Wear face and eye protection wherever there is a danger of injury to the eyes or face from electric arcs, flashes, or from flying objects resulting from an electrical explosion.

(11) Use nonconductive ropes and handlines.

(12) Be familiar with the location and content on the safety board or emergency kit.

e. Contractor personnel working on electrical and electronic equipment shall meet reference requirements Lockout and Tagout Procedures (Para 11-3).

Chapter 13
CONFINED SPACE ENTRY

13-1. GENERAL SAFETY REQUIREMENTS FOR CONFINED SPACE OPERATIONS:

(Definition: Space large enough to enter; limited or restricted entry or exit; not designed for continuous worker occupancy)

a. No individual will enter a space meeting the definition of a "confined space" unless and until the requirements of this chapter are fully complied with. All confined spaces will be treated as "permit required confined space" until they have been evaluated by the Fire Department or other qualified and designated personnel.

b. If rescue of an entrant is required, IMMEDIATELY call 911, before taking any other action, and provide the dispatcher with the requested information

13-2. SPECIFIC SAFETY LIMITATIONS ON CONFINED SPACE ENTRY:

a. No entry into or work within a hazardous atmosphere will be allowed under any circumstances for any reason. If any one or several of the following conditions exist (or if the following conditions are suspected) all personnel are to exit the immediate area, secure it if reasonable, and notify the White Sands Missile Range Fire Department. All entries into the confined space will be denied until the same following conditions are remedied or abated:

(1) If oxygen concentration levels are below 19.5% or above 23.5%.

(2) If any flammable gas, vapor, or mist is present in excess of 10% of its lower flammable level (LFL).

(3) If any airborne combustible material is present in a concentration that meets or exceed it's LFL.

(4) If any atmospheric condition may be present which is immediately dangerous to life and health.

(5) If mechanical, hydraulic, or electrical hazards cannot be shutdown and secured as a condition of entry and work.

b. If engulfment hazards cannot be eliminated or controlled through in-place engineering controls and protective devices, the Fire Department must be contacted as soon after work begins and the hazard is identified, and additional attendants must be designated by the work supervisor and be in place to support emergency egress or rescue.

c. Under all conditions, if the designated attendant must leave the support site, the entrants must exit the confined space until the attendant returns.

13-3. RESPONSIBILITIES: The Fire Department is the approver for all confined space entry and all work within confined spaces in accordance with 29 CFR 1910.146.

a. This authority has been operationally delegated to the Fire Department who may further sub-delegate operational authority to implement and manage confined space entry to White Sands Missile Range Directorates and Tenant Commanders upon their request. Requesting organization's personnel must complete a Confined Space Management training and certification program.

b. The Fire Department/Installation Safety Office is responsible for and has the authority to evaluate all potential confined space entry at work sites to determine if the space is a permit-required confined space. Fire Department determinations are final. Hot work permits are issued through the Fire Department.

(1) The Industrial Hygiene Section at McAfee Health Clinic shall provide guidance and technical assistance, as requested, in the issuing of confined space entry and work permits.

(2) Directors and Tenant Commanders shall require that all personnel under their cognizance meet the requirements of this chapter for all entries into and work within confined spaces.

(3) Employers, managers and supervisors of contract personnel operating at White Sands Missile Range shall operate a confined space entry program meeting all requirements of 29 CFR 1910.146. Shall issue a hot work permit for hot work operations conducted on or near a covered process. The permit shall document that the fire prevention and protection requirements in 29 CFR 1910.252(a) have been implemented prior to beginning the hot work operations; it shall indicate the date(s) authorized for hot work, and identify the object on which hot work is to be performed. The permit shall be kept on file until completion of the hot work operations.

(4) Government employees and military personnel shall not enter or work within confined spaces in violation of the requirements established by this chapter. All Hot Work permits will be submitted to the Fire Department prior to initiation of work.

13-4. DELEGATION OF CONFINED SPACE ENTRY AND WORK AUTHORITY:

a. Upon the recommendation of the Fire Department, the Director, Installation Safety Office, shall sub-delegate operational authority to implement and manage a confined space entry and work program to Directors and Tenant Commanders who have met the following requirements:

(1) The Director or Tenant Commander has designated in writing and provided to the Fire Department the name of a Confined Space Entry and Work Manager and one or more alternates to oversee the program.

(2) All personnel designated to enter (entrant), attend and support (attendant) or directly supervise work in confined spaces have completed an OSHA approved confined space training program and copies of the training documentation have been provided to the Fire Department.

(3) The organization has obtained the required equipment, hardware, and safety equipment needed for safe operations in confined spaces. The Fire Department will consult with the organization to develop a minimum requirements package including, but not limited to: forced air ventilation equipment, portable atmospheric monitoring equipment, safety harnesses and appropriate extraction equipment, remote communications equipment, and appropriate Personal Protective Equipment (PPE).

b. Delegation of this authority shall be for periods not to exceed 2 calendar years, at which time the Fire Department shall review operational records, certification/training documents, and the condition of organizational safety equipment to determine if the delegation will be renewed.

13-5. OPERATIONAL AND ADMINISTRATIVE REQUIREMENTS FOR ENTRY INTO CONFINED SPACES:

a. No entry into a confined space or potential confined space shall be made unless the appropriate Confined Space Entry and Work Manager or alternate has approved the entry.

(1) For activities with sub-delegated authority, or contract operations, the designated manager or alternates will perform or oversee this requirement.

(2) For all other activities, the Fire Department must be contacted 24 hours in advance of the entry requirement (or immediately if it is an emergency work action) to coordinate on-site support and approval. Approval of entry and confined space work will be contingent upon the Fire Department's ability to inspect the confined space site and provide on-duty emergency service personnel to support the entry and work. Overtime and reimbursable support for the Fire Department for this work must be coordinated at least 4 workdays in advance of the required entry date.

b. The following requirements must be met as a condition of entry:

(1) A Confined Space Entry Permit (Appendix T) must be properly prepared and posted at the job site and a copy delivered to the Fire Department (hand carry, electronic transmission via FAX or E-Mail, etc.) prior to the initial entry into the confined space. Activities without sub-delegated confined space entry and work authority must

prepare the form and provide it to the Fire Department 24 hours in advance of the requested work start time.

(2) Before an employee enters the space, the internal atmosphere shall be tested, with a direct-reading instrument that has been calibrated prior to use in accordance with the manufacturers specifications, for oxygen content, flammable gases, vapors, and potential toxic air contaminants, in that order. The supervisor, who has successfully completed the training for the gas detector/instrument he will use, shall perform testing. A written record of the pre-entry test results shall be made and kept at the work site for the duration of the job.

(3) Atmospheric monitoring is performed by each entrant immediately before entering the confined space. If there are no atmospheric hazards present within the space entry into and work within the space may proceed. Continuous testing of the atmosphere in the immediate vicinity of the workers within the space shall be accomplished. The workers will immediately leave the confined space when any of the gas monitor alarm set points are reached.

(4) All entrants and attendants are wearing the job site specific PPE required by supervisory determination and the Confined Space Entry Permit is posted at the confined space work site.

(5) Any required emergency extraction or egress equipment is installed and operational.

(6) Where feasible, positive (forced air) ventilation is in place and operational.

(7) Appropriate mechanical and electrical lockouts and tagouts have been installed in accordance with Chapter 11 of this regulation.

(8) Once confined space area is cleared of entrants and work is complete, notify Fire Department via telephone, 678-5105.

13-6. OPERATIONAL AND ADMINISTRATIVE POINT OF CONTACT IF YOU HAVE ANY FURTHER QUESTIONS:

a. Fire Chief Office - 679-5105

b. Assistant Fire Chief Office - 678-0470

c. Fire Captain's Office - 678-0357

d. Installation Safety Office - 678-1211

Chapter 14
AMMUNITION AND EXPLOSIVES SAFETY.

For Ammunition and Explosive Safety refer to WSMR PAM 385-64.

Chapter 15
LABORATORY SAFETY

15-1. GENERAL: The Chemical Hygiene Plan (CHP) establishes responsibilities, policies and procedures for handling hazardous chemicals in the laboratory. The CHP applies to all laboratories located on White Sands Missile Range. Exempted are military unique chemical surety or super-toxic material, toxins and radionuclides. Regulatory requirements for safe handling of these agents are referenced below.

a. Chemical Surety Material (AR 385-61, DA Pam 40-8)

b. Toxins (AR 385-69, DA Pam 385-69)

c. Radionuclides (AR 11-9)

15-2. CHEMICAL HYGIENE PLAN REQUIREMENTS:

a. The White Sands Missile Range Chemical Hygiene Officer shall:

(1) Develop and implement guidance for handling hazardous chemicals in the laboratory.

(2) Review the CHP at least annually and revise the document to reflect current regulatory practice.

(3) Review Standing Operating Procedures (SOP's) for all laboratory operations using hazardous chemicals.

(4) Conduct pre-operational surveys of all new laboratory operations using hazardous chemicals.

(5) Coordinate with the Industrial Hygienist to obtain a copy of the Health Hazard Information Module (HHIM) database for all laboratories.

(6) Review plans and specifications for all laboratory construction or renovation.

b. The Installation Safety Office shall:

(1) Conduct periodic inspections of all laboratories using hazardous chemicals.

(2) Investigate all reported accidents which result in exposure to hazardous chemicals.

(3) Review plans and specifications for all laboratory construction or renovation.

c. The McAfee US Army Health Clinic Industrial Hygienist shall:

(1) Maintain the HHIM database for all White Sands Missile Range laboratories.

(2) Conduct air sampling of laboratory operations where there is a reasonable probability that employee exposure may exceed the action level for a chemical.

(3) Conduct replacement, pre-assignment and periodic job related medical surveillance for military and civilian employees potentially exposed to hazardous chemicals.

(4) Conduct laboratory surveys at least annually.

d. Supervisors shall:

(1) Ensure that laboratory personnel receive job related medical surveillance from McAfee Clinic if required.

(2) Ensure that personnel working with hazardous chemicals are trained and "certified" to conduct operations.

(3) Ensure that personnel have received adequate training in the use and care of required and provided protective clothing and equipment.

(4) Perform inspections of laboratory operations, which use hazardous chemicals to ensure compliance with the SOP and the CHP.

e. Laboratory personnel shall:

(1) Plan and conduct laboratory operations using hazardous chemicals in accordance with approved procedures found in the SOP and the CHP. Laboratory hood ventilation checks using appropriate instrumentation shall be conducted prior to initiation of experiment procedures.

(2) Report hazardous conditions, exposures or abnormal circumstances associated with operation to their supervisor.

(3) Report for any job-related medical surveillance (physicals) required by McAfee Clinic.

(4) Manage laboratory waste in accordance with applicable environmental regulations and the White Sands Missile Range Environmental Hazardous Waste Management Plan (WSMRR 200-1).

15-3. POLICY:

a. The CHP establishes the minimum regulatory requirements for the safe use of hazardous chemicals in the laboratory. Chemical exposure shall be minimized through the use of engineering controls, work practices, and protective equipment and clothing.

b. Laboratory personnel shall not be exposed to airborne concentrations, which exceed the more stringent of either the PEL or TLV for a specific compound or mixture. A list of PEL's and TLV's is found in 29 CFR, part 1910, subpart z.

15-4. PROGRAM ADMINISTRATION:

a. SOPs shall be prepared for laboratory operations using hazardous chemicals. The SOP shall be prepared in accordance with chapter 8 of this regulation.

b. A pre-operational survey shall be conducted by the staff offices to identify health, safety, and environmental issues before any new operation may begin. The SOP shall not be approved until the pre-operational survey is completed.

c. Periodic safety inspections shall be conducted in each laboratory. Frequency shall be determined by the Installation Safety Office.

d. As a minimum, annual industrial hygiene surveys shall be conducted in each laboratory by the Industrial Hygienist.

