JULY 2012

ARMY SAFE
IS ARMY STRONG

LEADER'S GUIDE TO CIVILIAN SAFETY

U.S. ARMY

ARMY STRONG.

U.S. ARMY COMBAT READINESS/SAFETY CENTER
https://safety.army.mil

A BAND OF BROTHERS & SISTERS

Foreword

This Leader's Safety Guide was written to assist leaders and supervisors in preventing Army civilian employee accidents and injuries.   Many of the techniques contained in this guide can, of course, also be used to prevent workplace accidents and injuries among military personnel.   However, the administrative examples used in this guide, such as required forms and reporting procedures, apply to Army civilian employees.

Statistically, we know that as many as 85 percent of all accidents are caused by human error.   Reducing accidents caused by human error involves providing adequate training, encouraging worker participation in accident prevention and safe performance and establishing and enforcing safe work practices.   Much of this guide is devoted to methods which can be used to influence behavior.   It is important for leaders to remember that other factors, such as unsafe facilities or improper procedures can also cause accidents.

Leaders are the key to preventing accidents.   Leaders know the state of training, physical condition and morale of their subordinates, and are in a critical position to influence safe behavior and prevent accidents before they happen.   This guide is intended to help leaders accomplish their mission and fulfill their accident prevention responsibility.

As a leader, you are responsible not only for your own actions, but for the actions of workers whose activities you have authority to inspect, correct, and direct.   No one is in a better position to recognize hazards and take effective action before those hazards become accidental injuries and losses that drain resources.   This guide will help you do that.

Safety and Health Adds Value

Addressing safety and health issues in the workplace saves money and protects our most valuable asset – our people. Recent estimates place the direct costs associated with occupational injuries and illnesses for the Army at close to $2 billion over the last 10 years.   These costs are paid from the Army's budget.

When workers stay whole and healthy, the direct cost-savings to our organizations include:
- Lower workers' compensation chargeback costs
- Reduced medical expenditures
- Smaller expenditures for Continuation of Pay for injured workers
- Lower costs for job accommodations for injured workers
- Less money spent for overtime benefits

Safety and health also make big reductions in indirect costs, due to:
- Increased productivity
- Higher quality products

- Increased morale
- Better labor/management relations
- Reduced turnover
- Better use of human resources

Tips, Cautions, and Notes icons are included throughout the document in the following format:

A tip gives you tips, tricks, and shortcuts you can use.

Caution alerts you to specific steps or results of which to be aware.

Notes will include additional information/data about a topic.

Contents

Section 1

SAFETY AND HEALTH PROGRAM ELEMENTS

Where effective safety and health management is practiced, injury and illness rates are significantly less than rates at comparable worksites where a safety and health management system is not implemented. There are **four elements** that every effective safety and health program should have:

- **Management leadership and employee involvement**
- **Worksite analysis**
- **Hazard prevention and control**
- **Safety and health training and education**

Management Leadership and Employee Involvement: Employers/leaders and employees work together to make safety and health a priority. Leader and employee involvement and communication on workplace safety and health issues are essential.
For example, this partnership can be achieved when you:

- Post the company's written safety and health policy for all to see.
- Involve employees in policymaking on safety and health issues.
- Take an active part in safety activities; show your interest by reviewing safety performance as a part of job performance.
- Hold meetings that focus on employee safety and health.
- Set the example; abide by all safety and health rules.
- Show your commitment by investing time, effort, and money in your safety and health program.

Worksite Analysis: A worksite analysis means that you and your employees analyze all worksite conditions to identify and eliminate existing or potential hazards. This should be done on a regular and timely basis. There should be a current hazard analysis for all jobs and processes that all employees know and understand. To accomplish this, you could:

- Review annual safety and health inspection results. If a recent safety and health inspection/survey has not been conducted, request a safety professional and industrial hygienist review operations to assist in identifying safety and health issues.
- Become aware of hazards in your operations and similar operations.
- Create safety teams to conduct hazard analysis. The job hazard analysis (JHA) is a tool to assist in identifying hazards and safe work procedures.

- Encourage employees to report workplace hazards.
- Have an adequate system for reporting hazards.
- Examine the history of worksite conditions; previous accidental injuries, safety violations and near miss incidents.
- Have trained Collateral Duty Safety Officer (CDSO) personnel conduct inspections of the worksite and correct hazards.
- Ensure that any changes in processes or new high-hazard facilities are reviewed by a competent person.
- Seek assistance from safety and health experts.   An industrial hygiene survey should be conducted for operations with potential exposures to noise, chemical vapors, welding fumes, or potentially hazardous dust.

Hazard Prevention and Control: The next part of a good safety and health program means that you continually review your work environment and work practices to control or prevent workplace hazards.   This can be done when you:

- Regularly and thoroughly maintain equipment.
- Ensure that hazard correction procedures are in place.
- Ensure that employees know how to use and maintain personal protective equipment.
- Periodically review work procedures to ensure written procedures are current and safety is incorporated in work procedures.
- Ensure that all employees understand and follow safe work procedures.
- Make sure that, where necessary, you have a medical program tailored to your facility to help prevent workplace hazards and exposures.

Safety Training: It is important that everyone in the workplace be properly trained, from the line worker to the supervisors, managers, contractors, and part-time and temporary employees. This can be done when you:

- Allow only properly authorized and instructed employees to do any job.
- Train workers in the proper selection and use of personal protective equipment.
- Make sure employees do not perform work that appears unsafe.
- Hold emergency preparedness drills for employees.
- Pay particular attention to employees learning new operations to make sure they have the proper job skills and awareness of hazards.
- Train supervisors and managers to recognize hazards and understand responsibilities.

For more info see: OSHA web site:
http://www.osha.gov/dsg/topics/safetyhealth/recognition.html

Section 2

SAFETY LEADERSHIP

No one is in a better position to influence worker safety than the leader. If you provide employees with proper guidance, training, and development of good work habits, they will perform safely whether or not you are in the area. The safety culture of an organization is often described as "what people do when no one is looking." Leaders drive safety culture by setting the example, encouraging and rewarding safe performance, and by not rewarding or tolerating short cuts and unsafe acts.

The Army Readiness Assessment Program (ARAP) was designed as a tool to assess organizational safety climate and culture. ARAP is comprised of an online assessment, filled out by employees and Soldiers anonymously, that captures unit posture on command and control, standards of performance, accountability and risk management. ARAP provides leaders with data on their organization's safety culture. Visit the U.S. Army Combat Readiness / Safety Center web page: https://safety.army.mil for more information.

To attain and sustain safe performance--

- Explain the reasons for safety rules.
- Develop safe methods of performing each task.
- Be able to demonstrate safe performance of each task.
- Make sure required tools and equipment are available and used.
- Assign your employees tasks that are within their abilities.
- Promote teamwork among your employees.
- Enforce rules and regulations.
- Demonstrate your personal commitment to safety by setting a good example.

Ten Commandments of safety leadership:

I. Know and care for your workers. In a sense, you have two families. Care for your workers as you would care for your family. Be sure each worker understands and accepts his or her personal responsibility for safety. Know their training status and their qualifications. Verify knowledge and skills level of new employees, regardless of whether or not they have been previously certified in a certain area. Consider individual abilities when assigning job tasks.

II. Know the rules of safety that apply to the work you supervise. Never let it be said that one of your workers was injured because you were not aware of the required safety

precautions.   Know your equipment, its capabilities, and condition.   Checklists and publications are available to guide you.   Some sources are from OSHA standards, manufacturers, the U.S. Army Combat Readiness / Safety Center, local safety offices, technical libraries, systems engineers, and publication centers at installations and activities.   Consider this information when assigning job tasks.

III.   Anticipate the risks that may arise from changes in equipment or methods. Evaluate the impact of equipment change or modifications, timeline and schedule changes, seasonal and weather changes, and personnel assignments and skill levels.   Changes in one or more of an operation's conditions can introduce new hazards or increase risk, if not addressed.   Seek and use expert safety advice that is available to help you guard against new hazards.

IV.   Encourage your workers to discuss with you the hazards of their jobs.   An Activity Hazard Analysis (AHA) is a good tool to discuss specific tasks, equipment and safe procedures at the start of an operation to ensure you and your workers understand the requirements, procedures, and equipment to perform the tasks safely and efficiently.   Be receptive to the ideas of your workers.   They are a valuable source of first-hand knowledge that can help prevent accidents.

V.   Assign sufficient and qualified people and equipment to get the task done safely. Do not allow shortcuts.   In the long run, shortcuts don't save time or money.

VI.   Follow up on your instructions consistently.   Provide positive reinforcement of safe behavior by recognizing workers that use PPE and follow safe procedures.   See that your workers use the safeguards provided.   Routinely spot check their work.   If necessary, enforce safety rules through disciplinary action.   Left uncorrected, unsafe performance becomes the accepted standard: Frequent excuses for poor safety performance include: "We've always done it this way" and "No one has gotten hurt yet."

VII.   Set a good example.   Demonstrate safety in your own work habits and personal conduct.   Do not appear a hypocrite in the eyes of your workers.   Set and enforce high operating standards in every part of your operation.   Safety is a by-product of professionalism, of doing the job right the first time and every time.

VIII.   Investigate and analyze every accident, however slight.   Develop corrective measures to prevent similar accidents.   Corrective action following a minor accident or near-miss may be an opportunity to avoid a major accident.   Where minor accidents go unheeded, crippling major accidents may strike later.

IX.   Cooperate fully with those in the organization who are involved in employee safety. The safety professional, industrial hygiene, and occupational health staff work to help you identify and protect your workers from injury and health hazards.   Their purpose is to help you get your job done safely.   Maintain awareness.   Do not relax your vigil and become complacent when everything is running smoothly.

X. Remember, accident prevention is good business.

Additional Resources:

OSHA web site: Responsibility, Authority and Accountability:
http://www.osha.gov/SLTC/etools/safetyhealth/comp1_responsibility.html

OSHA web site: Management Leadership:
http://www.osha.gov/SLTC/etools/safetyhealth/comp1_mgt_lead.html

OSHA Web site: www.osha.gov;

 29 CFR 1960 Basic Program Elements for Federal Employees: Federal Supervisor Responsibility: 29 CFR 1960.9

"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. They shall also comply with the occupational safety and health standards applicable to their agency and with all rules, regulations and orders issued by the head of the agency with respect to the agency occupational safety and health program."   29CFR1960.9

Section 3

FEDERAL EMPLOYEE'S COMPENSATION ACT (FECA)

The cost to the Army for compensation claims and continuation of pay as a result of civilian job-related injuries and illnesses reached nearly $2 billion over a 10 year period. Department of Defense (DoD) and Army leadership have established goals to reduce civilian work-related injuries and illnesses and the associated costs. Reducing work-related injuries and reducing workers' compensation costs requires attention to accident prevention and improved case management of worker's compensation claims. Case management includes ensuring only legitimate claims are approved and employees are provided limited duty work positions to reduce lost work days due to injuries.

As a leader, you play an essential role in reducing workplace injuries and illnesses and their resulting costs. Accident prevention efforts reduce worker's compensation costs and prevent worker pain and suffering.

Key actions you can take:

- Support the Installation Safety Program. Refer to your local installation regulation. Contact your safety director for details concerning civilian employee injury prevention.
- Support the Installation Workers' Compensation Program. Know the forms and rules for authorizing compensation and medical treatment.
- Contact the Injury Compensation Program Administrator (ICPA) in your civilian personnel office for details regarding supervisor responsibility for reviewing and validating compensation claims.
- Investigate circumstances of all reported accidents. When an employee submits a CA-1, verify that the facts of the injury are true and that the injury is work-related before completing the supervisor's portion of the CA-1 and authorizing treatment. If left undetermined, the causes of your injuries will continue to add cost to your operations. After an injury or near miss, take time to ask basic questions and determine the immediate and primary causes of the injury. The rule of thumb is to ask the question, "Why?" at least three times in order to get to the basic cause. Be constructive, and don't look for someone to blame. Focus on finding and removing the causes.

 Supervisors must controvert (recommend denial) claims for injuries that are not work-related, or involved willful misconduct or intoxication.

- Coordinate with the Installation Civilian Personnel Officer and ICPA regarding claim denials.

- Maintain an up-to-date status on each injured employee until he or she is returned to duty.
- Notify the ICPA when an employee returns to work after a lost time injury or occupational illness.
- When an employee returns to work, brief him or her on measures to prevent recurrence of the injury / illness.

Follow your installation regulation on physical limitations.

- Work with the ICPA to identify light-duty positions for workers with medical restrictions.
- Encourage return to work as soon as possible to return workers to effective employment.
- Emphasize teamwork.
- Conduct weekly safety and occupational health meetings.
- Discuss recent accidents and measures to prevent recurrence.
- Support the Commander's Safety Awards Program.
- Perform job hazard analyses.   See example in Section 10.
- Establish accountability standards for subordinate supervisors and employees.
- Provide employee education and training regarding safety and health hazards in the workplace.   See new employee safety orientation in Section 7.

DA Civilians Injury Reporting Process for Worker's Compensation: DOL Forms CA-1, CA-2, and CA-6.

The injured employee seeking worker's compensation must report work-related injuries on DOL Forms CA-1, Notice of Traumatic Injuries.   Occupational illnesses are reported on the CA-2, Notice of Occupational Disease/Illnesses; and deaths are reported on the CA-6, Notice of Employees Death.

Reporting traumatic injuries--(DOL Form CA-1)

Upon receiving notice that an employee has sustained a job-related traumatic injury, the employee's supervisor must:

- Seek help for the injured employee.
- Provide the employee with Form CA-1 for reporting the injury.   Upon receipt of the CA-1, acknowledge and return the "Receipt of Notice of Injury" from employees.   Complete side two of the forms and process to the ICPA.   Assist employee in initiating forms when no other person is able to act on his or her behalf.
- Advise the employee of the right to elect continuation of regular pay or use annual or sick leave, if the injury is disabling.   Upon approval from the Civilian Personnel Office, annotate on the Time and Attendance Report accordingly.
- Submit Form CA-1, fully completed by both employee and supervisor, together with all other pertinent information and documents to the ICPA within two working days following the supervisor's receipt of the form from the employee. (Check with the supporting safety

office to see if an accident report is required.)

- Inform the employee whether COP will be denied and, if so, whether it will be terminated and the basis for this action.
- If the claim is denied (whether or not pay is terminated), submit an explanation for denial to the Civilian Personnel Office on the supervisor's portion of Form CA-1 or by separate narrative report (or both).

OSHA defines a traumatic injury as a wound caused by external force that affects a specific part or function of the body and has an identifiable time and place of injury. The event eliciting traumatic injury produces injury within a single work shift.

Reporting occupational illnesses--(CA-2)

Upon receiving notice that an employee has contracted an occupational illness or disease, the supervisor will

- Provide the employee with Form CA-2 (Federal Employee's Notice of Occupational Disease and Claim for Compensation).   Further advise the employee that medical care cannot be authorized without prior approval from the Office of Worker's Compensation Program (OWCP), and that the necessary medical reports can be submitted on the physician's letterhead to include all information required by instruction 3 of the employee's instruction sheet attached to the CA-2.
- Upon receipt of the completed CA-2, return the "Receipt of Notice of Disease or Illness" to the employee.
- Submit Form CA-2, fully completed by both the employee and supervisor, with all other pertinent information and documents to the Civilian Personnel Office within 10 working days following receipt of the form from the employee.   Check with the safety office to see if an accident report is required.
- Advise the employee of the right to elect sick or annual leave, if disabled, pending adjudication of the claim by OWCP.   If the claim is later approved by OWCP, the employee may elect compensation benefits for the loss of time and buy back his sick or annual leave.

OSHA defines an occupational illness as any abnormal condition or disorder, other than one resulting from an occupational injury, caused by exposure to factors associated with employment.

Reporting traumatic injuries and illnesses--(CA-1 and CA-2).   The following procedures apply to both CA-1 and CA-2):
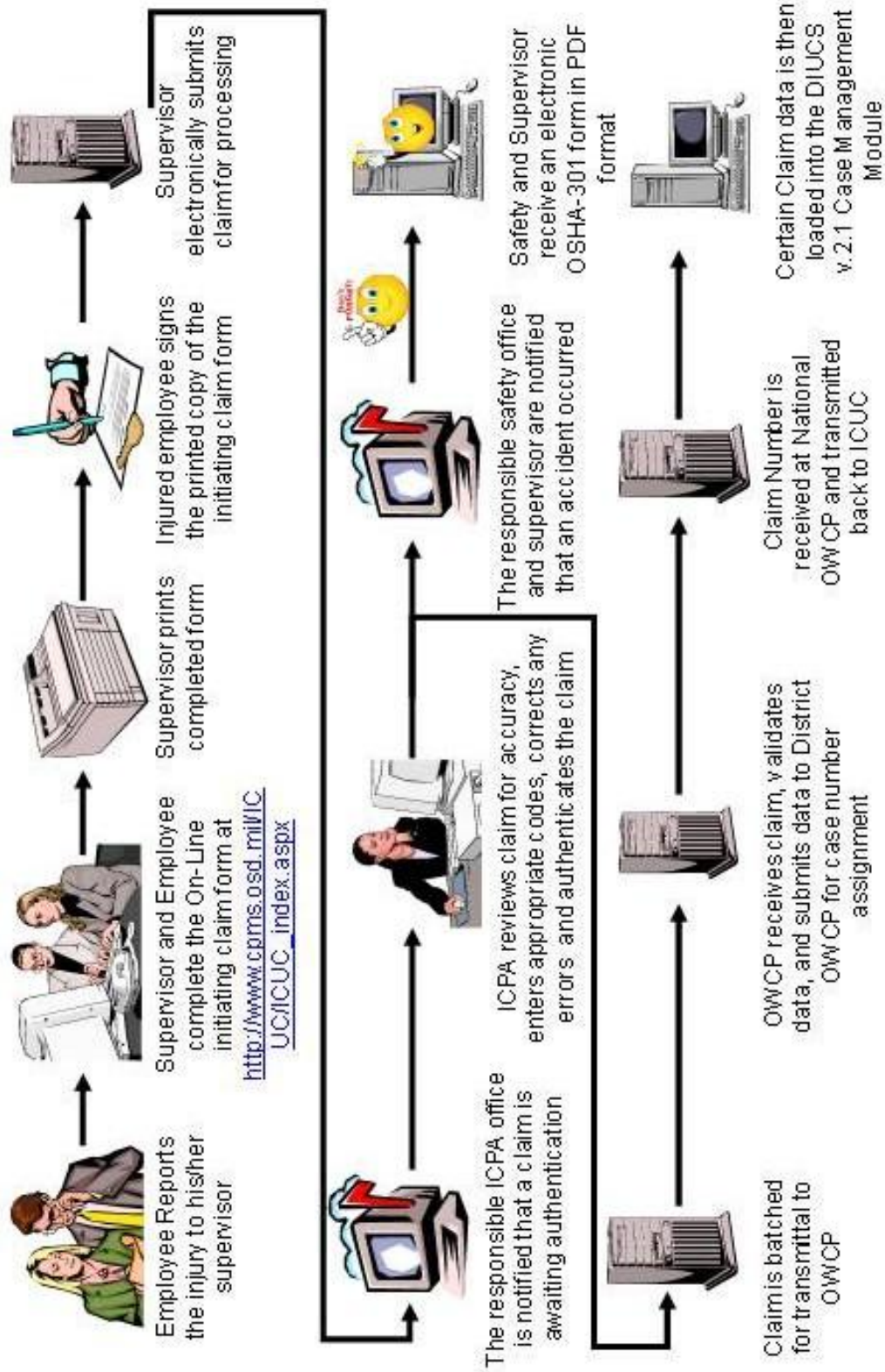
- Encourage use of military medical facilities for initial medical evaluation and treatment.
- Notify employee's next of kin.

- Brief management on new injury/illness as soon as possible after incident.
- Notify the occupational health staff when an employee incurs an injury/illness during the non-duty hours of the Occupational Health Clinic.
- Notify the occupational health staff when an employee sustains an injury or becomes ill and immediate transport to an emergency service is necessary.
- Coordinate with the occupational health staff to arrange transportation for employees who prefer treatment at a private physician's office or a hospital when necessary.

- Demonstrate concern for employee. For example, phone or visit within three days and every two weeks thereafter.
- Ensure statements on compensation forms are properly investigated, fully documented, accurately reported, and controverted (denied) where appropriate.
- Identify individuals who have demonstrated histories of misuse or abuse of the Workers Compensation Program and promptly report suspected fraudulent claims to the ICPA.

Filing Claims electronically: ELECTRONIC DATA INTERCHANGE (EDI) is the technical solution that allows Defense Activities to complete CA-1 and CA-2 forms on-line and submit them via the Internet to the Office of Workers Compensation Programs.   ICPAs will receive OWCP claim number via email within two working days of completed form transmission to OWCP.   Automatic interface with employee personnel database provides for enhanced data integrity, and fewer data-entry errors. The following figure graphically depicts electronic filing process.

How to File a CA-1 or CA-2 Claim

Employee Reports the injury to his/her supervisor

Supervisor and Employee complete the On-Line initiating claim form at http://www.cprms.osd.mil/IC UC/ICUC_index.aspx

Supervisor prints completed form

Injured employee signs the printed copy of the initiating claim form

Supervisor electronically submits claim for processing

The responsible ICPA office is notified that a claim is awaiting authentication

ICPA reviews claim for accuracy, enters appropriate codes, corrects any errors and authenticates the claim

The responsible safety office and supervisor are notified that an accident occurred

Safety and Supervisor receive an electronic OSHA-301 form in PDF format

Claim is batched for transmittal to OWCP

OWCP receives claim, validates data, and submits data to District OWCP for case number assignment

Claim Number is received at National OWCP and transmitted back to ICUC

Certain Claim data is then loaded into the DIUCS v.2.1 Case Management Module

Continuation of Pay (COP)

Continuation of Pay is the continuation of an injured employee's regular pay with no charge to sick or annual leave. The COP is available only in cases of traumatic injury and only for a maximum of 45 calendar days.

To qualify for COP, the injured employee must file a written notice of injury on Form CA-1 (Federal Employee's Notice of Traumatic Injury and Claim for Continuation of Pay/Compensation) within 30 days from the date of injury and provide medical information showing all dates of disability caused by the injury.

To return an injured employee to work, the ICPA and supervisor work together to:

- Stay in contact with the employee.
- Communicate with the Army medical authority, who contacts the employee's doctor.
- Obtain a medical release for the employee to return to work.
- Provide light duty (somewhere on post).

Sources of Assistance

- Safety/committees and councils
- Safety and Occupational Health Administration (OSHA)
- Vendors/commercial products

Section 4

FUNDAMENTALS OF ACCIDENT PREVENTION

An Army accident is an unplanned event or series of events that result in one or more of the following as a result of Army operations (Army involvement in an accident with fault regardless of degree):

- Damage to Army property (including government-furnished material (GFM), or government-furnished property (GFP), or government-furnished equipment (GEE) provided to a contractor).
- Injury (fatal or nonfatal) to military personnel, on or off duty.
- Injury (fatal or nonfatal) to on-duty Army civilian personnel, including non-appropriated fund employees and foreign nationals employed by the Army when incurred during performance of duties while in a work-compensable status.
- Occupational injury or illness (fatal or nonfatal) to Army military personnel, Army civilian personnel, including non-appropriated fund employees, or foreign nationals employed by the Army.
- Injury or illness (fatal or nonfatal) to non Army personnel or damage to non-Army property as a result of Army operations.

There are reasons why accidents happen.   An accident investigation is conducted to figure out **what** went wrong, and **why**. Once you know why an accident happened, it is possible to prevent future incidents.

Accident investigations look for the root causes of accidents:

Root causes of accidents are the reasons for errors, materiel failures/malfunctions, and environmental conditions.

Approximately 85 percent of Army accidents involve human error.   Often "why" a human error incident occurred can be categorized into one of the categories shown below. These failures can be related to standards.