15-5. PROCUREMENT:

a. Laboratory personnel shall order the smallest quantity of chemicals necessary to complete the work.

b. Laboratory personnel shall review health and safety data on chemicals before receipt to determine special requirements for handling, storage or disposal.

c. Material Safety Data Sheets (MSDSs) for chemicals used at White Sands Missile Range shall be provided to laboratories upon receipt of any new chemical. Laboratory supervisors shall ensure that an MSDS is obtained when picking up chemicals and made available to all employees. Supervisors shall ensure that employees are familiar with the MSDS's contents.

d. Laboratory personnel shall inspect containers upon receipt to ensure they are intact and not leaking. Damaged or unlabeled containers shall not be accepted.

15-6. CHEMICAL STORAGE:

a. General: Chemical storage inside the laboratory shall be limited to those chemicals necessary to complete mission requirements. Central storerooms shall be used when they are available. Chemicals shall not be stored on the bench.

(1) Chemicals shall be stored in accordance with the compatibility requirements. A separate cabinet shall be used for each group. Chemicals shall be stored in trays, desiccator or secondary containment large enough to contain the spill from the largest container.

(2) Chemical containers shall be inspected at least annually to determine their condition. Corroded or leaking containers shall be over packed and turned in along with outdated or excess chemicals.

(3) Cabinets shall be labeled with storage code and compatibility category.

b. Inventories:

(1) Inventories shall be available for each individual room where chemicals are stored or handled. The inventory shall be maintained by the room custodian and list the chemical name. Inventories shall be available to the Installation Safety Office during inspections.

(2) Room custodians shall update the inventory at least yearly.

c. Flammable and Combustible Liquids.

(1) The quantity of flammable and combustible liquids stored in a laboratory room shall not exceed 60 gallons or a month's supply, whichever is less.

(2) Flammable and combustible liquids shall be stored in glass, metal, or plastic containers which meet the requirements of NFPA 30. Class I liquids shall be stored in approved safety cans when the container quantity exceeds 2 gallons. Combustible liquids shall be stored in approved safety cans when the container quantity exceeds 5 gallons.

(3) Flammable and combustible liquids shall be stored in approved cabinets designed in accordance with NFPA 30. Cabinets shall not be located adjacent to an exit or in a stairwell. Cabinets shall not be vented without approval from the Installation Safety Office.

(4) The transfer of Class I liquids to smaller containers from bulk container not exceeding 5 gallons shall be conducted in a chemical hood or in an approved inside storage room. The transfer of Class I liquids from bulk containers exceeding 5 gallons shall be conducted in an approved inside storage room or outdoors.

(5) Class I liquids shall not be transferred between metal containers unless the containers are electrically grounded.

(6) Refrigerators and freezers used to store flammable liquids shall be explosion proof or "laboratory safe" in accordance with NFPA 45.

d. Water Reactive Chemicals: Water reactive chemicals shall be segregated from other chemical storage. These chemicals shall be stored in approved cabinets designed in accordance with NFPA 20.

Chapter 16
RESPIRATORY PROTECTION PROGRAM

16-1. POLICY:

a. Respirators are considered an acceptable method of protection only under the following circumstances:

(1) When US Army McAfee Health Clinic, Occupational Health, determines that engineering or work practice controls are not adequate to control the hazard.

(2) During intermittent, non-routine operations not to exceed 1 hour per week.

(3) During the interim period when engineering controls are being prepared for specific operations.

(4) During emergencies.

(5) When required by other federal regulations or operating licenses.

b. The ability to use Respiration Protective Equipment (RPE) shall be a condition of employment when required by the nature of the job, as defined by either an SF Form 78 (Certificate of Medical Examination) or by requirements stated in the individual's job description.

c. Each area and operation requiring RPE shall prepare a hazard analysis and an operation site Standing Operating Procedure (SOP).

d. Workers shall not be assigned to tasks requiring the use of RPE without prior medical evaluation and approval of McAfee Health Clinic, Occupational Health.

e. Only MSHA/NIOSH approved respirators, assigned by the Installation Respiratory Protection Specialist, shall be used.

f. Respirator users ensure that facial hair and haircuts do not interfere with the sealing periphery of the face piece or with valve function.

g. The correct respirator shall be selected and used based on the perceived hazard (dusts, mists fumes or organic vapors).

h. The person shall be required to meet all the requirements of the respiratory program according to reference 4, Appendix A.

i. The reasons for issuing the equipment shall be documented. NOTE: Surgical masks do not provide protection against air contaminates. They shall not be used in place of an air-purifying respirator.

16-2. RESPONSIBILITIES:

a. Installation Safety Office, (ISO) shall:

(1) Perform the duties of the Installation Respiratory Program Director (IRPD).

(2) Plan, program, and annually evaluate the Installation Respiratory Protection Program.

(3) Provide guidance to supervisors in preparing their work site SOPs and shall approve the completed SOPs.

(4) Use Industrial Hygiene (IH) work site inspections to provide the type of respiratory protection required to perform the work.

(5) Coordinate with McAfee Health Clinic, Occupational Health about the type of RPE and replacement parts to be purchased or used.

(6) Ensure random worksite inspections are done to determine if RPE is properly selected, used, cleaned, maintained and disposed of.

(7) Initiate prompt corrective actions on deficiencies detected in the Respiratory Protection Program (RPP).

b. Installation Respiratory Protection Specialist will:

(1) Be assigned to the Installation Safety Office.

(2) Train and instruct employees in the care, use, fit and maintenance of respirators annually.

(3) Repair respirators using only authorized parts or return to a factory-authorized facility.

(4) Maintain necessary inventory levels of respirators, spare parts and accessories.

(5) Issue respirators and fit test employees annually only after determining that all requirements for medical evaluation have been completed.

(6) Dispose of respirators per TB Med 502 (reference 62, Appendix A).

c. The McAfee Health Clinic, Occupational Health shall:

(1) Provide guidance to the Installation Respiratory Protection Specialist to plan, program and annually evaluate the installation's RPP.

(2) Assist supervisors in the preparation of a Hazard Analysis and SOP in their particular hazardous work area.

(3) Coordinate with the Installation Respiratory Protection Specialist in RPE selection.

(4) Perform IH work site inspections to determine the proper types of RPE best suited for the task and monitor exposure levels and stress. Determinations will include the type of respirator required and any filters, if required.

(5) Perform medical evaluations of workers to determine if they are physically and mentally fit to wear RPE.

(6) Review worker's medical records annually.

(7) Prescribe corrective lenses compatible with full face respirators.

(8) Identify and evaluate work sites for respiratory hazards.

d. Director, Directorate of Public Works shall:

(1) Ensure compressors used for breathing air are tested at least quarterly.

(2) Forward a copy of the test results to the Installation Safety Office (ISO). If test results are abnormal for at least grade "D" quality air, the Director, Directorate of Public Works shall notify the Director, ISO immediately.

e. Directors shall ensure personnel have the required equipment to perform their tasks in a safe manner.

f. Supervisors (where RPE is used) shall:

(1) Prepare a hazardous operation SOP in accordance with the requirements of chapter 8 of this regulation.

(2) Ensure workers are trained in the requirements of the SOP.

(3) Attend respirator training annually.

(4) Ensure workers are trained and medically qualified to use respirators.

(5) Not permit workers to perform tasks if a good face seal cannot be obtained or if proper RPE is unavailable.

(6) Implement the requirements for rescue and standby personnel in IDLH situations as defined by the appropriate SOP.

(7) Ensure that all emergency RPE users in their areas perform monthly cleaning and sanitizing of their respirators and maintain documentation. DD Form 314, Preventive Maintenance Schedule and Record, should be used for recordkeeping.

(8) Provide respirators to employees upon their request, unless approved by McAfee Health Clinic, Occupational Health.

(9) Ensure employees use only RPE assigned by the Installation Respiratory Protection Specialist.

g. Respirator user shall:

(1) Be familiar with the work site SOP and the use and limitations of their assigned RPE.

(2) Use only the RPE selected and assigned by the Installation Respiratory Protection Specialist in accordance with the instructions and training received.

(3) Inspect RPE prior to and after each use.

(4) Thoroughly clean and sanitize emergency respirators and maintain required documentation.

(5) Perform positive and negative pressure tests each time the respirator is used and report failure of face seal immediately to both the supervisor and the IRPS to obtain assistance.

(6) Keep respirator stored in a clean and sanitary place. RPE shall be stored to protect against dust, sunlight, heat, extreme cold, excessive moisture, damaging chemicals, or mechanical damage. RPE shall be stored so that the face piece and exhalation valve shall not be damaged.

(7) Notify the immediate supervisor of nonfunctional equipment.

(8) Undergo prescribed medical surveillance.

(9) Notify supervisor and reschedule a fit test if any of the following occurs: weight change of 20 lbs or greater, significant facial scarring in the area of the facepiece seal, significant dental changes (i.e. multiple extraction's without prosthesis), or acquiring dentures, reconstructive or cosmetic surgery that may interfere with facepiece sealing.

Chapter 17
AVIATION SAFETY PROGRAM

17-1. RESPONSIBILITIES:

a. Installation Safety Office (ISO) shall:

(1) Appoint a member to the Aviation Safety Council.

(2) Review and comment on the White Sands Missile Range Aviation Pre-Accident Plan.

(3) Review ground and flight safety accident forms.

(4) Participate in inspections, surveys and investigations, when required.

b. WST-A, Army Air, Holloman Airforce Base shall:

(1) Provide the White Sands Missile Range Aviation Safety Officer.

(2) Serve as chairperson of the Aviation Safety Council.

(3) Appoint members to the Aviation Safety Council.

c. The Aviation Safety Officer shall:

(1) Assist WS-TC-OA with the Aviation Safety Program and monitor general aviation safety at White Sands Missile Range.

(2) Coordinate and report pertinent aviation safety activities to Installation Safety Office (ISO).

(3) Prepare accident reports in accordance with reference 33, Appendix A.

Chapter 18
VISION CONSERVATION AND FACE PROTECTION

18-1. REQUIREMENTS:

a. Protective eye and face equipment shall be required when there is a reasonable probability of an occupational injury to the eyes or face from flying objects, direct or reflected brightness (glare), hazardous liquids, injurious radiation, or a combination of these hazards.

b. There are two categories of eye protection - primary and secondary. Primary eye protection is goggles or industrial safety glasses. Face shields are secondary protection and must never be worn without primary eye protection.

c. Industrial safety glasses, including planos (Plano - a term used for safety eyewear that does not contain an optical correction) may be equipped with detachable side shields for flying object hazards. Supervisors must determine if permanent side shields are required to be worn in the workplace. Non-sideshielded glasses provide frontal protection only.

18-2. RESPONSIBILITIES:

a. McAfee Health Clinic, Industrial Hygiene shall:

(1) Assist with the identification of eye hazard areas and recommend the proper type of protection.

(2) Provide technical expertise on matters regarding vision conservation.

(3) Provide vision screening and examine employees with eye problems.

(4) Notify the supervisor of personnel that cannot meet the minimum vision requirements to perform their job.

(5) Document eye health hazards, eye protection required, and used, the need for illumination and further assessments during annual evaluation of the workplaces.

(6) Recommend eye protection and engineering control to eliminate or control eye health hazards.

(7) Once the information described above is entered into the DOEHRS-IH, the IH can easily extract such information and forward it to the Installation Safety Office. (DA PAM 40-503, para 7-3, para 7-19)

b. Installation Safety Office shall:

(1) Ensure eye hazard warning signs, labels, or decals are posted in work areas as required.

(2) Monitor work sites to ensure employees are wearing proper eye and face protection.

(3) Assist supervisors with the identification and type of protection needed for eye hazard areas.

c. Directors shall ensure personnel have proper equipment required to perform their jobs in a safe manner.

d. Supervisors shall:

(1) Ensure a job hazard analysis is completed and on file.

(2) Attempt to engineer out potential hazard.

(3) Ensure personnel are trained in the potential job hazards and the types of eye and face protection required.

(4) Ensure personnel are not exposed to eye or face hazards unless they are wearing approved eye and face protection.

(5) Enforce the wearing, use and maintenance of eye and face protection devices.

(6) Have Plano eye protection devices available for visitors and employees not requiring prescription safety eye wear.

(7) Provide visitors and casual employees (personnel not normally assigned to work in or perform an eye hazardous operation) with temporary eye protection devices and ensure that eye protection is worn when entering an eye hazardous area.

(8) Ensure eye washes and deluge showers are accessible and functional. Perform weekly inspections and maintain written log of same.

e. Employees shall:

(1) Use eye and face protection devices or equipment whenever there is the probability of an eye injury.

(2) Wear and maintain, in a clean and reliable condition, assigned eye and face protection.

(3) Keep all appointments with the Optometrist, McAfee Health Clinic.

(4) If vision requires the use of corrective (prescription) lenses, wear goggles or glasses of the following types:

(a) Glasses whose protective lens provides an optical correction.

(b) Goggles that can be worn over corrective lens.

(c) Goggles that incorporate the corrective lenses.

Chapter 19
HEARING CONSERVATION PROGRAM

19-1. RESPONSIBILITIES:

a. The Installation Safety Office shall:

(1) Ensure noise hazard warning signs and decals are posted in work areas as required.

(2) Monitor worksites to ensure employees are wearing the proper hearing protection.

(3) Assist supervisors with the identification and protection needed for noise hazard areas.

(4) Assist Industrial Hygiene, McAfee Health Clinic in recommending and developing acoustical engineering controls on existing equipment.

b. McAfee Health Clinic, Industrial Hygiene shall:

(1) Identify hazardous noise areas.

(2) Provide noise hazard evaluations.

(3) Conduct audiometric testing of employee and provide hearing conservation training at that time.

(4) Notify the employee and his supervisor if the employee has a significant hearing shift and refer that employee for further medical evaluation.

(5) Coordinate with Safety in recommending and developing acoustical engineering controls on existing equipment.

c. The supervisor shall:

(1) Identify potential noise hazardous areas and request an evaluation be performed by McAfee Health Clinic, Industrial Hygiene.

(2) Notify Industrial Hygiene of changes in personnel or changes in process or equipment that alter noise production within 30 days of these changes.

(a) If a suspected area is determined to be noise hazardous the supervisor will institute measures to reduce or abate the hazard.

(b) Initiate procedures for personnel to be enrolled in the hearing conservation program.

(c) Prepare, maintain and provide McAfee Health Clinic, Industrial Hygiene with a list of names of personnel with hazardous noise exposure.

(d) Ensure that personnel exposed to hazardous noise report to Industrial Hygiene, McAfee Health Clinic for audiometric testing as scheduled.

(3) Ensure personnel exposed to hazardous noise have and use appropriate protective equipment.

(4) Ensure visitors and casual employees (personnel not normally assigned to work in or perform hazardous noise operations) are provided and wear hearing protection devices when in a noise hazardous area.

d. Employees shall:

(1) Wear and maintain, in a clean and reliable condition, assigned hearing protection.

(2) Ensure earmuffs make a good seal around the ear. Glasses, long sideburns, long hair, and facial movements, such as chewing, can reduce protection. Special equipment is available for use with glasses.

(3) Keep all appointments with Occupational Health, McAfee Health Clinic.

Chapter 20
BLOODBORNE PATHOGENS (BBP) EXPOSURE CONTROL PROGRAM

20-1. RESPONSIBILITIES:

a. The Installation Safety Office shall ensure that the Bloodborne Pathogens Exposure Control Plan is reviewed annually and updated as necessary.

b. The McAfee US Army Health Clinic shall:

(1) Assist in review and updating of the Bloodborne Pathogens Exposure Control Plan.

(2) Provide appropriate medical surveillance and care including immunization against Hepatitis for all personnel in matters pertaining to bloodborne pathogens.

(3) Provide training to affected employees annually.

c. Supervisory personnel shall:

(1) Ensure all relevant personnel receive required training as prescribed by McAfee Clinic.

(2) Ensure all relevant personnel are aware of the Hepatitis B vaccination program.

(3) Promptly report exposure incidents to Installation Safety Office, Occupational Health, and Department of Labor.

(4) Verify organization adherence to proper engineering for control of workplace BBP risk.

(5) Provide adequate personal protective equipment for the specific workplace biologic hazards.

d. The employee shall:

(1) Comply with training requirements of this standard.

(2) Undergo vaccination against Hepatitis or decline such vaccination in writing as specified in this standard.

(3) Properly use personal protective equipment for all biohazard job functions.

(4) Promptly report exposure to biohazard BBP materials to supervisors.

(5) Promptly report any unsafe work conditions to supervisors.

20-2. PROGRAM REQUIREMENTS:

a. Exposure determination:

(1) OSHA requires employers to perform an exposure determination to decide which employees may incur occupational exposure to blood or other potentially

infectious materials. The exposure determination is made without regard to the use of personal protective equipment (i.e., employees are considered to be exposed even if they wear protective equipment). This exposure determination is required to list all job classifications in which all employees may be expected to incur such occupational exposure, regardless of frequency. At this installation the following job classifications are in this category:

(a) Military Police and Civilian Police/Guards

(b) Firefighters

(c) Dental Care Providers:

(1) Dentists

(2) Dental assistants

(3) Dental hygienists

(d) Medical Providers:

(1) Doctors

(2) Nurses

(3) Medics

(4) Medical Lab Workers

(5) Medical X-Ray Technicians

(e) Veterinarian Providers:

(1) Veterinarians

(2) Veterinary assistants

(f) Designated First Aid Responders

(g) Medical Facility Custodial Workers

(2) In addition, OSHA requires a listing of job classifications in which some employees may have occupational exposure. Since not all the employees in these categories would be expected to incur exposure to blood or other potentially infectious materials, tasks or procedures that would cause these employees to have occupational exposure are also required to be listed. This listing is as follows:

(a) Designated backup first aid responders if:

(1) Containment of bleeding or bandaging is required

(2) Carrying and transporting victims

(3) Performing CPR, specifically mouth-to-mouth resuscitation

(b) Clerical personnel in medical facilities if:

(1) Assisting with specimen transport

(2) Restraining victims of trauma or hemorrhage

(c) Lifeguards if:

(1) Providing first aid

(2) Providing mouth-to-mouth resuscitation

(3) OSHA further requires a delineation of what contaminates shall constitute a risk to employees under this standard. The body secretions to be considered are outlined in paragraph 19-4.

(4) OSHA mandates that the principle of "Universal Precautions" shall be taught and adhered to. At this installation all personnel and visitors shall be assumed to be infected with bloodborne pathogens. Their tissues, blood, and body secretions shall be managed as though infectious to their handlers.

(5) OSHA mandates that the exposure control plan herein set forth be reviewed and updated at a minimum of annually.

b. Engineering control against BBP exposure.

(1) Work Area Restrictions. In areas where there is a reasonable likelihood of exposure to bloodborne pathogen infectious materials, employees are not to eat, drink, apply cosmetics or topical medication, smoke or handle contact lenses. Food and beverages are not to be kept in refrigerators, freezers, shelves, cabinets, or on counter tops or bench tops where blood or other potentially infectious materials are intermittently or permanently present.

(2) Controls regarding contaminated materials are:

(a) Broken glass shall never be handled. Removal by instruments is mandatory (vacuuming, sweeping).

(b) Contaminated needles and other contaminated sharps shall never be intentionally bent, removed by hand, sheared or purposefully broken. Recapping is allowed only for local anesthetic administration during surgery and must be done with a one handed technique. Vacutainers and needles may be removed only using automated one-hand systems.

(c) All contaminated sharps shall be discarded immediately in puncture resistant biohazard containers designed for this purpose.

(d) All contaminated non-sharp materials and disposable personnal protective equipment shall be discarded immediately in biohazard bags or cartons designed for this purpose.

(e) BBP biohazardous waste shall be isolated to the biohazard depot room at McAfee US Army Health Clinic and processed as regulated waste.

(f) Medical specimens requiring transport to William Beaumont Army Medical Center (WBAMC) shall be sequestered in designated crash-resistant transport boxes designed expressly for this purpose. Transport personnel shall not open these boxes enroute for any purpose and shall be specifically instructed both verbally and in writing.

(g) Contaminated equipment. Equipment which has become contaminated with blood or other potentially infectious materials shall be examined prior to servicing and shipping and shall be decontaminated, as necessary, unless the decontamination of the equipment is not feasible, in which case it must be biohazard labeled for transport. Appropriate protective measures shall be taken by personnel decontaminating potentially infectious equipment.

(h) Contaminated containment systems: Any biohazard waste container which has evidence of external contamination or loss of container integrity will be placed in a second containment device which is sealable, leakproof, and properly biohazard labeled.

(3) Personal Protective Equipment:

(a) Personal protective equipment shall be chosen based on the anticipated method of exposure to infected materials. The protective equipment shall be considered appropriate only if it does not permit blood or other potentially infectious material to pass through or reach the employee's clothing, skin, eyes, mouth, or other mucous membranes under normal conditions of use and for the duration of time for which the protective equipment will be used.

(b) All personal protective equipment used at this installation shall be provided without cost to the employee. It will be provided in the following manner:

(1) Hand contact with specimen/patient - Mandatory latex gloves, Alternate Hypoallergenic gloves, firefighter gloves, impervious gloves.

(2) Potential or spray/aerosol - Face shield or mask and goggles. Alternate - Safety glasses and side shield and mask.

(3) Potential of shoe penetration - Safety shoes.

(4) High Potential for Clothing contamination - Coveralls. Includes: Lab coat, Tyvek suit, and Turnout gear.

(c) Use of personal protective equipment is mandatory during operations designated as posing BBP exposure risk. Employees intolerant of BBP shall be accommodated if possible (i.e., hypoallergenic gloves for employees with dermatitis). Those employees who cannot be accommodated shall be reassigned or redetailed.

(4) Decontamination:

(a) Hand-washing requirements: OSHA requires that hand-washing facilities be readily accessible should potential exposure occur. Where fixed hand-washing facilities are not available antiseptic towelettes shall be provided by the installation for use in decontamination. This is meant to supplement and not replace the requirement for hand-washing. Before decontamination is completed, hand-washing shall be performed using fixed or portable hand-washing stations. Such stations are mandatory in certain sites including medical facility exam rooms, medical laboratories, bathrooms and firehouses.

(b) Contaminated Personal Protective Equipment (PPE). All garments, which are penetrated by blood, shall be removed immediately or as soon as possible within the limits of property and safety. All PPE shall be removed prior to leaving the work area or scene. All contaminated garments shall be isolated. Those not subject to decontamination shall be placed in biohazard waste bags. Disposable gloves shall be discarded only in biohazard plastic bags. Recyclable laundry shall be isolated to biohazard (red) bags and processed separately from other workplace laundry. This will be done by contractors informed of the biohazard concern. At the workplace, laundry bags shall be opened only to enter laundry.

(c) Contaminated recyclable equipment. All contaminated (BBP) recyclable equipment shall be decontaminated prior to reuse. Work surfaces shall be decontaminated after completion of procedures or as soon as possible after any spill of blood or other potentially infectious material. Equipment requiring servicing shall be decontaminated prior to transport if possible. Disposable PPE shall not be cleaned or recycled.