Tips **Relationship between failures and standards.**

Failure	Standards
Standards Failure	Standards (SOPs, written procedures and instructions) are not clear or practical, or do not exist.
Training Failure	Standards exist, but individuals have not been trained to perform required tasks.
Leader Failure	Standards are known but are not enforced; workers are encouraged to take short cuts, or workers are rewarded for unsafe actions that save

	time or money.
Individual Failure	Standards are known but are not followed. Examples include: Fear / excitement, overconfidence in own/other's abilities, haste / in a hurry, poor / bad attitude, lack of rest / sleep (self induced), and effects of alcohol/drugs

Investigation of the root cause of accidents and near miss incidents will lead to corrective action to help prevent reoccurrence and future similar incidents.

Identification of hazards and close call incidents give supervisors and safety professionals an opportunity to apply risk control measures and corrective actions before a loss occurs.

Additional References: DA Pam 385-40 Army Accident Investigation and Reporting

Section 5

ACCIDENT INVESTIGATION AND REPORTING

Army accidents are investigated so that preventive measures can be developed to eliminate or control the hazards that lead to the accidental loss.   Even first-aid cases, no matter how minor, must be investigated and reported.   Department of Army Civilian injuries are reported both through the accident reporting system and the worker's compensation system.   These are two separate reports: the DOL CA form requirements discussed in section 3 of this guide, and the Army Abbreviated Ground Accident Report (AGAR).

The AGAR is used to investigate and report property damage and injury, accident cause factors and actions to prevent recurrence.   AR 385-10, Chapter 3, Accident Reporting and Records, prescribes responsibilities and procedures for reporting Army accidents.

 Army reporting and recording is required for occupational injuries and illnesses reported by a **contractor or subcontractor ONLY** where accident reporting to the Army is contractually required, or the injury or occupational illness happens to on-duty contractors supervised by Army personnel on a day-to-day basis.

Report Army civilian and applicable contractor work-related injuries / illnesses on the AGAR. The AGAR is submitted through the command or garrison safety office to the U.S. Army Combat Readiness / Safety Center.   Injuries and illnesses are also logged on the organization's or garrison's OSHA 300 Log of Occupational Injuries and Illnesses.   Civilian workforce and applicable contractor injuries should only be logged on one OSHA 300 log.   Check your installation's procedures for maintaining the OSHA 300 log.

ReportIt Army Accident Reporting System

ReportIt is the Army's automated accident reporting tool for collecting injury, illness, and loss data, as well as managing its safety and occupational health program efficiently.

As of September 2011, online reporting is the preferred method for submitting accident reports for all accidents, both fatal and nonfatal, resulting in occupational illness to Army military and Army civilian personnel; injury to on-duty Army civilian personnel; injury to Army military personnel, whether on or off-duty; damage to Army property; and damage to public or private property and/or injury or illness of non-Army personnel caused by Army operations.

ReportIt User Guide:

Ground: https://reportit.safety.army.mil/documents/GroundUserGuide.pdf

⚠️ With a serious injury or fatality, secure the accident site and make immediate notification.

OSHA and Army standards require immediate notification for serious accidents as described below.   Supervisors / leaders must notify their supporting safety office, through their chain of command, as soon as possible after a serious accident occurs.   OSHA must be notified within eight hours following a serious accident.   Notify your safety office as soon as possible following an accident so that the notification to OSHA can be accomplished within the eight hour legal requirements.
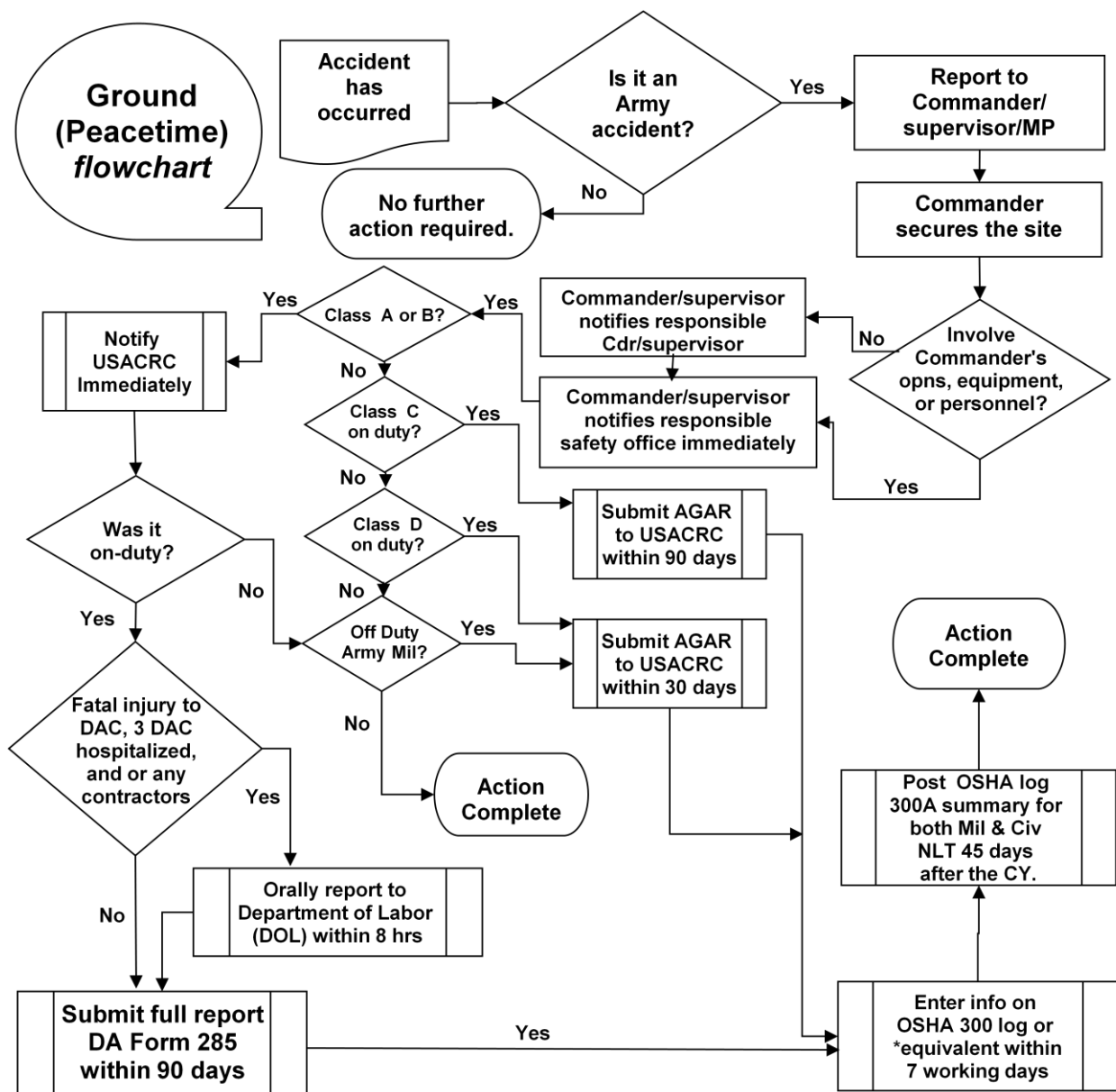
Immediate telephonic notification through the chain of command to the Army Combat Readiness/Safety Center is required for Class A, B, or C Aviation accidents and Class A or B Ground accidents.   Examples include:

- **Fatality**
  On-duty / work-related fatality of a DA Civilian or contract employee.   On-duty or off-duty fatality of a Soldier.
- **Three or more hospitalized** Hospitalization of three (3) or more workers from a single accident event.
- **Permanent disability**
  Work-related injury likely to result in permanent disability
- **Property damage accident** Accidental property damage of $500,000 or more.

Additional References:

AR 385-10, Chapter 3 for more information on accident investigation and reporting.

DA Pam 385-40 Army Accident Investigation and Reporting

Ground (Peacetime) *flowchart*

Accident has occurred → Is it an Army accident?

- Yes → Report to Commander/supervisor/MP → Commander secures the site → Involve Commander's opns, equipment, or personnel?
  - No → Commander/supervisor notifies responsible Cdr/supervisor
  - Yes → Commander/supervisor notifies responsible safety office immediately
- No → No further action required.

Class A or B?
- Yes → Notify USACRC Immediately
- No → Class C on duty?
  - Yes → Commander/supervisor notifies responsible safety office immediately
  - No → Class D on duty?
    - Yes → Submit AGAR to USACRC within 90 days
    - No → Off Duty Army Mil?
      - Yes → Submit AGAR to USACRC within 30 days
      - No → Action Complete

Notify USACRC Immediately → Was it on-duty?
- Yes → Fatal injury to DAC, 3 DAC hospitalized, and or any contractors
  - Yes → Orally report to Department of Labor (DOL) within 8 hrs → Submit full report DA Form 285 within 90 days
  - No → Submit full report DA Form 285 within 90 days
- No → (to Class C/D path)

Submit full report DA Form 285 within 90 days → Yes → Enter info on OSHA 300 log or *equivalent within 7 working days → Post OSHA log 300A summary for both Mil & Civ NLT 45 days after the CY. → Action Complete

NOTE: In the event a safety of use or ground precautionary issue is suspected or identified, notify USACRC immediately.

Class   Property Damage and/or Injury/Occupational Illness
A   >$2M or more. Fatality or Permanent Total Disability.
B   > $500K but < $2M; Permanent Partial Disability, or 3 or more hospitalized as in-patients.
C   > $50K but < $500K; Days away from work or training day case.
D   > $2K but < $50K; A non fatal injury or illness resulting in restricted work, transferred to another job, medical treatment greater than first aid, needle stick injuries and cuts from sharps that are contaminated from another persons blood or other potentially infectious material, medical removal under medical surveillance requirements of an OSHA standard, occupational hearing loss, or a work-related tuberculosis case.
 * Military will maintain separate but equivalent OSHA 300 logs for injuries and illnesses.

Figure 1-3. Ground Accident Reporting (Peacetime)

Section 6

OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA)

The Occupational Safety and Health Act of 1970 applies to all federal civilian employees and to all working conditions and workplaces except those involving uniquely military equipment, systems, and operations.

As a supervisor, you must use OSHA standards as your workplace safety guidelines or follow Army regulations where they are more protective than OSHA standards.   OSHA standards can be found at Department of Labor's OSHA's Website: www.osha.gov.

OSHA 29 CFR 1910, General Industry Standards, address most Army workplaces, such as administrative and office areas, vehicle and equipment maintenance, and warehousing and logistics activities.

OSHA 29 CFR 1926, Construction Safety standards apply to construction activities and projects.   In addition, U.S. Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1 provides additional safety requirements and applies to most Army construction activities.

OSHA 29 CFR 1960, Basic Program Elements for Federal Employee Occupational Safety and Health Programs and Related Matters, addresses federal agency program elements to effectively implement a comprehensive safety and health program and comply with OSHA standards.   29 CFR 1960 directs federal agencies to:
- Establish safety and health procedures and policies.
- Conduct inspections; implement a hazard reporting system.
- Correct safety deficiencies, maintain records of work-related injuries and illnesses.
- Establish safety committees.
- Train management and workers in their safety responsibilities.

OSHA Compliance Safety and Health Officials (CSHO) have the right of entry to Army workplaces to evaluate compliance with the standards.   They are not required to give prior notice. OSHA inspectors are required to check in with garrison management before inspecting a facility or operation.   If an OSHA compliance officer shows up at your work area unescorted, contact your supporting safety office or the garrison safety office immediately, so that inspection findings and recommendations can be documented and tracked appropriately.

Employees have certain rights granted by the OSH Act and 29 CFR 1960.   You must protect your employees' right to:

- Be represented during OSHA and other safety and health inspections of Army activities.

- Make complaints orally or in writing during a safety and health inspection.
- Know of all violations in work areas including exposures to toxic or harmful materials.
- Report unsafe or unhealthful conditions to the agency and appeal the disposition of such cases to OSHA through command channels.
- Comment on proposed local standards. Have access to standards, safety and health statistics, and agency safety and health procedures and findings.Request representation on a safety and health committee
- Be protected against discrimination for exercising OSHA rights.