(d) Decontamination agents. Decontamination shall utilize only bleaches and EPA registered germicides. Unless contraindicated by manufacturer recommendations,

household bleach (sodium hypochlorite) 1:10 dilution or hydrogen peroxide 1:10 dilution may be utilized. LPH and other industrial strength germicides may be substituted.

c. Hepatitis B vaccine prophylaxis:

(1) All employees who have been identified as having exposure to blood or other potentially infectious materials in their work environment shall be offered the Hepatitis B vaccine, at no cost to the employee. The vaccine shall be offered within 10 working days of assignment to hazardous operations. Vaccination is unnecessary if the employee has been previously immunized or if they have immunologic evidence of adequate protection.

(2) Refusal to accept vaccination is allowed provided the employee signs the written declination statement. Refusal to submit to vaccination is a reversible decision, which will not abridge the offer to vaccine, should the employee reconsider.

(3) Vaccination shall be offered at McAfee US Army Health Clinic during day shift duty hours. At the discretion of the Installation Medical Advisor, special clinics will be arranged if mission requirements and needs so mandate, at the discretion of the Installation Medical Advisor.

(4) Vaccination shall be according to United States Public Health Service (USPHS) protocol. Current protocol calls for a series of 3 vaccinations (baseline, 1 month and 6 months). Failure to complete the vaccine series on schedule will require bloodborne pathogen post-exposure evaluation and follow-up.

d. Bloodborne pathogen post-exposure evaluation and follow- up:

(1) Referrals. Any employee suspected of having physical contact with infectious sources shall be referred immediately to McAfee US Army Health Clinic for case evaluation and management. The only delay justified is for initial washing of the contaminated body area. Personnel contaminated while working in worksites closer to other medical treatment facilities shall utilize those closer facilities. Contamination of PPE in the absence of skin or mucous membrane exposure does not necessitate evaluation or medical referral.

(2) First aid. Whether provided by the organization or the medical treatment facility, the initial management of body exposure to bloodborne pathogen contamination shall first involve cleaning of the affected body part. Skin decontamination should be managed by gentle washing and lavaging of the affected area with rinsing for no less than 15 minutes. Scrubbing should be avoided. Eye contamination should mandate lavage with clear water without additives or soaps. Mucous membrane contamination (mouth, inner nose) should be managed with lavage and gargles. Hydrogen peroxide diluted 1:1 with water is an acceptable mouthwash decontaminate for this procedure. The most critical decontamination agent is large volume water rinse. Where water is

scarce, prepackaged towelettes should be used as a bridge for skin decontamination, until washing can be accomplished.

(3) Professional medical management of contamination incidents. After first aid measures to decontaminate the employee have concluded, the medical personnel shall attempt to define the contagion risk for that employee. The employee shall be offered baseline serologic (blood) testing for bloodborne pathogens including Hepatitis and HIV. Whenever allowed by law and consent of the "donor", the employee will be tested for Hepatitis and HIV. The victim shall be offered Hepatitis prophylaxis vaccination or booster vaccination and immune globulin prophylaxis if their immune status suggests inadequate antibody capacity. With the employee's consent infectious disease specialty consultation shall be arranged for each incident. Serial surveillance of the victim's blood for evidence of a complicating infection shall be provided. All incidents shall be reported to the Department of Labor using the CA1 format. All cases shall be managed as a work illness or injury case and no charge for services, medications or referrals shall be borne by the victim.

(4) Incident evaluation and secondary prevention measures. Each exposure incident shall be evaluated by the White Sands Missile Range Safety Division to identify causality and to identify conditions amenable to corrective action. Case review shall include confidential deliberation by the installation workmen's compensation subcommittee. Unresolved remediable causes of employees risk shall be referred to the SOHAC.

(5) Employee counseling. Each exposed employee shall be individually counseled by McAfee US Army Health Clinic (and if necessary, William Beaumont Army Medical Board infectious disease) physicians regarding the disease concerns raised by their exposure incident. Secondary preventive measures shall be tailored to the circumstances of the incident and investigation.

e. Employee training:

(1) The curriculum for training BBP risk employees shall include the following information:

(a) OSHA standard 29 CFR 1910.1030 with specific notation of where copies can be easily accessed.

(b) Epidemiology and symptomatology of bloodborne diseases discussed in lay terms.

(c) Modes of transmission of bloodborne pathogens including procedures which might increase the risk of such exposure.

(d) The exposure control plan, its implementation and specific notation of how a copy can be easily accessed.

(e) The specific control measures available to eliminate exposure to bloodborne pathogens.

(f) Personal protective equipment available specific to the operations in which the trainee works including its selection, proper use, replacement, and disposal.

(g) First aid measures for the acute exposure.

(h) Signs and labels used to designate BBP hazard risks with emphasis on the significance of packages so labeled and the proper packaging and labeling of materials believed to be contaminated with bloodborne pathogens.

(i) The Hepatitis B vaccination process, risks, and benefits, including specific notation of the consent requirement, the free nature of the service and the reversibility of any declination by the employee.

(2) Training shall be provided to employees within 10 days of assignment to work in a potential BBP hazard operation and to include annual training.

f. Record Keeping.

(1) Medical records shall be kept in the occupational health medical folders of each individual.

(2) Training records shall be maintained by the ISO, with assistance from Occupational Health Section, McAfee US Army Health Clinic. Training records shall be maintained for a minimum of 3 years and will include:

(a) Certification of employee attendance at meeting.

(b) Course outline.

(c) Trainer's credentials relative to the subject.

(d) Dates of training.

Chapter 21
CONTROL OF POTENTIAL HAZARDS TO HEALTH FROM IONIZING AND NONIONIZING RADIATION

21-1. GENERAL

a. This chapter establishes policies, procedures, and functions for radiation safety. It applies to all WSMR elements procuring, receiving, storing, shipping, using, transporting, maintaining, or disposing of ionizing and nonionizing radiation producing materials and/or equipment.

(1) Nonionizing radiation includes laser radiation, high intensity light, and radio frequency radiation.

(2) Ionizing radiation refers to radioactive material and ionizing radiation-producing equipment.

b. This regulation does not apply to the use of radiation sources for medical or dental purposes.

c. Nuclear Regulatory Commission (NRC) regulations and licenses are mandatory requirements for the use of NRC-licensed materials. An Army radiation authorization (ARA) is required for not-operationally-ready maintenance, naturally occurring or accelerated produced radioactive material (NARM), and Department of Energy (DOE) materials.

d. WSMR Pam 385-24 contains technical requirements for developing management and control processes for operations involving sources of radiation and its implementation is mandatory.

21-2. POLICY.

a. To disseminate Command policies and delineate responsibilities regarding the control of potential health hazards from ionizing and nonionizing radiation operations at White Sands Missile Range and to ensure occupational exposures to ionizing radiation are maintained as low as reasonably achievable (ALARA).

b. To establish standards and furnish technical guidance to minimize and/or avoid health and safety hazards resulting from ionizing and non-ionizing radiation operations.

c. To provide procedures for the control of potential health hazards to personnel resulting from an exposure to ionizing and nonionizing radiation.

d. To specify personnel dosimeter monitoring criteria, personnel monitoring procedures, and medical surveillance procedures for personnel who are occupationally exposed to ionizing radiation.

e. Implement the White Sands Missile Range Radiation Safety Program (RSP).

21-3. SCOPE: Applicable to all Department of Defense (DOD) organizations, other governmental agencies, civilian contractors and visitors, whether tenant or transient, using, operating and/or possessing any device, or material capable of producing potentially hazardous ionizing radiation on or over White Sands Missile Range owned or leased land. Range sponsors of contractors and visitors are responsible to ensure contractor's compliance with this regulation.

21-4. RESPONSIBILITIES. Organizational responsibilities are in WSMR Pam 385-24.

21-5. ADMINISTRATION AND PROCEDURES. Administration and procedures are in WSMR Pam 385-24.

Chapter 22
ERGONOMICS PROGRAM

22-1. RESPONSIBILITIES:

a. The Medical Director shall:

(1) Coordinate with Installation Safety Office (ISO) and update the program document as required.

(2) Provide advice regarding the appropriate personnel to serve on the White Sands Missile Range Ergonomics Team.

(3) Develop and maintain a written health care management plan/protocol for the early recognition, evaluation, treatment, and follow-up of Work-Related Musculoskeletal Disorders (WMDs).

(4) Provide a health care representative to serve as the WSMR Ergonomics Team.

(5) Assist in identification of modified or restricted-duty jobs and make specific recommendations to CPAC accordingly.

b. The Chief Industrial Hygiene Officer, shall:

(1) Manage the Industrial Hygienist aspects of the ergonomics program.

(2) Designate an Industrial Hygienist to serve on the White Sands Missile Range Ergonomics Team.

(3) Verify the designee has 40 hours of formal ergonomics training.

(4) Document workplace ergonomic risk factors during routine work site evaluations.

(5) Provide technical assistance to resolve issues from ergonomic assessments and problems.

(6) Provide ergonomic training and education in reference to the Industrial Hygiene.

(7) Coordinate with the medical staff and ISO to identify potential WMDs and ergonomic changes in respective work places.

c. The Director, ISO shall:

(1) Appoint a safety professional and an alternate as Installation Ergonomics Officer (IEO). Verify the IEO has or will have 40 hours of formal ergonomics training.

(2) Appoint a safety professional(s) to perform/assist in ergonomic evaluations and problem solving efforts.

(3) Integrate all confirmed ergonomic hazards into the installation hazard abatement program consistent with AR 385-10.

(4) Provide the IEO copies of accident and injury data, which may have ergonomic implications.

(5) Ensure ergonomic issues are considered during safety inspections.

d. The Installation Ergonomics Officer shall:

(1) Lead the White Sands Missile Range Ergonomics Team, providing an interface between the team and the Workers' Compensation Committee, the Safety and Occupational Health Advisory Council, and other installation organizations.

(2) Assign members of the White Sands Missile Range Ergonomics Team and obtain approval of the team membership through the Workers' Compensation Committee.

(3) Oversee, manage, or perform the worksite ergonomic analyses.

(4) Provide quarterly review and analysis reports to White Sands Missile Range leadership during the Safety and Occupational Health Advisory Council meetings.

(5) Serve as the focal point for the safety/occupational health review and approval of specialized Automated Data Processing (ADP) and other equipment reportedly designed to alleviate ergonomic problems.

(6) Evaluate and recommend appropriate ergonomic training/education for White Sands Missile Range personnel.

(7) Develop, maintain, and obtain approval of the White Sands Missile Range Ergonomics Action Plan through the Workers' Compensation Committee. The action plan will reflect specific actions, action officers, and milestones associated with the accomplishment of the various elements of the ergonomics program, to include the following:

(a) Program objectives.

(b) Program interfaces with existing programs, such as the wellness/ fitness program, medical surveillance program, and occupational health programs.

(c) Workplace Analyses.

(d) Hazard Prevention and Control.

(e) Health Care Management.

(f) Education and Training.

(g) Program Evaluation and Review.

(h) Material Acquisition.

Note. DA Pam 40-ERG (draft) contains information useful to consider when developing and updating the WSMR Ergonomics Action Plan.

e. The Ergonomics Action Team will be led by the Installation Ergonomics Officer. The team will be established in accordance with WSMR team Membership protocol (must have union representative). Membership may include directorate representatives, such as Accident Prevention Team members, engineering professionals, medical personnel, safety professionals, civilian personnel representatives, Program for Individuals with Disabilities Manager (EEO), and a Community and Family Activity Division representative. The ergonomics team shall:

(1) Gather and evaluate appropriate injury, accident, and complaint data on worksites and work processes.

(2) Identify existing and potential WMDs.