As a supervisor, you have legal OSHA-related responsibilities.   You must:

- Read the OSHA Poster and ensure it's posted at a prominent location within the workplace. Know employee rights and employer responsibilities.
- Minimize employees' need to complain directly to OSHA by being responsive and prompt to investigate complaints.
- Execute supervisory and personal safety responsibilities inherent in your job.
- Assure compliance with mandatory OSHA procedures.   Enforce the use of PPE.
- Ensure employees are adequately trained for their job and maintain safety training records for your employees.
- Initiate the accident reporting process for reportable accidents.

Your organization / garrison safety office will:

- Provide you with technical guidance, expertise and advice to comply with OSHA requirements.
- Develop and coordinate the necessary management actions and programs to meet OSHA requirements.
- Advise and assist you with actions to resolve employee complaints and OSHA violations.
- Integrate OSHA requirements into the overall Army Safety Program.

OSHA's Voluntary Protection Program (VPP)

Many Army agencies have obtained or are pursuing VPP Star status to better their safety programs. VPP is designed to recognize and promote effective safety and health management. A hallmark of VPP is the principle that management, labor, and OSHA work together in pursuit of a safe and healthy workplace. VPP participants are work sites that have successfully designed and implemented outstanding health and safety management systems.

Additional Information and Resources:

OSHA web site: www.osha.gov: Regulations / Standards
OSHA web site: http://www.osha.gov/dcsp/vpp/index.html.

DOD VPP CX web site: https://vppcx.org/

![red alert icon] AR 385-10, The Army Safety Program, Paragraph 1-5.a (3) "Comply with this regulation, the Occupational Safety and Health Act of 1970 (OSHAct), safety regulations, the Army Occupational Health Program, work practices, and standing operating procedures (SOPs)."

OSHA POSTER

Section 7

EDUCATION AND TRAINING

As a leader, you are responsible for making sure workers receive the training they need to perform their jobs effectively and safely.   There are several types of training for which you are responsible.   DA Pam 385-10, Appendix C provides a list of safety training topics/requirements for employees and supervisors.

Accident investigations often identify a safety training deficiency as a root cause of accidents. Insufficient job skills or knowledge or lack or currency can lead to a human-error accident. Additional or improved training can reduce performance errors where a lack of knowledge exists.

Training is not the answer if employees know how to do the job correctly, but choose not to follow the procedures.   A critical question: Can the worker perform correctly, when they are being observed?

Training needs assessment

If there is a failure to perform a task to standard, it can set the stage for worker injuries or damage to equipment or facilities.   If you identify critical tasks that are not being performed properly, consider the risk created by these errors and why these problems exist to determine systemic sources of human error.

- Do standards exist for the task?   Are they clear/practical?
- Have the standards been published effectively?
- Have assigned personnel received training necessary to perform the task to standard?
- Is the training current, or have changes occurred in the process?
- Have new people entered the workforce since the initial training?
- Have refresher and on-the job training been provided?
- Have personnel been evaluated or tested on their skills and knowledge recently?

If the answer to any of these questions is "no", and/or errors, shortcuts, and unauthorized changes have been introduced into the procedures, a systemic failure exists that may lead to human error accidents.

Initial safety training

You must provide an initial safety and health orientation for your employees.   Document the

orientation and maintain the record with your employee record file.   The orientation must include:

- Hazard Communication training--a result of the Hazard Communication Standard issued by the Occupational Safety and Health Administration (OSHA) to help protect employees' right to work in a safe and healthful environment.   The training requires that employees be informed about hazardous chemicals in their workplace and trained to work safely with these materials.
- All safety and health rules including an explanation of the value of each.
- Briefings on specific potential hazards and controls for those hazards.
- Emergency action plans and first-aid procedures.
- A safety-oriented walk-through of job steps.
- Various OSHA standards require that workers be trained, qualified, certified, or licensed. For example (not inclusive) OSHA 1910 General Industry standards require training for: means of egress, powered industrial truck, PPE, first aid, lockout/ tagout, confined space, machine operators, welding/cutting/brazing, electrical workers.

 Supervisors must be aware of the training requirements for the tasks they supervise.

Remedial safety training

- Remedial safety training is conducted to remedy some weakness or oversight in previous training.   It can be directed to an individual or group as needs dictate.
- The key to successful remedial training is to make sure that the training is directed at actual training problems.   Do not make the mistake of trying to solve non-training problems such as poor attitudes or a weak safety culture with safety training.   Safety training should be provided to meet an identified lack of knowledge or skill.

Updated safety training

- As an activity changes through the addition of new processes, procedures, or missions, so do safety training needs.   Initial training must be updated, and employees must be informed of new hazards.
- A good time to review updated refresher training needs is during periodic inspections.

Ongoing safety training

- All training has its greatest effect immediately after it is presented. After that, it loses effectiveness as the employee forgets the material.
- Periodically present some safety and health-related training covering particularly important problems.
- To avoid repetition that could lead to employee boredom, vary your method of presenting material by using slides, films, charts, and other graphic aids.

Safety meetings

A good way of promoting safety awareness is through safety meetings. These meetings should be held on a regular basis, and special meetings should be called when needed.   Ideally, you should have at least a brief, 10-minute "stand-up" or "tailgate" meeting with your employees each week to maintain safety awareness and reconfirm the safety culture.

Safety training and meetings should be documented using individual or group training records to ensure training requirements are met.   Maintain sign-in rosters and training outlines for documentation during periodic reviews, inspections, and accident investigations.

Sample New Employee Safety Orientation

Discuss the requirement to report all accidents, even scratches, to the supervisor immediately.

Explain procedures to follow in case of emergency.

Discuss occupational safety and health protection for federal employees.   Employee rights and responsibilities under the OSH Act of 1970 can be found at OSHA web page: www.osha.gov or on the OSHA poster.

Explain the requirements for personal protective clothing and equipment directly related to the employee's job:

- **Safety shoes**
  - Safety shoes must be worn by employees who work in shops, warehouses, garages, labs, explosives production areas, depots and similar areas identified as having foot hazards.
  - Protective toe caps may be worn by employees performing temporary work in hazardous areas or employees exempted by the occupational health staff from wearing safety shoes.
- **Gloves**
  Gloves should be worn when handling material.   Discuss specific glove requirements for handling chemicals and other hazardous materials and choosing the right glove for the job.
- **Hearing protection**
  - Hearing protection must be worn in areas posted as noise hazardous.   Sources vary depending on the work location and tasks.   Information concerning noise testing is usually available from preventive medicine or the safety office.
  - Three kinds of hearing protection are available:
    - Earmuffs: (office **location** where available).
    - Non-disposable earplugs: (office **location** where available).
    - Disposable earplugs: (office **location** where available).
  - Anyone assigned to work in a noise hazardous environment must have a baseline audiology test to determine their baseline hearing within 6 months of initial exposure.
- **Clothing and Personal effects.**   Employees working on machinery shall not wear loose clothing or leave long hair loose that could catch on a moving part of the machine.
- Keep rings and other dangling or loose items/jewelry out of the workplace. Rings are a major cause of hand injuries.

Discuss housekeeping--

- Keep the floor free of oil; clean up spilled liquids.

- Keep aisles clear.
- Put tools away when not in use.
- Place scrap in proper containers.
- Put materials contaminated with oil or flammables in a tightly covered waste container.

Discuss specific job-related hazards.   For high-risk jobs, use the job hazard analysis to orient new employees to specific procedures and safety precautions required in performance of their duties.   Skills training should involve both demonstration and hands-on performance to ensure workers can perform safely.

Explain specific installation hazards:

- Speed limits, seatbelt policy, and hazardous roads.
- Alcohol/drug abuse policy.
- Cell phone and texting policy.
- Other related safety policies.

Procedures for reporting hazards.   The employee learns how to identify hazards through training, inspections and job hazard analyses.   When employees identify hazards in their work areas, the correct procedures are to report them to the appropriate supervisor immediately. On-the-spot correction of hazards by the supervisor will create a safety culture in which an employee works accident free

Every employee should know these three "R's:

- **Recognize** hazards
- **Reduce** or remove hazards
- **Report** hazards to your supervisor

Verify limitations prescribed by pre-placement medical examination.   Assure limitations are not exceeded by job assignments.   Re-verify after accidents or other changes in physical condition.

Furnish handouts and hang posters.   Fact sheets, quick reference guides, and safety and health promotional items can be used to re-enforce safety training.

Section 8

MOTIVATION FOR SAFE PERFORMANCE

The key to preventing accidents is getting people to perform safely.   Leaders must establish a safety culture in which employees want to perform safely.

- The key to safety motivation is understanding the people you are dealing with so you can select an incentive that will appeal to them.
- For example, you might observe that the need for recognition is very high among your employees.   A good incentive in this case would be a formal awards program recognizing safe performance.
- On the other hand, you might supervise a group that doesn't respond well to recognition but might have a high desire for acceptance by fellow employees.   In this case, you should strive to develop a situation in which the group, particularly the informal group leaders, accepts your safety objectives.   In this way, those who seek to belong to the informal group will be influenced to conform to the group's support of safety objectives. Failure to do so will earn group disapproval.
- The bottom line is that you must recognize and use the needs of the individuals and groups under your supervision by continually applying incentives that will fill these needs while inducing safe behavior.

Motivation in practice:

Let's say that your safety objective is to assure that your workers use protective equipment. Here's one approach:

- Establish specific areas or operations in which the equipment will be used.   Specify hard-hat areas, eye-protection operations, noise-hazardous areas, and so forth. Employee participation in the hazard assessment process and selection of the right PPE can result in increased acceptance of PPE requirements.
- Comfort is an issue.   If a variety of eye protection is available to choose from, workers can choose for fit, comfort and style.   They are more likely to comply with eye protection requirements.
- Put protective equipment requirements into job and process SOPs.   Make it a part of the job.
- Require use of the protective equipment as a condition of employment.   Employees learn use of the equipment just as they learn any other aspect of the job.
- Train your workers.   Stress that use is necessary for their benefit and to comply with the law.   Teach them how to use and properly maintain the equipment, and use sustained training to ensure they remember.
- Ensure that the equipment is readily available when needed.   A worker is not likely to

walk 50 yards or wait 5 minutes to get a pair of goggles for a special job.

- Set the example.   You must use the equipment without fail when you're exposed to the hazard.
- Look for violations and for proper use.   Correct violations on the spot; by the same token, take time to notice and reward proper use.   Praise those who use the equipment. Make them feel good for cooperating.
- Be consistent in both praise and discipline.   Use the established schedule of automatic penalties if violations occur.   Let all employees know you are serious.   Coordinate with Management Employee Relations Branch, and Civilian Personnel Office for procedures.

Section 9

BUILDING A SAFETY CULTURE

Safety Culture can be thought of as the values, beliefs, perceptions and normal behaviors that are shared by employees.

In some organizations, unsafe behaviors or human error is involved in approximately 85% of accidents.   Many of these accidents involve unsafe behaviors, such as: a worker taking a short cut to save time, disregarding a safety procedure, or removing a guard from a machine.   These types of violations are attributed to the influences of a negative safety culture.

One of the most important actions you can take as a supervisor is to work on influencing a positive safety culture.

Whether it is intentional or not, every organization has a safety culture. The question is whether the safety culture is what we want it to be and what can we do to change it.

POSITIVE SAFETY CULTURE: In a positive safety culture:

- Communication is open at all levels of the organization and feedback is seen as vital to improving safety processes.   There is an expectation that problems raised by workers will receive prompt action.
- Individuals at all levels focus on what can be done to prevent injuries or illnesses. Individuals look out for their own safety and the safety of their co-workers.

- Employees are encouraged to identify safety and health hazards and correct them on their own.   Employees feel open to discuss perceived safety hazards with their supervisor without fear of negative consequence.
- There is a commitment to safety that places as much emphasis on safety and health issues as on other core management issues, such as production, sales, and quality control.

 To be most effective, safety and health must be **balanced with, and incorporated into**, the other core business processes.

- People and their well being are valued. The focus is on protecting people, as well as the bottom line.
- All personnel, especially senior managers, demonstrate their commitment to safety by following safety processes and procedures, just as they instruct their employees to do.

NEGATIVE SAFETY CULTURE: In a negative safety culture:

- Communication is not open at all levels; employees do not voice safety concerns.   Workers expect that safety concerns reported to supervisors or management will be disregarded or played down.
- Safety rules are used to discipline employees.   Enforcement is not fair and consistent for everyone.
- Management may not follow safety rules (for example, not wearing hearing protection or other PPE as they are supposed to).
- Production demands require less focus on safety.   Workers are expected to take short cuts to get the job done, and safety procedures may be routinely disregarded to save time or money.
- Safety training may be considered a burden or a waste of time.
- Workers believe management's concern is not for the well being of the employees, but rather on time schedules, production, and cost savings.

Questions to Generate Discussion:

- What kind of safety culture does our organization have?
- What can our management team do to improve our safety culture?
- What can you do, individually, to improve our safety culture?
- Why is communication so important in establishing a safety culture?
- Do you feel you could approach a co-worker to discuss something that they could do more safely? Why or why not?
- Do you feel you can approach your supervisor to discuss a safety issue that needs correction?
- If you could change one thing about your organization's safety culture, what would it be?

Additional Information and Resources:

This section was adapted from a Caterpillar Toolbox Safety Talk:
http://safety.cat.com/cda/files/1440453/7/Building+a+Safety+Culture_V1010.1.pdf

OSHA's web site also includes information about safety and health management systems and safety culture: http://www.osha.gov/SLTC/etools/safetyhealth/index.html

The Army Readiness Assessment Program (ARAP) is the Army's safety culture assessment tool.   Find out how to assess the safety culture in your organization and how to get one-on-one advice for improving your safety culture from the ARAP team at the USA Combat Readiness / Safety Center web site: https://safety.army.mil/

Section 10

RISK MANAGEMENT

Risk Management (RM) is a process that helps leaders make sound decisions in a logical manner.   Used in a positive command climate, RM can become a mindset that governs all missions and activities.

- RM enables leaders at all levels to do exactly what the term implies: manage risks.
- RM is not a license or excuse to shortcut or disregard established safety standards. OSHA standards are minimum safety and health standards.   RM is a tool to help ensure our Army workplaces are "free of recognized hazards."   RM goes a step beyond "minimum standards" to focus on identifying and controlling potential hazards that can cause injuries whether an OSHA standard applies or not.

RM is a five-step process that is easily integrated into the decision-making process.

- Step one is to **Identify Hazards**.   Hazards are potential sources of danger that could be encountered while performing a task or operation.   Everyone practices hazard recognition when we acknowledge: "That could hurt."   A more systematic approach is to consciously look for potentially hazardous situations before starting an operation/task. Look at previous accident history, inspection results and job hazard analysis, changes in personnel, tools or procedures that could make the task more hazardous.   Discuss the task with experienced operators or recognized experts to learn what is needed to make things go right and what actions are likely to result in injury or equipment and facility damage.
- Step two is to **Assess Hazards** to determine their potential for damage or injury.   Simply stated: "How likely is this hazard to occur" and "what injury or facility and equipment damage can occur if this hazard isn't fixed."   Each hazard is assigned a "probability" and a "severity".   The leader or work team uses their knowledge and experience to assign a risk assessment of: Extremely High, High, Medium, or Low.   The risk assessment is used to judge the relative importance where several hazards have been identified.   Step two also helps highlight the importance of taking action.   OSHA uses the term "imminent danger" to describe hazards that could result in death or serious injury and are likely to occur soon

if immediate action is not taken. Use the RM Matrix below to help assess hazards.

- Step three is to **Develop Controls and Make Risk Decisions**.   Leaders determine the best way to safely get the job done.   Risk controls may eliminate the hazard, reduce the possibility of a hazardous event occurring, and/or reduce the potential severity by shielding the operator or providing personal protective equipment.   Leaders/supervisors have a duty to protect workers from on-the-job injuries.

 Risk decisions are made at a level of management that corresponds to the degree of risk.   Guidance should be established as to who makes which risk decisions.   For example, low risk decisions may be made by an immediate supervisor, medium risk decisions by middle management (activity/division), and high risk decisions by top management (directors/command staff) for acceptance or denial.   The commander may elect to have some decisions made at lower levels of management.

- Step four is to **Implement Controls** established as a result of steps one through three.   Included in this step are Leader actions to ensure that risk controls are put into effect.   The Leader assigns responsibilities and timelines for implementing controls.   If special procedures, tools, equipment, materials or training are required to reduce hazards and improve safety, step four is used to organize resources to get the job done.   Controls may be incorporated in task training, SOPs, job briefings, or written task orders.

- Step five is to **Supervise and Evaluate** performance.   Supervision in this sense goes beyond ensuring that people do what is expected of them.   It includes following up during and after a project to ensure that all went according to plan, reevaluating the plan or making adjustments as required to accommodate unforeseen issues, and incorporating lessons learned for future use.

The bottom line for RM is to plan for a successful operation; which includes:

- **Safe People**
  Workers are adequately trained, know their jobs and are prepared to do the job right. The safety culture promotes safe performance rather than promoting risk taking and hazardous short-cuts.

- **Safe Equipment**

Operators have the necessary tools and equipment to perform assigned tasks and equipment is maintained is safe operating condition.

- **Safe Practices**
  Procedures have been validated; SOPs are current and accurate; and rehearsals, walk-throughs or practice sessions are performed for critical tasks.

- **Safe Work Environment**
  The work place is inspected on a routine basis to ensure safe operating conditions. Walking/working surfaces, fire prevention and protection, and housekeeping standards are maintained.   Hazards identified in Step 1 are eliminated or controlled making the workplace safer.

Four Principles of RM:

Integrate risk management into planning.   Planning is a key function of management. Leaders and supervisors determine resources requirements – personnel and job skills needed; materials and equipment required and available; and establish timelines for accomplishment. Proper planning can help identify and control foreseeable hazards.   Modifications and revisions late in the planning cycle often limit options and increase costs. Applying RM to operations and planning can ensure that hazards and controls are developed and put in place before accidents, injuries, and losses occur.   The right tools, adequate procedures, and trained, proficient workers set the stage for safe and efficient operations.

Accept no unnecessary risks.   An unnecessary risk is one that, if eliminated, still allows accomplishment of the organization's mission.   Leaders have responsibility to both protect the workers and ensure mission accomplishment.   Under the OSH Act of 1970, Leaders have a legal responsibility to provide a workplace "free of recognized hazards."   For example, working on live electrical components involves inherent risks and should only be done by trained, experienced workers and only when emergency or essential services cannot be interrupted.

Make risk decisions at the proper level.   Eliminating the hazard with sound engineering controls is usually the best method of controlling hazards.   Implementing engineering controls often involves resource planning and justification of funding for corrective action.   In those instances when mission accomplishment and military necessity result in the requirement to make risk decisions to override standards, such decisions must be made at the appropriate level of command and based on full consideration of the safety, occupational health and environmental impacts; e.g., the level of risk and hazard involved.   Don't put workers lives at risk to save time or money.

Accept risks if benefits outweigh costs.   Leaders / supervisors should be aware of legal issues regarding failure to follow at least minimum safety and health standards.   Leaders / supervisors have to make decisions regarding whether proposed risk controls are sufficient. For example, for welding operations; is the use of a respirator sufficient to protect welders from toxic fumes or should a ventilation system be installed to permanently reduce exposure to the fumes.   Decisions should be based on knowledge and may require safety or industrial hygiene professional advice, but ultimately risk decisions are a management decision.

Two risk management tools that are commonly used in manufacturing and general industry applications are Change Analysis and Job Hazard Analysis.   A short discussion of each RM tool follows.

Change Analysis is a risk management tool used to systematically identify and manage change to ensure continued safe operation.   Unplanned changes can set the stage for disastrous results.   Accident investigations have identified unexpected or unplanned changes as a cause factor in several petroleum production, chemical manufacturing, and ammunition production disasters.   A skilled operator's absence due to illness may set the stage for an accident when an apprentice or unskilled operator fails to react to a correctable malfunction.   A chemical ingredient change in a process line can result in poor quality output or set the stage for an explosion on the production line.   Change analysis focuses on: "If we change the way we do this; this is what could happen?".

A team of operators, engineers and safety and health professionals can analyze proposed changes or new equipment, etc. before they are put online to identify hazards before they lead to accidents and injuries.   Fixing potential problems before it occurs is usually less expensive than attempting to fix the problems after the fact.   Change analysis involves comparing an existing situation that performs properly to a proposed change in order to identify differences and possible problems or hazardous outcomes.

Use group discussion and brainstorming to develop the change analysis. The table below shows an example of a change analysis.

Identify the elements of the current operation / situation:	Identify the changed situation or proposed change:	Analyze the impact of the change / potential outcomes / hazards:	Methods / actions to address the impact of the change:
• People	• Number of qualified operators; qualifications of operators		
• Equipment	• Change of equipment; type of tools or equipment; equipment vendor; ventilation system or PPE		
• Practice / procedures / key job tasks or steps	• Change of procedures; SOP change; consolidation or broadening the scope of responsibilities		
• Place / work environment	• Change to the work environment, chemicals used, ventilation, or work space organization		
• Time	• Shortened timeline; increased pace; increased production quota		

JOB HAZARD ANALYSIS (JHA)

The Job Hazard Analysis (JHA) is a risk management tool often used in manufacturing and industrial operations to systematically lay out the steps of a task or project, tools and procedures, and identify hazards and controls.   The JHA is a written hazard analysis that can be used to meet OSHA's requirement for a written hazard assessment for a personal protective equipment program.   The JHA is also an effective tool in LEAN manufacturing process improvement studies.   Like change analysis, the JHA provides a detailed review of specific operation and tasks in order to eliminate or control potentials hazards.

The JHA is a hazard assessment technique used to identify workplace hazards and protect employees.   The JHA breaks down a job into its component steps.   This is done by analyzing each step in order of occurrence with an experienced operator.

Next, each step is examined to determine hazards, safe procedures, PPE required and possible at-risk behaviors that could result in injury.

The final step is to document the necessary changes, provide equipment safeguards and PPE, and train operators in the revised procedures.

The JHA has been used successfully to get operator participation and buy-in for needed changes and to assure safe operations.   There are several advantages to using the job hazard analysis:

- It provides a systematic and thorough review of tasks and procedures that can be used to streamline production or train new operators.
- It provides a permanent record of the standard operating procedures and safety measures for a specific job.
- It produces a PPE, tools and equipment list and step-by-step safe job procedures.

Instructions for conducting a job hazard analysis

- See sample form on next page.
- Under 'job description,' list the name of the job being performed.
- Under 'job location,' list the physical location(s) where the job will be performed.
- In the column labeled 'key job steps,' list the steps in sequence.
- In the column labeled 'tools, equipment, or material,' list all of the proper ones to be used. Be sure to list the proper item in line with each successive job step.
- In the 'potential health, injury, or damage hazard' column, list the accident or unsafe conditions that can result if proper procedures are not followed.   List the proper item in line with each successive job step.

- In the last column, 'safe practices, apparel, and equipment,' list the factors needed to prevent an accident that may result from use of improper procedures.   List the proper item in line with each successive job step

Sample Form for JHA Hazard Analysis

Job Description: Change Tire	**Job Location:** Maintenance Area (Bays)		
Key Job Steps	**Tools, Equipment, or Material**	**Potential Health, Injury, or Damage Hazard**	**Safe Practices, Apparel, and Equipment**
1. Jack vehicle	Use shop jack	Vehicle slips from jack (crushing injury)	Place jack as directed by vehicle TM / operator manual Use jack stand if working under vehicle
		Jack failure (crushing injury)	Check jack for serviceability Stay clear of area under vehicle
2. Remove tire	Lug wrench Wheel stands	Strain or sprain from handling the tire and wheel	Get help or use proper lifting technique to avoid strain
		Bruises or cuts from slipping wrench	Assure tool fits and use properly
		Vehicle falls from jack or stand (see 1 above	Position jack or stand properly
3. Mount spare	See 2 above	See 2 above	See 2 above
4. Lower vehicle	See 1 above	See 1 above	See 1 above

Section 11

SAFETY INSPECTIONS

Safety inspections are one of the principle means of detecting hazards and unsafe behaviors that may develop in a workplace over time.   Supervisors should always be on the lookout for hazards and unsafe behaviors; but sometimes they overlook hazards that crop up.   Safety inspections ensure hazards are identified and corrected before an accident occurs.   Safety inspections may be conducted by a safety and health professional, Collateral Duty Safety Officer, supervisor, or higher level of command.