(3) Conduct worksite evaluations and recommend correct/remedial actions for ergonomic hazards.

(4) Recommend priorities for the abatement of identified WMDs.

(5) Support the Installation Ergonomics Officer.

(6) Evaluate the effectiveness of the corrective actions and document the results.

(7) Provide/recommend specialized work training.

(8) Work with medical personnel in the identification of potential WMDs and advise medical personnel on ergonomic changes in the workplace.

(9) Assist the IEO in the development and maintenance of the WSMR Ergonomics Action Plan.

Chapter 23
Driver Safety Program

23-1. RESPONSIBILITIES:

a. ISO:

(1) Manage overall Driver Safety Program.

(2) Maintain AMV statistics.

(3) Collect AMV accident reports and data for trend analysis and mishap prevention. Active duty accidents will be recorded for all motor vehicle mishaps on and off duty. Accidents meeting reportable criteria will be reported to applicable agencies.

(4) Recommend motor vehicle accident prevention programs.

b. Installation Licensing Office: Provides resources to maintain operational integrity of the Drivers Safety Program.

(5) Maintains overall management cognizance of the Defensive Drivers Safety course to include scheduling classes and instructors.

(6) Ensures all instructors maintain current certification by the National Safety Council or other nationally recognized program.

(7) Charged with day-to-day operation of the Driver's Improvement Training to include scheduling of instructors.

c. Directorate of Emergency Services: Provide names of employees requiring remedial and accident avoidance procedures to the Installation Licensing Office.

d. Installation Supervisors:

(1) Ensure all personnel under their supervision tasked with operating government owned/leased vehicles are scheduled to attend a Driver's Improvement Course.

(2) Report all AMV mishaps and near misses to the ISO promptly.

(3) Recommend remedial actions for individuals involved in vehicle incidents or moving violations.

(4) Ensure employees can safely operate vehicles prior to operating.

(5) Responsible for scheduling of WSMR personnel to attend Driver's Improvement Training.

23-2. PROCEDURES:

a. Online Training:

(1) Can be accomplished through the US Army Combat Readiness Center Website.

(2) Refer to Chapter 26, Training for further instruction on safe government vehicle usage while operating on the installations unimproved roads.

b. Classroom Training:

(1) Scheduling.

(a) Supervisors must schedule employees to attend the Driver's Improvement Course.

(b) SF 182 (Authorization and Record of Government Training) must be prepared for each individual attending the Driver's Improvement Course.

(2) Instruction

(3) Qualified instructors will be provided by the Installation Safety Office.

(4) Instruction will be in accordance with the Army Safety Program requirements with all instructors certified by the National Safety Council or other nationally recognized program.

(5) Driver's Improvement training is mandatory every four years.

c. Facilities:

(1) Location of facilities on main Post will be announced prior to scheduled classes.

(2) Classes will be taught on main Post and at Stallion Range Center (SRC) with SRC location to be determined by SRC Manager.

(3) National Safety Council or other nationally recognized program certificates of completion will be provided to each employee upon completion of the course.

d. Duration:

(1) The Driver Accident Avoidance Course will be in accordance with the WSMR Installation Safety Action Plan.

(2) All remedial and accident avoidance classes will utilize the eight hour driver's improvement course schedule and may be taken in concert with the normal driver's improvement training.

e. Criteria:

(1) Employees must provide the instructor with a valid state operator's permit prior to the beginning of each class. Employees who do not possess a valid operator's permit will be returned to their organization.

(2) The Driver's Improvement Course does not certify personnel to operate government equipment in excess of 26,000 pounds gross vehicle weight and special purpose vehicles (i.e., forklifts).

f. Record Keeping:

(1) The Installation Licensing Office will maintain a copy of employee's certificate of course completion.

(2) Each employee completing the class will be issued a DD Form 346 (Government Operator's Permit) which must be on the employee's person during operation of a government vehicle under 26,000 pounds.

(3) Installation Licensing Office will notify employees when mandatory refresher training is needed.

23-3. MOTORCYCLES AND MOPEDS:

a. Soldiers:

(1) Are responsible for establishing a Motorcycle Safety Packet which will be maintained with in the unit. Motorcycle Safety Packet will include actual or certified photocopies of the following:

(a) Drivers license with motorcycle endorsement.

(b) Appropriate Motorcycle Safety Foundation (MSF) or Specialty Vehicle Institute of America (SVIA) motorcycle safety course. Also include advanced motorcycle safety certification if completed.

(c) Proof of insurance IAW WSMRR 190-3.

(d) Proof of registration IAW WSMRR 190-3.

b. Commanders:

(1) Are responsible for ensuring that each Soldier upon arrival has registration that is compliant with WSMRR 190-3.

(2) Will ensure that each Soldier has established a Motorcycle Safety Packet containing the items highlighted in section 24-3 a (1) of this regulation.

(3) Are responsible for retaining the Motorcycle Safety Packets on file within the unit. These packets are inspectable items by way of the Installation Safety office and are subject to inspection at any time.

(4) Are responsible for ensuring that any Soldier that requires motorcycle training is scheduled accordingly via the Installation Safety office.

(5) Commanders are responsible for the establishment of the Motorcycle Mentorship Program within the unit.

(6) Will ensure that each Soldier comprehends the responsibilities of operating a motorcycle on White Sands and retains a comprehensive understanding of WSMRR 90-3.

23-4. MOTOR POOL SAFETY: See Appendix X.

Chapter 24
CHEMICAL AND BIOLOGICAL STIMULANT OPERATIONS LICENSING

24-1. UNSAFE OPERATIONS: The following personnel have the authority to stop unsafe operations.

a. Installation Safety Office, Fire Protection and Quality Assurance Specialist Ammunition Surveillance (QASAS) personnel.

b. Any supervisor within their area of operations.

c. Operator following specific Standing Operating Procedure (SOP) instructions.

d. Test conductor for operations.

e. Anyone that observes an unsafe operation.

24-2. SAFETY:

a. All operations involving biological and chemical stimulant operations shall comply with the requirements of this section.

b. No operation involving chemical and biological stimulant operations will be conducted at White Sands Missile Range without a White Sands Missile Range Command approved SOP and an approved license to conduct stimulant test operations at White Sands Missile Range. All activities conducting operations involving chemical and biological stimulants must submit the following information to the ISO for inclusion in the WSMR overall site license application:

(1) A list of each stimulant to be used, in what form, and under what concentration limits.

(2) Health hazard/toxicity data for the stimulant(s) to be used, addressing expected concentration levels and potential exposure duration. Include information describing where the health hazard information was obtained and when the information was last reviewed and updated.

(3) For testing involving outdoor dissemination of stimulants, describe the procedures to be used to ensure adequacy of meteorological conditions and prediction of stimulant dispersion. How will real-time conditions be monitored and who will give on-site permission to disseminate stimulants? How will control of all personnel with potential for exposure be maintained and informed of any changing test conditions?

(4) Describe the training that all personnel involved in stimulant operations already possess or will receive. How will training records be maintained?

(5) How will control of tenant organization or test/training customer operations be maintained?

c. All chemical and biological stimulant operations operating site licenses previously issued will be included as an appendix to the respective SOP governing the chemical and biological stimulant operation or test. Concurrent review of both documents can be performed when the SOP is submitted for renewal. The following control measures will be in place and strictly adhered to during the course of testing and any deviation from these controls will require a waiver approved by the Commander, ATEC, prior to commencing testing:

(1) Current approved Standing Operating Procedures detailing all protective measures, such as personal protective equipment (PPE) requirements, training required to conduct tests in a safe manner, requirement to conduct a daily safety briefing prior to operations, and identification of responsible individuals or offices who ensure safe conduct of operations.

(2) A current and comprehensive job hazard analysis which identifies all risks involved with conduct of these tests, to include proper handling and storage of stimulant material, with adequate control measures to either mitigate or control the hazards. This job hazard analysis will become part of the training package for these tests and part of the Standing Operating Procedures.

(3) Material Safety Data Sheets (MSDS's) outlining the hazards and controls for stimulants will be readily available. These MSDS's will be part of the training package.

(4) A pre-operational survey will be conducted in order to familiarize all personnel involved with steps in the test process by conducting a dry run of the test operations. Key personnel involved in the tests will be required to attend. This will serve to resolve any issues with test conduct and further define control measures in place.

(5) Ensure current weather predictions are provided by the meteorologist at the beginning of each day, and cloud tracking optics and field ground samplers are in place to monitor dispersion of the cloud and stimulant material.

(6) During entry into the remains of the structure after the detonation, ensure all required PPE is worn and that monitoring equipment is in place to detect any potential exposure to hazardous cloud or other hazardous material.

(7) Ensure test-related personnel who are not WSMR employees read and agree to, in writing, the stipulations of this license and all other governing SOPs and regulations. Any personnel not complying with the stipulations of the license will not conduct testing on WSMR.

(8) Prior to authorizing organizations to conduct these operations at WSMR, the SOP must be signed verifying written acknowledgement that the organizations understand and will comply with the provisions of the license.

(9) The license will be required to be amended when operations deviate significantly from SOPs or additional stimulants are being used.

Chapter 25
CONTRACTING SAFETY

25-1. PURPOSE: To inform Contractors operating on White Sands Missile Range of the requirements, regulations, and responsibilities. First and foremost all Contractors must have a designated Project Sponsor/COR when operating on White Sands Missile Range. These requirements and responsibilities have been developed due to past accidents, incidents, and after action reviews and the processes of corrective actions that were implemented.

25-2. RESPONSIBILITIES:

a. Program Sponsor:

(1) Shall assure the Contractor has a Specific Safety Plan/s, for planned project, and provide a copy to the Installation Safety Office for approval before start of operation.

(2) Attend a Pre-Project/Operation Meeting.

(3) Appoint a COR with oversight responsibilities to include safety/health/environmental/required training/certifications/documentation and required permits.

(4) Assure that all accidents, incidents, fatalities, or exposures are reported to the Installation Safety Office within 12 hours (678-1211/2305) of incident.

(5) Assure UXO and Wildlife Briefings are provided to all employees before operating on White Sands Missile Range. Videos providing the current UXO Range Hazards Briefing and an Oryx alert video are available on the Safety Office link located on the White Sands Missile Range Home Page.

(6) Assure that accident sites are preserved and secured after an accident or incident until released by the Installation Safety Office.

(7) Attend an After Action Review (AAR) board meeting when required.

b. Contracting Officers Representative (COR) Responsibilities:

(1) Provide safety oversight for the Contractor/Sub-contractors with support from Project Sponsor and Installation Safety Office.

(2) Attend the required COR course, CLC 106, "COR with a Mission Focus" at web-link www.dau.mil See Appendix W, as per regulatory guidance, to be a certified WSMR COR.

(3) Conduct safety inspection of contractor work site to assure safety compliance.

(4) Assure that all warning lights, warning signs, barricades and smoking policies are not violated by Contractor.

(5) Assure that all accidents/incidents are reported to the Installation Safety Office within 12 hours of incident (678-1211).

c. Installation Safety Office (ISO):

(1) Provide Safety support to the COR.

(2) Conduct an After Action Review (AAR) after selected accidents or incidents.

(3) Report all fatalities to OSHA and report certain categories of exposure to employees or general public.

(4) Assure all required Safety regulations are followed such as but not limited to: AR 385-10, OSHA 29 CFR 1910.

(5) Review and approve Contractor Safety Program before start of project.

(6) Conduct periodic safety site visits of long term projects in support of the COR.

Chapter 26
ARMY MOTOR VEHICLE AND GOVERNMENT OPERATED VEHICLE ACCIDENT PREVENTION PROGRAM

26-1. PURPOSE: To provide guidance and standards relating to the review of collisions or accidents involving motor vehicles owned or leased by the Department of the Army or other agencies of the United States Government, when such Army Motor Vehicle (AMV) accidents and Government Operated Vehicle (GOV) accidents occur on the White Sands Missile Range (WSMR), New Mexico, or occur off-post but involve an AMV or GOV assigned to WSMR. The objectives of the Army Motor Vehicle Accident Prevention Program are to:

a. Enable the Senior Commander (SC), WSMR, to manage all aspects of the WSMR AMV/GOV Accident Prevention Program.

b. Minimize the potential for loss of life, personal injury, and destruction of property through leader engagement.

26-2. POLICY:

a. AMV/GOV accidents shall be officially reported as soon as possible and by the quickest means reasonably available, to the Directorate of Emergency Services (DES), Law Enforcement Division, Emergency Dispatch Center by calling 575-678-1234.

b. AMV/GOV involved in an accident will be reported without delay to the supervisor of the driver.

c. Actions for a Single Accident (DES determined driver at fault):

(1) Prior to the driver operating an AMV/GOV after an accident the supervisor will review with the driver all policies and procedures relating to use of AMVs/GOVs.

(2) Supervisor will require the driver to complete the Accident Avoidance Course within 30 days. This course is located at the Army Learning Management System at: https://www.lms.army.mil

(3) An AMV/GOV accident resulting in more than $2000 in damages or lost work days will be briefed to the SC during a recurring WSMR Leadership Team Staff meeting by the driver's Commander/Director at a location and time prescribed by the SC.

(4) These actions are not intended to be a replacement or substitute for any disciplinary action or liability under AR 735-5, or any civil or criminal action taken under the laws of the United States.

d. Actions for Two (2) or more Accidents within 3 years (DES determined driver at fault):

(1) Supervisor and section chief review, with the driver, all policies and procedures relating to use of AMV/GOV. Supervisor, section chief and driver complete defensive driving course together before driver may use any AMVs, or any government paid rental vehicles on or off the installation.

(2) Two (2) or more AMV/GOV accidents resulting in more than $2000 in damages or lost work days will be briefed to the SC during a recurring WSMR Leadership Team Staff meeting by the driver's Commander/Director at a location and time prescribed by the SC.

(3) Driver must request approval from their Commander or Director to continue driving.

(4) These actions are not intended to be a replacement or substitute for any disciplinary action or liability under AR 735-5, or any civil or criminal action taken under the laws of the United States.

26-3. RESPONSIBILITIES:

a. The Senior Commander, WSMR will:

(1) Establish a WSMR AMV/GOV Accident Prevention Program.

(2) Chair briefings for AMV/GOV accidents resulting in more than $2000 in damages or lost work days.

b. The Installation Safety Director (ISD) will:

(1) Provide for review and monitoring of the overall WSMR AMV/GOV Accident Prevention Program for the SC.

(2) Provide Command emphasis to the WSMR AMV/GOV Accident Prevention Program.

(3) Manage and implement the WSMR AMV/GOV Accident Prevention Program.

(4) Ensure the WSMR SC and staffs are informed on WSMR AMV/GOV Accident Prevention Program issues.

c. The Commander/Director, White Sands Test Center, will:

(1) Review Test Center AMV/GOV accident packages and forward thru the ISD to the SC.

(2) Brief all AMV/GOV accidents resulting in more than $2000 in damages or lost workdays to the SC within 30 days of the accident at a location prescribed by the SC. Contact the ISD for scheduling at (575) 678-2305 or the Secretary of the General Staff (SGS) at (575) 678-5175.

d. The Commander, U.S. Army Garrison WSMR, will:

(1) Review all Garrison AMV/GOV accident packages and forward thru the ISD to the SC.

(2) Brief all AMV/GOV accident resulting in more than $2000 in damages or lost workdays to the SC within 30 days of the accident at a location prescribed by the SC. Contact the ISD for scheduling at (575) 678-2305 or the SGS at (575) 678-5175.

e. WSMR Tenant Activities Directors will:

(1) Review your AMV/GOV accident packages and forward thru the ISD to the SC.

(2) Brief all AMV/GOV accidents resulting in more than $2000 in damages or lost workdays to the SC within 30 days of the accident at a location prescribed by the SC. Contact the ISD for scheduling at (575) 678-2305 or the SGS at (575) 678-5175.

f. The Drivers Immediate Supervisor will:

(1) Investigate the scene following the AMV/GOV accident to determine its root cause.

(2) Immediately following the accident, assemble a package containing the following; 1) supervisor's accident investigation report; 2) description of the root cause; 3) the employees written testimony; 4) the official police accident report; 5) and the supervisor's statement of corrective action.

(3) The package will be submitted through the chain of command up to the

commander / director level, and then to the ISD no later than twenty (20) working days following the accident. See Appendix A for forms to be included in the package.

g. The Driver involved in an AMV/GOV will:

(1) Immediately report the accident to his/her supervisor, and to the DES Law Enforcement Division, Emergency Dispatch Center. Failure to report a traffic collision or accident in a timely manner, regardless of fault, may subject the employee to disciplinary action, and to criminal penalties.

(2) Submit a written report of the collision to the DES Law Enforcement Division.

(3) Provide a written signed and dated narrative account of the accident to his/her supervisor.

26-4. TRAINING:

a. Mandatory Training: All Team White Sands members permanently assigned to White Sands Missile Range who operate government vehicles as part of their duties shall be required to view the Driving on Unimproved Roads safety awareness video as an addition to the driver training outlined in AR 600-55.

b. The Installation Safety Office is the proponent for the Driving on Unimproved Roads safety awareness video. This online video is located on the Army Mandatory Training and Education Assessment System. For assistance or information contact the ISD at 678-2305.

(1) Those individuals who do not have an assigned computer or account shouldrequest computer support from within their organization.

(2) Compliance is tracked by your Common Access Card (CAC). Viewing this training video on someone else's computer account does not meet the training requirement.

(3) Go to https://intranet.wsmr.army.mil/amteas/ to access this training material

c. Initial Training: Initial training will be accomplished as a requirement for issuance of the U.S. Government Motor Vehicle Operator's Identification Card 346 (OF 346).

(1) Provide the installations Government Licensing Office, building 1838, (575) 678-3344, a copy of the training certificate for entry on the installations licensing database.

(2) Provide a copy to your organizations training coordinator

d.Refresher Training: Refresher training will consist of viewing the "Driving on Unimproved Roads" safety awareness video and must be completed when your military drivers license (U.S. Government Motor Vehicle Operator's Identification Card 346) is renewed. Renewal is accomplished on the same date as the individual's State driver's license expires, or 5 years from issue date whichever is sooner.

(1) Provide the installations Government Licensing Office, building 1838, (575) 678-3344, a copy of the training certificate for entry on the installations licensing database.

(2) Provide a copy to your organizations training coordinator.

Chapter 27
USE OF PERSONAL PROTECTIVE EQUIPMENT (PPE) DURING HIGH HAZARD OR MANNED FIRING TRAINING, TEST AND EVALUATION

27-1. PURPOSE: To provide guidance and standards relating to the use of proper PPE during training, test and evaluations involving High Hazard or Manned Firing operations. The DA and ATEC requirements to develop a hazard specific Risk Assessment and Hazard Analysis is the primary tool the supervisor and employee use to identify proper PPE for the operation. The use of the the Hazard Analysis process and procurement of the proper PPE provides the maximum protection for the WSMR workforce.

27-2. POLICY:

a. Always Be Safe: All testing, mission or training occurring on WSMR must be performed safely in order to be considered a successful outcome for the customer, WSMR and the Army. Any grievous injury, loss of life or damaged equipment is unacceptable. Safety must be at the forefront of all planning and execution events to ensure all risk mitigation measures have been correctly indentified, and all safety requirements have been addressed. Everyone must put special emphasis on using proper PPE. Contact the Test Center Safety Office, 678-3921, for information or assistance.

b. Identify Risks: An integral part of planning involves reviewing the Safety Assessment Reports (SAR) or Plans of Instruction (POI) which identify and breakdown the hazards within the systems and associated with the test, mission or training event.

(1) Follow the Process: A thorough analysis must be conducted IAW with AR 385-10 (The Army Safety Program), DA Pam 385-30 (Mishap Risk Management) and ATEC R 385-1(The ATEC Safety Program). This analysis, performed through management and employee evaluation of the process, identifies hazards and the proper

mitigations of those hazards by employing correct engineering techniques, administrative controls, and/or PPE.

(2) Get Safety Plan Approved: Every test, mission or training event will include a Hazard Analysis as part of its Standing Operating Procedure (SOP). All SOPs, with completed Hazard Analysis, will be provided to the Installation Safety Office (60 days for new SOPs and 30 days for renewals) for review and concurrence prior to submission for Command approval.

(3) Use Proper PPE: Assessment of the proper PPE for Manned Firing will specifically address likely hazrds suchs as flash, fire and blast. Each fielded weapon system identifies PPE requirements specific to that system. The use of TM 10-8400-201-23, which includes descriptions onf specifications of the appropriate gear based on the assessed need, is required to determine PPE usage for Research, Development, Test and Evaluation activities, not otherwise specified. Required and mandated PPE will be procured locally through appropriate channels.

27-3. RESPONSIBILITIES:

a. The Senior Commander, WSMR will:

(1) Establish a WSMR PPE Policy.

(2) Approve High Hazard Training mission on WSMR.

(3) Submit High Hazard Test missions to HQ ATEC for approval.

b. The Installation Safety Director (ISD) will:

(1) Will review and provide concurrence for all SOPs and Hazard Analysis for Test Center tests and operations.

(2) Submit all SOPs for Command approval.

c. The Commander/Director, White Sands Test Center, will:

(1) Approve Medium Hazard SOPs for Test Center tests and operations

(2) Ensure all Test Center Directors and Office Chiefs comply with the WSMR PPE policy.

Appendix A
References

Section I
Required Publications

1. 10 CFR 30 Rules of General Applicability to Domestic Licensing of bi-product Material
2. 29 CFR 1910.1030, Bloodborne Pathogens Standard
3. 29 CFR 1910.1200, Hazard Communication Standard
4. 29 CFR 1910.134, Respiratory Protection
5. 29 CFR 1910.146, Permit-required Confined Spaces
6. 29 CFR 1910.147, Lockout Tagout
7. 29 CFR 1960, Basic Program Elements for Federal Employee Occupational Safety and Health (OSHA) Programs and Related Matters
8. 29 CFR, 1910
9. 40 CFR 370.2
10. American National Standards Institute (ANSI), Z-136.1: American National Standard for the Safe Use of Lasers
11. Annex R to WSMR Data Collection Package (DCP), White Sands Missile Range (WSMR) Aircraft Pre-accident Prevention Plan
12. ANSI, C95.1: American National Standard Safety Levels With Respect to Human Exposure to Radio Frequency Electromagnetic Fields 300 kHz to 100 GHz
13. AR 11-34, The Army Respiratory Protection Program.
14. AR 11-9, The Army Radiation Safety Program
15, AR 15-6, Procedures for Investigating Officers and Boards of Officers
16. AR 40-5, Preventive Medicine
17. AR 40-10 US Army Health Hazard Assessment Program In Support of The Material Acquisition Decision Process
18. AR 75-1, Malfunctions Involving Ammunition and Explosives
19. AR 190-11, Physical Security of Arms, Ammunition, and Explosives
20. AR 385-10, The Army Safety Program, with ATEC Supplements
21. AR 385-40, 1 Nov 1994, Accident Reporting and Records with ATEC Supplements
22. AR 385-55, Prevention of Motor Vehicle Accidents
23. AR 385-63, Range Safety
24. AR 600-3, Army Personnel Proponent System
25. AR 600-8-22
26. AR 600-55, The Army Driver and Operator Standardization Program (Selection, Training, Testing and Licensing)
27. AR 672-74, Army Accident Prevention Award Program
28. Army Air Division SOPs Numbers 95-1, 95-2, and 95-3
29. ATEC-R 385-1, US Army Test and Evaluation Command Safety Program
31. DA PAM 40-502 Occupational and Environmental Health Respiratory Protection Program.