Safety inspections are conducted to identify and correct hazards that can lead to accidents. A good safety inspection will:

- Detect missing equipment guards, poor housekeeping, inadequate maintenance of tools, other unsafe conditions, or equipment that might cause accidents.
- Detect short cuts or other unsafe actions by workers; such as operating equipment without authority or at unsafe speeds; unsafe handling of materials; and using improper personal protective equipment.
- Highlight the need to specify safeguards for people and machines.
- Encourage employees to inspect their own work areas and practices.
- Detect deficiencies in the management of the safety program.

Prevention program procedures

Inspection frequency.   Inspections and surveys of operations, practices, and facilities will be conducted annually or more often.   Inspection frequency may be daily, weekly, monthly or quarterly based on the type of organization and potential hazardous activities and conditions. Frequently changing workplace conditions or high risk operations warrant more frequent checks to ensure safe performance.

Inspection procedures will emphasize use of observation, interviews, operational reviews, performance testing, and similar techniques designed to detect high risk of both unsafe acts and unsafe conditions at the earliest possible time.

Types of inspections

Continuing and routine inspections are usually performed by supervisors; however, they may be performed by a safety representative.   These inspections seek to discover conditions, procedures, and practices that, if allowed to continue, might cause accidents.   Special targeted hazards might be scheduled; for example, wearing safety glasses one month, using machine guards the next.   Your installation safety office and preventive medicine activity are available to

help you with these inspections.

Standard Army Safety and Occupational Health Inspections (SASOHI) are performed at least annually using SASOHI procedures.   These inspections are normally performed by a safety representative from the installation safety office, but inspections of low-hazard areas may be performed by a Collateral Duty Safety Officer (CDSO) or supervisory personnel.   Conduct at least one inspection accompanied by qualified safety personnel annually in accordance with DA Pam 385-10.   Inspection personnel must notify appropriate union representatives to participate.

Special or command on-call inspections are made by a safety representative from a higher echelon of command.   The purpose of this inspection is to appraise the safety performance of the unit or department to determine areas where improvement is needed and to present these facts to the commander or director.

 AR 385-10 Paragraph 18-9.   "A pre-operational walk-through will be conducted for all hazardous operations to validate the SOP, provide operator training, and to ensure all hazards have been identified during all phases of normal operation and emergencies. They are highly recommended for other long-term operations as well."

Inspection records

During inspections, record unsafe conditions and practices.   The record should contain the date, type of inspection, detailed account of hazards found, and recommendations for correcting those hazards.

You should retain a copy of the most recent inspection and any work orders submitted.   Follow up on recommendations until the conditions have been corrected or decisions have been made that no action will be taken.

OSHA Inspections

Under the OSH Act, OSHA compliance officers are authorized to conduct safety and occupational health inspections of federal workplaces to determine whether federal agencies are complying with safety and health standards.   Compliance officers may enter federal facilities to conduct inspections of contractor operations or federal civilian workplaces. Inspections are usually conducted without advance notice.

An OSHA inspection may be initiated in response to an employee compliant of unsafe or unhealthful working conditions; a civilian employee work-related fatality or catastrophic injuries; or as part of a scheduled inspection of a federal agency.   OSHA compliance officers normally will be escorted through federal civilian workplaces by a representative from the command safety office or the garrison safety office. OSHA compliance officers may issue a citation through official channels to federal agencies that fail to comply with standards.

Section 12

HAZARD REPORTING

Managers and supervisors should develop a process that encourages workers to report hazards or problems.   Employees should be comfortable with reporting hazards or other problems that may affect work performance without fear of reprisal or being labeled a whiner or complainer.

You must encourage reporting and show that you value worker input for the program to be effective.   Employees need to understand that not only will they not be harassed for reporting problems, but they will be rewarded for taking prompt action to prevent potential injuries. Workers should be encouraged to identify hazards before they result in injuries or losses.

The first step is to ensure that action is taken to correct reported hazards, and that feedback is provided to workers who identify concerns.   Ensure workers are aware of interim and final actions that were taken to resolve reported safety issues.

The RM process discussed in Section 10 is used to assess employee reported hazards, and develop and implement controls to eliminate the hazards or control exposure.

The DA Form 4755 (Report of Alleged Unsafe or Unhealthful Working Conditions) is the Army's formal process for hazard reporting.   The hazard report form is submitted by the worker to the garrison or organization safety representative to report hazards and request corrective action. A safety office representative will verify the hazards and applicable standards and work with leaders and supervisors to develop appropriate corrective actions to eliminate the hazard or reduce personnel exposure.   The safety professional must provide feedback to the employee on both interim and final actions taken to correct the reported hazards.   The worker who submitted the hazard report may request that the safety office protect their identity to prevent adverse action being taken against them.

The OSH Act of 1970 also allows workers who believe they are at risk of injury on the job to submit a complaint of unsafe / unhealthful working conditions directly to OSHA.   OSHA takes employee complaints seriously and usually conducts a site visit or inspection to verify conditions and ensure hazards are corrected.

Normally, if there is a good working relationship and supervisors act responsibly to correct reported hazards, employees do not need to use the DA Form 4755 or OSHA's hazard reporting process.

Reference: DA Pam 385-10 & 29 CFR 1960

<center>**Section 13**</center>

<center>**MANUAL MATERIAL-HANDLING (SAFE LIFTING)**</center>

Manual Material Handling injury claims cost the Army approximately 53 million dollars every year.   A large amount of these type of injuries are due to **back sprains / strain.**   Back sprains/strains are one of the top three civilian injury categories nearly every year.   The best way to prevent back injuries is to develop habits that reduce the strain placed on the back. There are some basic things you can do to reduce back injuries:

Analyze Material Handling / Lifting Tasks:

- Analyze regular lifting tasks.   Size?   Weight?   Repetitive lifts?   Are there lifting tasks that require mechanical lifting devices or a two person lift?
- Does employee pre-placement screening cover his/her lifting limitations?
- Have employees been trained in proper lifting techniques?
- Have you done a job hazard analysis (JHA) on the operation?   If so, do you have an SOP for the procedure?   Is it current?

- If not, perform a JHA and develop an SOP.   Enforce its use and update when conditions force change.
- Do performance standards and job descriptions clearly define requirements for material handling?   Do you assign or allow employee to exceed any physical limit noted by pre-placement?
- Is policy clearly specified as to when to ask for help in lifting?
- Are gloves needed / worn?
- If banding, are goggles/face shield worn?
- Are safety shoes needed / worn?
- Do you have material handling equipment necessary for the job?   Are employees trained / licensed for material handling equipment?
- Do you correct poor work habits and notice employee safe work actions?

Train workers in proper lifting techniques:

- Avoid lifting and bending whenever you can.
- **Place objects up off the floor.**   If you can set something down on a table or other elevated surface instead of on the floor, do it so you won't have to reach down to pick it up again.
- **Raise / lower shelves**. The best zone for lifting is between your shoulders and your knee height.   Put heavier objects on shelves at waist level, lighter objects on lower or higher shelves.
- **Use carts and dollies** to move objects, instead of carrying them yourself.

<center>38</center>

- **Use cranes, hoists, lift tables and other lift-assist devices whenever you can.**
- Break larger loads into smaller loads.   It's easier to move several small containers or boxes that one bulky or heavy load.
- **Use proper lifting procedures**
  You can't always avoid lifting, but there are ways to reduce the amount of pressure placed on the back when you do so. By bending the knees, you keep your spine in a better alignment, you essentially take away the lever principle forces.   Instead of using your back like a crane, you allow your legs to do the work.

Follow these steps when lifting:

- **Use your head before you use your back.**   Assess the load to be lifted; if it's too heavy or too bulky, get help.
- Check that there is enough space for movement, and that the footing is good. "Good housekeeping" ensures that you won't trip or stumble over an obstacle. Make sure that there is a good place to sit the load down.
- Take a balanced stance with your feet about shoulder-width apart. One foot can be behind the object and the other next to it.
- Squat down to lift the object, but keep your heels off the floor. Get as close to the object as you can.
- Use your palms (not just your fingers) to get a secure grip on the load. Make sure you'll be able to maintain a hold on the object without switching your grip later.
- Lift smoothly (without jerking) using your leg, abdominal and buttock muscles and keeping the load as close to you as possible. Keep your chin tucked in so as to keep a relatively straight back and neck line.
- Once you're standing, change directions by pointing your feet in the direction you want to go and turning your whole body. Avoid twisting at your waist while carrying a load.
- Keep the load close to the body.   Keep arms and elbows close to the body while lifting and moving.
- To lower the object, bend the knees. Don't stoop. To deposit the load on a bench or shelf, place it on the edge and push it into position. Make sure your hands and feet are clear when placing the load.

 Make it a habit to follow the above steps when lifting anything.

Section 14

SLIPS, TRIPS, AND FALLS

Slips, trips and falls are one of the top three civilian injury categories nearly every year and cost the Army $47M on average.   Supervisors and leaders should always be on the lookout for conditions that may lead to a fall; slippery floor surfaces, poor housekeeping, loose floor mats or stair treads, or improper use of ladders and work platforms.   Preventing slips, trips, and falls takes constant vigil to observe changing work conditions and unsafe acts that set the stage for a fall.   Other than fire fighters, few workers that use ladders have had training in how to properly use a straight or step ladder.   Consider if your workers need training to safely use ladders.

Analysis:

- Identify or define the problem.   Where are workers at risk for falls: wet / slippery floors, climbing ladders, icy exterior walkways, building maintenance or automotive shops.
- What kinds of accidents happen?   How often do they happen?   When do they happen?   Why do they happen?
- What are the main accident causes?   Examples: Failure to follow procedures, inadequate supervision and inadequate written procedures.
- Are there SOPs or procedures for the task?   Are they routinely enforced?
- Had the worker received training in the task he was performing?.
- Do stairways with four or more risers have a top rail that is 42" and a midrail that is 21"
- Is there a brake or landing every 20 feet on a straight fixed ladder? (If it has a cage it can go 30 feet)
- Is the tallest step ladder you can have 20 feet or less?
- In workplaces with scaffolding, is it designed to hold 4x the maximum load, and does it have a toe board when there is a danger of objects falling on persons below, i.e. tools?
- Do platforms or open sided flooring four feet or above have fall protection?

Prevention:

Worksite

- Ensure all personnel receive training.
- Require that SOPs be developed for each task.
- Give additional training for non-routine tasks.
- Require workers, to follow SOPs or procedures.
- Are there procedures to keep climbing equipment; such as ladders, scaffolding, etc., in good condition?   Ensure that employees do not exceed a normal reach while working

on this type of equipment.
- Are good housekeeping standards established and enforced in all operations?.
- Are all accidents investigated for causes and reports reviewed/analyzed for trends to ascertain where prevention efforts are needed?.
- Are there procedures that ensure no running in the workplace or on the stairs?

Task-oriented procedures

- Are wet or oily spots cleaned up immediately?
- Are surfaces of stairs kept in a non-slippery condition?
- Are loose tiles, floorboards, bricks, pavement, carpeting reported and/or repaired immediately?
- Are surfaces kept free of discarded items such as staples, tacks, pencils, tools, etc.? Are tools put away when the job is done?
- Are file drawers closed after material is retrieved?
- If safety shoes are required for the task, are they being worn?
- Do personnel walk in designated aisles or walkways?