32. DA Pam 40-ERG, Installation Ergonomics Program 30. DA PAM 385-10, Army Safety Program
33. DA PAM 385-16, System Safety Management Guide
34. DA PAM 385-24, The Army Radiation Safety Program
35. DA PAM 385-40, Army Accident Investigation and Reporting
36. DA PAM 385-63, Range Safety
37. DA PAM 385-64, Ammunition and Explosives Safety Standards
38. DA PAM 385-95, Aircraft Accident Investigation and Reporting
39. DOD 4145.26-M, DOD Contractor's Safety Manual for Ammunition and Explosives
40. DOD 6050.5-G-1, Department of Defense Federal Hazard Communication Training Program Guide
41. DOD Instruction 6055.11: Protection of DOD Personnel from Exposure to Radio Frequency Radiation and Military Exempt Lasers
42. DOD-6055.9-STD, DOD Ammunition and Explosives Safety Standards
43. DODI 5000.36, System Safety Engineering and Management
44. DODI 6055.4, Department of Defense Traffic Safety Program
45. Flightfax Article "Advanced Composite Materials" April 1992
46. Flightfax Article "Caution, Advanced Composite Materials" August 1996
47. Memorandum, CSTE-DTC-MS-S, 17 Dec 02, Subject: Command Policy - Safety of Chemical and Biological Agent Stimulant Operations.
48. Military Handbook (MIL-HDBK-419), Grounding, Bonding, and Shielding for Electronic Equipment and Facilities
49. MIL-STD 882E, Standard Practice for System Safety
50. MIL-STD-1472F, Human Engineering Design Criteria Standard
51. National Electrical Code 200
52. National Fire Protection Association (NFPA) 70, National Electrical Code
53. Public Law 91-596, 29 Dec 1970 as amended by Public Law 101-552, S3101, Nov 5, 1990

54. TB 385-4, Safety Requirements for Maintenance of Electrical and Electronics Equipment
55. TB 43-0142 Safety Inspection and Testing of Lifting Devices Manual
56. TB 43-0151 Air and Other Gas Compressors Manual
57. US Army Safety Center (USASC) Safety Alert Message 201506Z May 96
58. WSMR Chemical Hygiene Plan
59. WSMR Hazard Communication Program/Handbook
60. WSMR Pam 385-64, White Sands Test Center Ammunition and Explosive Safety Standards *(TBP)*
61. WSMR Regulation 385-3: Laser Beam Safety
62. TB MED 502, The Army Respiratory Protection Program,. February 1982

Appendix A
Section II
Glossary

Definition of Terms:

Action level: A concentration designated in Title 29, CFR Part 1910, for a regulated substance which initiates certain required activities such as exposure monitoring and medical surveillance. Also ½ of the permissible exposure limit (PEL) or threshold limit value (TLV) for a chemical, whichever is more stringent.

Acutely toxic: A chemical falling within any of the following toxicity categories: (1) a median lethal dose (LD50) of 50 mg/kg of body weight or less when administered orally to rats, (2) an LD50 of 200 mg/kg of body weight or less when administered to the skin of rabbits, (3) a median lethal concentration (LD50) in air of 200 ppm or less of gas or vapor, or 2 mg/liter or less of mist, fume or dust when administered by inhalation to rats.

Ammunition and explosives area: An area specifically designated and set aside from other portions of an installation for the development, manufacture, testing, maintenance, storage, disposal or handling of ammunition and explosives.

Ammunition and explosives: Includes (but is not limited to) all items of ammunition; liquid and solid propellants; pyrotechnics; high and low explosives; guided missiles, warheads; devices; chemical agent; and components and substances associated therewith, presenting real or potential hazard to life, property and the environment.

Army Motor Vehicle: AMV

Attendant: The employee authorized on the Confined Space Entry Permit to be stationed immediately outside the confined space to monitor the safety of the entrants and provide initial emergency notification to emergency response personnel if required.

Authorized employee: A person who locks out or tags out machines or equipment in order to perform servicing or maintenance.

Bloodborne pathogens: Infectious agents which can be spread from one individual to another by contact with emitted blood or other contaminated body secretions.

Bonding: The permanent joining of metallic parts to form an electrically conductive path, which will assure electrical continuity and the capacity to conduct safely any current likely to be imposed.

Carcinogen: A chemical or mixture which contains at least 0.1 percent of a chemical which meets one of the following criteria: (1) it is regulated by OSHA as a carcinogen, (2) it is a human carcinogen listed under the category "known to be carcinogens," in the Annual Report on Carcinogens published by the National Toxicology Program (NTP), (3) it is listed under Group I, "carcinogenic to humans," by the International Agency for Research on Cancer (IARC), (4) it is listed in either Group 2A or 2B by IARC or under the category "reasonably anticipated to be carcinogens" by NTP, (5) is a military unique compound classified as a carcinogen by the Center for Health Promotion and Preventive Medicine (CHPPM) or Office of the Surgeon General (OTSG), or (6) it causes statistically significant tumor incidence in experimental animals in accordance with any of the following criteria: (1) After inhalation exposure of 6-7

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hours per day, 5 days per week for a significant portion of a lifetime to doses less than 10 mg/cubic meter, or (2) After repeated skin application of less than 300 mg/kg of body weight per week, or (3) After oral doses of less than 50 mg/kg of body weight per day.

Chemical Hygiene Officer: An employee appointed by the Commander who is qualified by training or experience to provide technical guidance in the development and implementation of the Chemical Hygiene Plan.

Chemical Hygiene Officer: As designated by the Commanding General, WSV, will supply the White Sands Missile Range Chemical Hygiene Officer and will ensure he is qualified by professional training and experience to provide technical guidance in the development and implementation of the Chemical Hygiene Plan.

Chemical Hygiene Plan: A written program developed and implemented by the employer which sets forth policy and procedures capable of protecting employees from the health hazards associated with their workplace IAW 29 CFR 1910.1450(e)(3)

Chemical Hygiene Plan: A written program developed and written by WSMR management which sets forth policy and procedures for protecting employees from the health hazards associated with laboratory workplace operations.

Class A Accident: An Army accident in which the resulting total cost of property damage is $1,000,000 or more; an Army aircraft or missile is destroyed, missing or abandoned; or an injury and/or occupational illness results in a fatality or permanent total disability.

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

Class C Accident: An Army accident in which the resulting total cost of property damage is $20,000 or more, but less than $200,000; a nonfatal injury that causes any loss time from work beyond the day or shift on which it occurred; or a nonfatal occupational illness that causes loss time from work (for example, 1 work day) or disability at any time (lost time case). The day of the accident is not counted as a day away from work.

Class D Accident: An Army accident in which the resulting total cost of property damage is $2,000 or more but less than $10,000.

Class E Accident: An Army aviation incident in which the resulting damage cost and injury severity do not meet the criteria for a Class A-D accident. A Class E aviation incident is recordable when mission (either operational or maintenance) is interrupted or not completed. Intent for flight may or may not exist.

Class F Incident: Recordable incidents confined to aircraft turbine engine damage (does not include installed aircraft Auxiliary Power Units (APU) as a result of internal or external FOD, where that is the only damage.

Combustible Liquid: Any liquid having a flashpoint at or above 100 degrees Fahrenheit (F), but below 200 degrees F, except any mixture having components with flashpoints of 200 degrees F or higher, the total volume of which makes up 99 percent or more of the mixture.

Competent person: A person who by qualification, training, or experience has the knowledge and capability suitable to the job, task, or assignment.

Component: Any part of a complete item whether loaded with explosives, inert (not containing explosives), or empty (not filled with explosives).

Compressed Gas: A gas or mixture of gases having, in a container, an absolute pressure exceeding 40 psi at 70 degrees F, or a gas or mixture of gases having, in a container, an absolute pressure exceeding 104 psi at 130 degrees F regardless of the pressure at 70 degrees F.

Confined Space Entry Permit: A written document with multiple levels of approval that defines and controls entry into a confined space. See Appendix A.

Confined Space: An area large enough to enter and work in (storage tank, process vessel, sewer line, manhole, facility crawl space, communications tunnel, etc.) which has one or more of the following characteristics:

Debris: Any solid particle thrown by an explosion or other strong energetic reaction. For aboveground detonations, debris usually refers to secondary fragments.

Deflagration: A rapid chemical reaction in which the output of heat is enough to enable the reaction to proceed and be accelerated without input of heat from another source. Deflagration is a surface phenomenon with the reaction traveling along the surface at subsonic velocity.

Designated Area: An area, which may be used for work involving carcinogens, reproductive toxins or acutely toxic chemicals. A designated area may be the entire laboratory, a controlled area within the laboratory or engineering controls such as a chemical hood.

Detonation: A violent chemical reaction within a chemical compound or mechanical mixture involving heat and pressure. When the material is located on or near the surface of the ground, is normally characterized by a crater.

DOD mishap: An unplanned event or series of events that result in damage to DoD property, occupational illness to DoD military or civilian personnel, injury to DoD military personnel on or off duty, injury to on-duty civilian personnel; damage to public and private property, or injury and illness to non-Dod personnel as a result of DoD operations.

Dud: Explosive munitions which have not armed as intended or which have failed to function after being armed.

Dummy ammunition: Ammunition components having the appearance of actual items and not having any explosives components.

Emergency: For the purposes of this plan, any occurrence such as, but not limited to, equipment failure, container rupture or loss of engineering control which results in the release of a hazardous chemical into the workplace.

Employee: An individual employed in a laboratory that may be exposed to hazardous chemicals in the course of employment.

Empty ammunition: Ammunition or ammunition components void of any type of explosive filler.

Energy isolating device: A mechanical device that physically prevents the transmission or release of energy such as a manually operated circuit breaker, a disconnect switch, a line valve or any similar device used to block or isolate energy.

Engulfment Hazard: A liquid, earth (sand, silt, etc.), or structural component of the confined space which could inadvertently trap or envelop the entrant such that he/she could not perform a self extraction and egress from the work site. This is a life-threatening hazard.

Entrant: The employee authorized on the Confined Space Entry Permit to enter and/or work in the confined space.

Equipment: A general term including material, fittings, devices, appliances, fixtures, apparatus, and the like, used as a part of, or in connection with, an electrical installation.

Explosive: A chemical that causes a sudden, almost instantaneous release of pressure, gas and heat when subjected to sudden shock, pressure or high temperature.

Exposed (As applied to communication circuits.): Where the circuit is in such a position that in case of failure of supports or insulation, contact with another circuit may result.

Exposed (As applied to live parts.): Capable of being inadvertently touched or approached nearer than a safe distance by a person. It is applied to parts not suitably guarded, isolated, or insulated.

Fixed ammunition: Ammunition consisting of a cartridge case loaded with propellant and a projectile, which are firmly attached.

Flammable Aerosol: An aerosol that, when tested by the method described in Title 16, CFR, part 1500.45, yields flame projection exceeding 18 inches at full valve opening, or a flash back at any degree of valve opening.

Flammable Gas: A gas that, at ambient temperature and pressure, forms a flammable mixture with air at a concentration of 13 percent by volume or less, or a gas that at ambient temperature and pressure forms a range of flammable mixtures with air wider than 12 percent by volume, regardless of the lower limit.

Flammable Liquid: A liquid having a flashpoint below 100 degrees F, except any mixture having components with flashpoints of 100 degrees F or higher, the total of which make up 99 percent or more of the total volume of the mixture. It is also known as a Class I liquid. These are further divided into:(1) Class 1A: Which includes liquids having flashpoints below 73 degrees F and boiling points below 100 degrees F. (2) Class 1B: Which includes liquids having flashpoints below 73 degrees F and boiling points at or above 100 degrees F. (3) Class 1C: Which includes liquids having flashpoints at or above 73 degrees F but below 100 degrees F.

Flashpoint: The minimum temperature at which a liquid gives off a vapor in sufficient concentration to ignite when tested using the Tagliabue Closed Tester, the Pensky-Martens Closed Tester or the Setaflash Closed Tester.

Fragment: A piece of exploding or exploded munitions. Fragments may be complete items, subassemblies, pieces thereof, or pieces of equipment or buildings containing the items.

Ground: A conducting connection, whether intentional or accidental, between an electrical circuit or equipment and the earth, or to some conducting body that serves in place of the earth.

Grounded: Connected to earth or to some conducting body that serves in place of the earth.

Hazard Analysis Working Group (HAWG): A team composed of Range Personnel with expertise in process operations, system operational requirements and hazard analysis methodology. The HAWG membership will be made up of the following representatives:

Hazard Analysis: Systematic and documented review of operations, facilities and equipment to identify potential hazards that could result in injuries to personnel or damage to facilities or equipment.

Hazardous Chemical: A chemical for which there is statistically significant evidence based on at least one study conducted in accordance with established scientific principles that acute or chronic health effects may occur in an exposed employee. This includes chemicals which are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, neurotoxins, agents which act on the hematopoietic (blood-forming) systems, and agents which can damage the lungs, skin, eyes or mucous membranes.

Hazardous Noise: Any noise that exposes an employee to a sound level greater than 85 dB when measured on the A scale of a calibrated standard sound level meter.

Hazardous Operation: Defined as any activity that has the potential to injure, maim, or fatally wound an individual, cause damage or loss of equipment, or requires the use of personal protective equipment.

Hearing Protection Device: A device, most often worn over ears, used to attenuate noise.

High Risk Operations: Experimental procedures involving the manipulation, handling or reaction of hazardous chemicals where the potential for release of gas, vapor or aerosol contamination is high. This category includes but is not limited to:(1) Rapid exothermic reactions (2) Transfer of electrostatic powders (3) Heating, mixing or transfer of volatile chemicals (4) Pressurized operations where there is potential for uncontrolled release (5) Work involving aerosol generation

Installation Safety Office: ISO

Laboratory Hood: A type of engineering control enclosed on five sides with a movable sash or fixed partial enclosure on the remaining side designed to draw air from the laboratory into the enclosure to prevent or minimize the escape of contaminants into the laboratory space.

Laboratory Scale: Work with substances in which the chemical quantities and equipment used for reactions, transfers, and other handling are designed to be easily and safely manipulated by one person.

Laboratory Use: The handling or use of chemicals in which: (1) Chemical manipulations are done on a "laboratory scale." (2) Multiple procedures or chemicals are used. (3) Procedures are not part of a production process. (4) "Protective laboratory practices and equipment" are available and in common use to minimize the potential for employee exposure to hazardous chemicals.

Laboratory: A facility or individual room where the "laboratory use" of hazardous chemicals occurs.

Laboratory: A facility or individual room where the "laboratory use" of hazardous chemicals occurs.

Launch pads: The load-bearing base, apron, or platform upon which a rocket, missile, or space vehicle and its launcher rest during launching.

Lockout Device: A device that utilizes a positive means, (i.e., lock, lock and hasp, etc.) to hold an energy isolating device in a safe position for the purpose of protecting personnel by preventing the energizing of a machine or equipment.

Low Risk Operations: Experimental procedures where the potential for release of gas, vapor or aerosol contamination is remote.

Mass-detonating explosives: Ammunition or explosives, almost all of which can be expected to explode virtually instantaneously when a small portion is subject to fire, to severe concussion or impact, to the impulse of an initiating agent, or to the effect of a considerable discharge of energy. All Hazard Class and Division (HD) 1.1 and those HD 1.2.1 with a maximum credible event (MCE) listed in the Joint Hazard Classification System.

Medical Consultation: A consultation which takes place between an employee and a licensed physician for the purpose of determining what medical exams or procedures are appropriate in cases where a significant exposure to a hazardous chemical may have taken place.

Noise: Unwanted sound

Noncombustible: Not burnable in the ordinary sense of the word.

Non-DOD component: Any entity (government, private or corporate) that is not a part of the Department of Defense.

Nonfatal Injury: Injury that causes any loss of time from work beyond the day or shift on which it occurs.

Nonfatal Occupational Illness: Illness that causes time from work or disability at any time (lost time case).

Normal maintenance: Work performed on ammunition to prevent deterioration and to correct minor defect not requiring renovation or major modification operations.

Occupational Illness and Disease: An Illness or disease caused by environmental factors, the exposure to which is peculiar to a certain process, trade, or occupation and to which an employee is not ordinarily subjected or exposed outside of or away from such employment or duty.

OSHA: Occupational Safety and Health Administration

Oxidizer: A chemical other than a blasting agent or explosive as defined in Title 29 CFR, part 1910.109 (a), that initiates or promotes combustion in other material, thereby causing fire either by itself or through the release of oxygen or other gases.

Permissible Exposure Limit: An occupational standard promulgated by OSHA as regulatory requirement. The PEL can be an 8-hour TWA, a ceiling value or a 15-minute STEL. A list of PEL's is found in Title 29 CFR, part 1910, subpart z.

Practice ammunition: Ammunition or ammunition components used for training. Practice ammunition simulates a service item in weight, design, and ballistic properties. A practice round may be inert or have explosive filler.

Protective Laboratory Practices and Equipment: Those laboratory procedures, engineering/administrative controls, work practices and protective clothing and equipment used to minimize employee exposure to hazardous chemicals.

Pyrotechnic material: The explosive or chemical ingredient, including powdered metals, used in the manufacture of military pyrotechnics.

Qualified Person: One familiar with the construction and operation of the equipment and the hazards. An employee may be considered "qualified" with regard to certain equipment in the workplace, but "unqualified" as to other equipment, based on his training.

Reasonable time: In accordance with Occupational Safety and Health Administration (OSHA) guidance, White Sands Missile Range has established as being within 3 to 4 minutes. This definition is used with the "Two Man Rule", Defribulator placement, and Medical Support discussed in this regulation.

Recordable Injury: All accidents occurring on and in the immediate area of WSMR. Reportable Accident: An accident which meets the definition of AR 385-40 2-2 which includes but is not limited to:

Reproductive Toxin: A chemical which affects the reproductive system and may produce chromosomal damage (mutations) and adverse effects on the fetus (teratogenesis). For the purpose of this guidance any chemical with a mutagenic or teratogenic quotation in the Registry of Toxic Effects of Chemical Substances (RTECS) shall be considered a reproductive hazard.

Restricted area: Any area, usually fenced, at an establishment where the entrance and egress of personnel and vehicular traffic are controlled.

Risk Assessment Code (RAC): A code assigned to each operation of an overall process to assign the probability of potential loss in terms of hazard severity, accident probability and exposure to hazard. (See AR 385-10)

Rocket motor: That portion of the complete rocket, which is loaded with propellant.

Rocket: A motor, which derives its thrust from ejection of hot gasses, generated from burning propellants.

Safety Assessment Report (SAR): A formal summary of the safety data collected during the design and development of the system.

Senior Commander: The senior general officer or equivalent at the installation who exercises designated command authorities and is the Secretary of the Army/CSA representative at the installation

Subsystem: A system that combines with other systems to make a higher order system.

System Safety Engineer: An engineer who is qualified by training and/or experience to perform system safety engineering tasks.

System Safety Engineering: An engineering discipline requiring specialized professional knowledge and skills in applying scientific and engineering principles, criteria, and techniques to identify and eliminate hazards or reduce the risk associated with the hazard.

System Safety Management Plan: A management plan that defines the system safety program requirements of the government. It ensures the planning, implementation, and accomplishment of system safety tasks and activities consistent with the overall program requirements.

System Safety Management: A management discipline that defines system safety program requirements and ensures the planning, implementation and accomplishment of system safety tasks and activities consistent with the overall program requirements.

System Safety: The application of engineering and management principles, criteria, and techniques to optimize safety within the constraints of operational effectiveness, time, and cost throughout all phases of the system or facility life cycle.

System: A composite, at any level of complexity, of personnel, procedures, materials, tools, equipment, facilities, and software. The elements of this composite entity are used together in the intended operational or support environment to perform a given task or achieve a specific purpose, support, or mission requirement.

Tagout Device: A prominent warning device that is capable of being securely attached for the purpose of protecting personnel that forbids the operation of an energy isolating device and identifies the individual and organization tagging the device.

Threshold Limit Value (TLV): Airborne concentrations of a substance published by the ACGIH to which it is believed workers may be exposed day after day with no adverse effect. The TLV's are advisory in nature; however, DA policy uses the TLV as regulatory policy when it is more stringent than the PEL for a specific chemical. A list of TLV's is found in Title 29 CFR, part 1910, subpart z.

Toxic Chemical: A chemical falling within any of the following toxicity categories: (1) an LD50 of more than 50 mg/kg but not more than 500 mg/kg of body weight when administered orally to rats, (2) an LD50 of more than 200 mg/kg but not more than 1000 mg/kg of body weight when administered to the skin of rabbits, (3) an LD50 in air of more than 200 ppm but not more than 2000 ppm of gas or vapor, or more than 2 mg/liter but not more than 20 mg/liter of mist, fume or dust when administered by inhalation to rats.

Traumatic Injury: A wound or other condition of the body caused by an external force, including stress and strain.

Unexploded ordnance (UXO): Explosive ordnance, which has failed to function as designed.

Unqualified Person: One who has not received any classroom or on-the-job training on the safety related work practices per 29 CFR 1910.331.

Warhead: That portion of a rocket or guided missile containing the high explosives charge or other destructive agent.

Work Injury: An injury to an employee arising out of or in the course of employment or performance of duty. This includes occupational illness and diseases.

Appendix A - Forms Pertaining to Chapters
Section III

Forms	Pertaining to:
DA FORM 4753 Notice of Unsafe or Unhealthful Working Conditions (For Posting)	Chapter 4
DA Form 4754 Violation Inventory Log	Chapter 4
DA FORM 4755 Employee Report of Alleged Unsafe or Unhealthful Wrkng Cond.	Chapter 4
Employee Safety and Health Training Record	Chapter 4
DA Form 1118	Chapter 5
DA Form 1256	Chapter 5
Chemical and Hazardous Materials Quick Check for the Worksite	Chapter 6
Additional HAZCOM forms in Word format	Chapter 6
HSHM-MHC-7 Occupational Health Clinic Permit	Chapter 7
STE FORM 1416 Record of Injury	Chapter 7
DA FORM 285 US Army Accident Report	Chapter 7
DA FORM 285-AB-R US Army Abbreviated Ground Report	Chapter 7
DA FORM 2397-AB-R Abbreviated Aviation Accident Report	Chapter 7
Standing Operating Procedures Concurrence and Title Cover Pg.	Chapter 8
EWS 1178 Hazard Analysis Form	Chapter 8

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STEWS-NRES-F-22 White Sands Missile Range Confined Space Entry Permit	Chapter 13
Ammunition and Explosive Safety Warning Sign/Decal Symbols	Chapter 14
SF Form 78	Chapter 16
DA Form 1687	Chapter 16
DD Form 314	Chapter 16
SOP for Ionizing & Non-Ionizing Radiation with Hazard Analysis (Form EWS 1178)	Chapter 21

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