LADDER SAFETY

Bureau of Labor Statistics data indicates that falls from ladders injure more than 20,000 American workers every year. The impact from sprains and strains, broken bones and other more serious disabling conditions resulting from falls from ladders reach far beyond the injured worker's suffering. The direct compensation and medical treatments associated with falls from elevation cost American businesses $4.6B each year.

The OSHA standards for walking and working surfaces apply to all permanent places of employment, except where only domestic, mining, or agricultural work is performed.

How can you use your ladder more safely?   Follow these simple guidelines:

1. SELECT THE RIGHT LADDER FOR THE JOB

- Always choose a nonconductive ladder when working with electricity or on electrical circuit or equipment.   Metal ladders should never be used when dealing with electricity.
- Don't use a step ladder where a straight ladder is needed, and vice versa
- Check ladder capacity and strength
- Read and follow all manufacturer instructions

2. INSPECT YOUR LADDER

- Get help to move or set up heavy and awkward ladders

- Erect the ladder on a solid, level surface and install a manufacturer approved 'leveler' if using on uneven surfaces.
- Secure the base when raising an extension ladder, and never set it up while it's extended. Watch for wet or muddy surfaces.
- Check ladder angle.
- Tie off and extend the ladder 36-42" above the dismount level when stepping off at a higher level.
- Secure the ladder against displacement by tying it at the top or the bottom or both, depending on the conditions.

3. USE SAFE CLIMBING TECHNIQUES

- Don't rush.
- Face the ladder and use both hands while climbing up or down.
- Apply the three-point rule: Keep at least both feet and one hand or both hands and one foot on the ladder at all times.
- Clear the area around the ladder of debris and materials.
- Clean mud and grease from the footwear before climbing.
- Carry tools in pockets or belt, or hoist them on a rope.
- Keep eyes on the ladder and pay attention to hand and foot placement.
- Stay off the top two rungs of a straight or extension ladder, and the top step and cap of a step ladder.

GENERAL REQUIREMENTS FOR USE OF ALL LADDERS

- When portable ladders are used for access to an upper landing surface, the side rails must extend at least three feet above the upper landing surface. When such an extension is not possible, the ladder must be secured, and a grasping device such as a grab rail must be provided to assist workers in mounting and dismounting the ladder. A ladder extension must not deflect under a load that would cause the ladder to slip off its support.

- Ladders must be maintained free of oil, grease, and other slipping hazards.

- Ladders must not be loaded beyond the maximum intended load for which they were built, nor beyond their manufacturer's rated capacity.

- Ladders must be used only for the purpose for which they were designed.

- Non-self-supporting ladders must be used at an angle where the horizontal distance from the top support to the foot of the ladder is approximately one-quarter of the working length of the ladder.   Wooden job-made ladders with spliced side rails must be used at an angle where the horizontal distance is one-eighth the working length of the ladder.

- Fixed ladders must be used at a pitch no greater than 90 degrees from the horizontal, measured from the back side of the ladder.

- Ladders must be used only on stable and level surfaces unless secured to prevent accidental movement.

- Ladders must not be used on slippery surfaces unless secured or provided with slip-resistant feet to prevent accidental movement.   Slip-resistant feet must not be used as a substitute for the care in placing, lashing, or holding a ladder upon slippery surfaces.

- Ladders placed in areas such as passage-ways, doorways, or driveways, or where they can be displaced by workplace activities or traffic must be secured to prevent accidental movement, or a barricade must be used to keep traffic or activities away from the ladder.

- The area around the top and bottom of the ladders must be kept clear.

- The top of a non-self-supporting ladder must be placed with two rails supported equally unless it is equipped with a single support attachment.

- Ladders must not be moved, shifted, or extended while in use.

- Ladders must have nonconductive siderails if they are used where the worker or the ladder could contact exposed energized electrical equipment.

- The top or top step of a stepladder must not be used as a step.

- Cross-bracing on the rear section of stepladders must not be used for climbing unless the ladders are designed and provided with steps for climbing on both front and rear sections.

- Ladders must be inspected by a competent person for visible defects on a periodic basis and after any incident that could affect their safe use.

- Single-rail ladders must not be used.

- When ascending or descending a ladder, the worker must face the ladder.

- Each worker must use at least one hand to grasp the ladder when moving up or down the ladder.

- A worker on a ladder must not carry any object or load that could cause the worker to lose balance and fall.

- Employers must provide a training program for each employee using ladders and stairways. The program must enable each employee to recognize hazards related to ladders and stairways and to use proper procedures to minimize these hazards.

TRAINING REQUIREMENTS

Under the provisions of the OSHA ladder standard, employers must provide a training program for each employee using ladders and stairways. The program must enable each employee to recognize hazards related to ladders and stairways and to use proper procedures to minimize these hazards. For example, employers must ensure that each employee is trained by a competent person in the following areas, as applicable:

- The nature of fall hazards in the work area

- The correct procedures for erecting, maintaining, and disassembling the fall protection systems to be used

- The proper construction, use, placement, and care in handling of all stairways and ladders

- The maximum intended load-carrying capacities of ladders used. In addition, retraining must be provided for each employee, as necessary, so that the employee maintains the understanding and knowledge acquired through compliance with the standard.

Structural Defects:

- Portable ladders with structural defects—such as broken or missing rungs, cleats, or steps, broken or split rails, corroded, or other faulty or defective components—must immediately be marked defective, or tagged with "Do Not Use" or similar language and withdrawn from service until repaired.

- Fixed ladders with structural defects—such as broken or missing rungs, cleats, or steps, broken or split rails, or corroded components—must be withdrawn from service until repaired.

- Defective fixed ladders are considered withdrawn from use when they are (a) immediately tagged with "Do Not Use" or similar language; (b) marked in a manner that identifies them as defective; or (c) blocked (such as with a plywood attachment that spans several rungs).

Ladder repairs must restore the ladder to a condition meeting its original design criteria, before the ladder is returned to use.

References:

CA 810, Federal Workers Compensation

DA Pam 385-10: The Army Safety Program

OSHA web site: www.osha.gov

Section 15

HEALTH HAZARDS

Hazard Communication: The Hazard Communication standard (1910.1200) is on OSHA's "Top 10" list of most frequently cited violations every year.   The purpose of this standard is to inform workers of industrial chemical hazards and reduce potential exposures.   Citations may be issued for failing to meet any of the basic program requirements:

- Develop a workplace specific written Hazard Communication program.
- Maintain a chemical inventory list of chemicals used in the workplace.
- Maintain current Safety Data Sheets (SDS) for chemicals on the inventory.
- Train workers on the Hazard Communication standard, hazards of chemicals used in the workplace, and how to prevent exposure.
- Implement a chemical container labeling system to ensure proper identification of chemicals stored and used in the workplace.

A substance is considered a "health hazard" if exposure through the skin or eye contact, inhalation or ingestion causes temporary or permanent injury.   The health effects of exposure may be acute or chronic.

An **acute exposure** usually occurs from a single short time exposure to a high concentration.

A **chronic exposure** usually results from repeated long-term exposure to a low concentration of a hazardous substance.

OSHA has established exposure limits for many hazardous substances to prevent acute or chronic exposure.   Examples of chemical health hazards are:

- Carcinogens – have been proven to cause cancer.
- Acute or chronic toxins – cause immediate symptoms such as headache, dizziness, nausea, or asphyxiation; damage to liver, kidneys, lungs or central nervous system; or death.
- Irritants – cause reversible inflammatory effects on living tissue; Burning eyes, inflammation, dermatitis, or other short term symptoms.
- Corrosives - cause damage to skin, eyes, or other parts on the body on contact.
- Sensitizers - are materials that can cause severe skin and/or respiratory responses in a sensitized worker after exposure to a very small amount of the material.

OSHA sets enforceable **Permissible Exposure Limits (PELs)** to protect workers against the health effects of exposure to hazardous substances. PELs are regulatory limits on the amount or concentration of a substance in the air. They may also contain a skin designation. OSHA PELs are based on an eight-hour time weighted average (TWA) exposure.

Reducing exposure

Everyone who works with toxic substances should know the names, toxicity and other hazards of the substances they use. Employers are required by law to provide this information, along with training in how to use toxic substances safely.   A worker may obtain information about a chemical's composition, physical characteristics, and toxicity from the SDS.

Engineering controls

Limiting exposure at the source is the preferred way to protect workers. The types of engineering controls, in order of effectiveness, are:

- **Substitution** is using a less hazardous substance. But before choosing a substitute, carefully consider its physical and health hazards. For example, mineral spirits (Stoddard Solvent) is less of a health hazard than perchloroethylene for dry cleaning, but is more of a fire hazard and an air pollutant.
- **Process or equipment enclosure** is the isolation of the source of exposure, often through automation. This completely eliminates the routine exposure of workers. For example, handling of radioactive materials is often done by mechanical arms or robots.

- **Local exhaust ventilation** is a hood or air intake at or over the source of exposure to capture or draw contaminated air from its source before it spreads into the room and into your breathing zone.
- **General or dilution ventilation** is continual replacement and circulation of fresh air sufficient to keep concentrations of toxic substances diluted below hazardous levels.

Personal Protective Equipment (respirators, gloves, goggles, aprons) should be used only when engineering controls are not possible or are not sufficient to reduce exposure.

A SDS and consultation with the command's or installations industrial hygienist can help you get the information to prevent harmful exposure.   Some questions to ask include:

- What is the substance? What's in it? How toxic is it? Are health effects acute, chronic, or both?
- Is there evidence that the substance is a carcinogen? A mutagen? A teratogen or reproductive toxin?

- How does this substance enter the body (routes of entry): inhalation, skin absorption, ingestion?
- What is the legal exposure limit (PEL) or recommended safe exposure limit?
- Has air sampling been conducted to determine airborne concentrations?   If so, what were the results?
- To how much of the substance are you being exposed? What is the concentration of the substance in the workplace air? How long are you exposed?
- Are you exposed to other chemicals at the same time? Can they have a combined (additive or synergistic) effect?
- Do you have any medical conditions or take any drugs that might interact with chemicals?
- What controls are recommended to prevent overexposure?
- Is any type of medical testing recommended?

An emergency eyewash and shower is required where the eyes or body of any person may be exposed to injurious corrosive materials.   The emergency equipment must be available within 10 seconds.   Where a strong acid or corrosive is used, the unit should be immediately adjacent to the hazard.

References:

- 29 CFR 1910.151, Medical Services and First Aid
- 29 CFR 1910.1000, Air Contaminants
- 29 CFR 1910.1200, Hazard Communication
- OSHA Safety and Health Topic: Hazardous and Toxic Substances: http://www.osha.gov/SLTC/hazardoustoxicsubstances/index.html

Section 16

ERGONOMICS

Ergonomics involves human reaction to monotony, fatigue, repeated motion, and repeated impact.   The human body can endure considerable discomfort and stress and can perform many awkward and unnatural movements--for a limited period of time.   But, when unnatural conditions or motions are continued for prolonged periods, the worker's performance suffers. Therefore, work systems need to be tailored to human capacities and limitations through consideration of:

- Stress on muscles, bones, nerves, and joints.
- Eye fatigue, color, audio signals, and the like.
- Environmental factors such as lighting, glare, temperature, humidity, noise, atmospheric contaminants, and vibration.
- The psychological and social aspects of the working environment.

The benefits of designing work systems to minimize physical stress on workers to include more efficient operation, fewer accidents, lower cost of operation, reduced training time, and more effective use of personnel.

Among improvements that can reduce fatigue and stress are redesigned hand tools, adjustable chairs and workbenches, lighting improvements, control of heat and humidity, and noise reduction.

Cumulative-trauma disorders (CTDs)

The most common work-related musculoskeletal injury is carpal tunnel syndrome (CTS). Administrative personnel, computer operators, cashiers, woodworkers, and power-tool operators have this in common. Both occupational and medical factors can be associated with carpal tunnel syndrome

- Repetitive motions.
- Forced and awkward posture.
- Exposure to vibrations for long hours.
- Employees experience CTDs from
    - Hands hovering awkwardly over keyboards for long periods.
    - Twisting wrists to position product codes over a scanning window.

Prevention focuses mainly on reducing exposure to suspected causes and conditioning or training the muscles to tolerate the repeated motions better.   Controlling these risk factors involves reducing, adjusting, or controlling:

- Repetitiveness
- Forcefulness
- Posture
- Vibration
- Mechanical stress (e.g., sharp-handled tools on underlying structures of the hand/fingers).

It may be as simple as having a computer operator adjust the height of his or her chair to raise their hands a little higher over the keyboard or move the computer screen directly in front of the operator.   Before risk factors can be controlled, however, they must be recognized.

Early recognition of the signs and symptoms of the disorder and recognition of occupational risk factors should reduce the number and severity of cases of musculoskeletal disorders (MSD) in many jobs and conserve our valuable work force.

Employee involvement can help prevent musculoskeletal disorders.   Employers and employees can work together effectively to reduce work-related musculoskeletal disorders.

Here are some ways:

- Look at injury and illness records to find jobs where problems have occurred.
- Talk with workers to identify specific tasks that contribute to pain and lost workdays.
- Ask workers what changes they think will improve comfort and reduce strains.
- Encourage workers to report MSD symptoms.
- Find ways to reduced repeated motions, forceful hand exertions, prolonged bending, or working above shoulder height.
- Reduce or eliminate vibration and sharp edges or handles that dig into the skin.

- Rely on equipment for heavy or repetitive lifting.

Medical conditions such as rheumatoid arthritis, diabetes, and osteoarthritis can contribute to CTDs.

While cumulative-trauma disorders can be work related, the workplace may not be their only source.   Hobbies, second jobs, or other outside activities can lead to CTDs.   Analysis of each case should consider total exposure, not just what might be found at the work site.   And remember, posture and technique may be more important in some cases than exotic ergonomic equipment or workstation redesign.

Early recognition and treatment of ergonomic-related symptoms can significantly reduce lost-time injuries and medical/surgical treatment.

Proper user position and support at Workstation
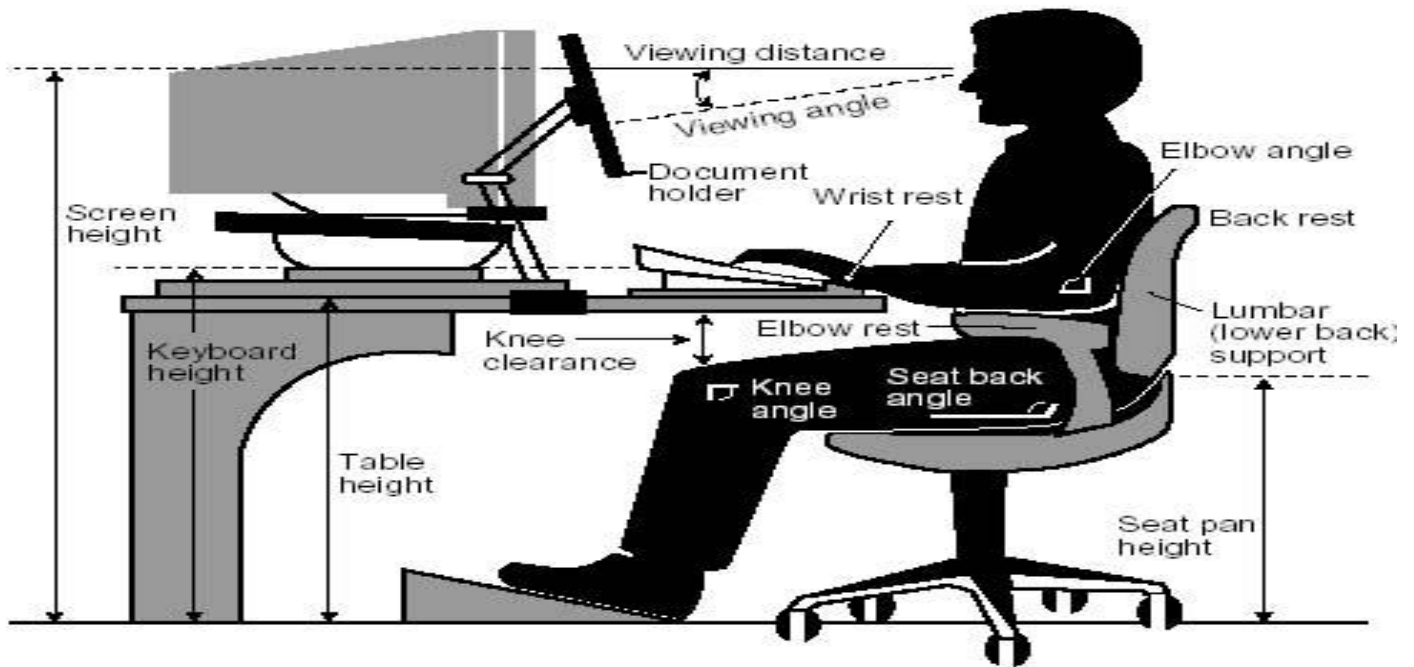
References:

The DoD Ergonomics Working Group provides a number of Ergonomic Checklists and self-assessment tools at their web site to identify conditions that may result in repetitive strain injuries.   http://www.denix.osd.mil/ergoworkinggroup/publications/ergonews.cfm

OSHA etool: http://www.osha.gov/SLTC/etools/computerworkstations/

OSHA http://www.osha.gov/Publications/videoDisplay/videoDisplay.html

Section 17

PERSONAL PROTECTIVE CLOTHING AND EQUIPMENT

- Injuries can occur to the eyes, head, hands, body, and feet by failure to wear personal protective clothing and equipment.
- During design of equipment and processes, personal protective equipment (PPE) is the "last resort" to protect workers from injury.   It is required only when engineering controls cannot be instituted to eliminate a hazard.
- Protective equipment is also extremely important as a second line of defense against inadvertent or unexpected conditions.
- Workers should be advised that using PPE doesn't eliminate the hazard.   If the PPE is not properly worn or fails, exposure to the hazard will occur.   To reduce the possibility of exposure, PPE must be properly fitted and maintained.
- Workers must have a medical evaluation before being assigned to work requiring them to wear a respirator.   Issuing a worker a respirator and telling him or her to use it is not only ineffective and violates federal regulations, it can be very dangerous.   Using PPE requires hazard awareness, proper fitting, and training for the user.   Selection of proper protection for a specific task or operation is extremely important.   An industrial hygiene evaluation can determine potential exposure levels and recommendations for proper respiratory protective devices.
- Make sure employees know that PPE should never be modified or removed, and that they should check with the supervisor if it is uncomfortable.   The specific type of PPE may not be fitted properly, may be dirty, or there may be other reasons, most of which can be corrected. For example, ear plugs designed for a large ear canal would be very uncomfortable for a person with small ear canal.   Pay special attention to the fit for both comfort and protection.
- The Protective Clothing and Equipment Program (PCE) requirements for preventing work hazards and health risks are addressed in Chapter 18, AR 385-10.

The steps in a Personal Protective Equipment (PPE) program are:

1. Conduct a written hazard assessment

2. Select the correct PPE type

3. Fit and issue PPE

4. Provide a medical evaluation (respirators)

5. Train workers in proper use, maintenance and limitations of the equipment

6. Enforce the use of PPE where required

Eyes: Eye protection is selected based on the eye hazards in the workplace. Safety glasses, goggles, etc. must protect against the expected hazardous exposure. Ensure that protective eyewear is worn during operations that pose hazards to the eye such as

- Welding
- Painting
- Grinding
- Fuel handling
- Maintenance/repair
- Woodworking
- Metal work
- Heavy equipment operation
- Electrical work
- Vehicle operations when windshield is down or head is outside the hatch in tracked vehicles

Ears: Protecting against noise hazards

Ensure that personnel use proper hearing protection when equipment noise exceeds 85 decibels. Contact your preventive medicine office for noise level requirements and recommendations for reducing noise levels. Personnel working in noise hazardous areas should be registered in the Hearing Conservation Program and periodically evaluated for hearing loss. Ear muffs, fitted ear plugs, canal caps, and soft ear plugs are issued based on fit, comfort, personal preference and the job environment.

The following are examples of equipment that exceeds 85 decibels when in operation:

- All Army aircraft
- Construction/engineer items such as dozers, cranes, forklifts, graders, etc.
- Tractors
- Tracked vehicle engines (APCs, tanks, etc.)
- Multi-fuel vehicle engines
- Army tactical vehicles

Head: Preventing "struck-by" injuries

- Ensure that helmets are worn at all times by all personnel riding in or operating Army combat vehicles.
- Ensure that helmets or hardhats are worn in construction areas in accordance with SOPs and local and Army regulations.

Hands:

- Require that personnel remove rings before working around equipment.
- Caution employees that "hung" rings are common when disembarking vehicles, causing severe finger injuries.
- Ensure that employees use the proper tool for the job.
- Remind employees to ensure that hands and fingers are clear before opening or closing doors, hatches, and tailgates.

Feet:

Ensure that protective boots or shoes are worn in areas that require foot and toe protection. The most common foot hazard is from falling or rolling objects, but other exposures such as heat, electrical, and chemicals must be considered as well.   Consult your post regulation for appropriate foot wear approved for specific occupations and tasks.

Ensure that the following personnel wear protective foot gear:

- Electrical workers
- Mechanics (tracked and wheeled vehicles, aircraft)
- Carpenters

- Heavy equipment operators
- Warehouse workers
- Others performing operations posing hazards to the feet

 PPE is provided based on a written hazard assessment.   Safety and Occupational Health professionals and Industrial Hygienists can assist with identifying hazards and selecting the appropriate PPE based on the hazard assessment.   The job hazard analysis, discussed in Section 10, can provide the basis for determining PPE requirements.

 An Eye and Face Protection eTool is available at OSHA's web page.   This tool provides information to aid in conducting a hazard assessment.
http://www.osha.gov/SLTC/etools/eyeandface/index.html

Examples of eye and face hazards and PPE for selected operations are provided in the following charts.

Hazard Assessment		
Hazard type	**Examples of Hazard**	**Common Related Tasks**
Impact	Flying objects such as large chips, fragments, particles, sand, and dirt.	Chipping, grinding, machining, masonry work, wood working, sawing, drilling, chiseling, powered fastening, riveting, and sanding.
Heat	Anything emitting extreme heat.	Furnace operations, pouring, casting, hot dipping, and welding.
Chemicals	Splash, fumes, vapors, and irritating mists.	Acid and chemical handling, degreasing, plating, and working with blood.
Dust	Harmful dust.	Woodworking, buffing, and general dusty conditions.
Optical Radiation	Radiant energy, glare, and intense light	Welding, torch-cutting, brazing, soldering, and laser work.

Eye and Face Protection Selection Chart

Source	Assessment of Hazard	Eye / Face Protection
IMPACT -- Chipping, grinding machining, masonry work, woodworking, sawing, drilling, chiseling, powered fastening, riveting, and sanding	Flying fragments, objects, large chips, particles sand, dirt, etc	Spectacles with side protection, goggles, face shields. See notes (1), (3), (5), (6), (10). For severe exposure, use faceshield.
HEAT -- Furnace operations, pouring, casting, hot dipping, and welding	Hot sparks	Faceshields, goggles, spectacles with side protection. For severe exposure use faceshield. See notes (1), (2), (3).
	Splash from molten metals	Faceshields worn over goggles. See notes (1), (2), (3).
	High temperature exposure	Screen face shields, reflective face shields. See notes (1), (2), (3).
CHEMICALS -- Acid and chemicals handling, degreasing plating	Splash	Goggles, eyecup and cover types. For severe exposure, use face shield. See notes (3), (11).
	Irritating mists	Special-purpose goggles.
DUST -- Woodworking, buffing, general dusty conditions	Nuisance dust	Goggles, eyecup and cover types. See note (8).
LIGHT and/or RADIATION --		
Welding: Electric arc	Optical radiation	Welding helmets or welding shields. Typical shades: 10-14. See notes (9), (12)
Welding: Gas	Optical radiation	Welding goggles or welding face shield. Typical shades: gas welding 4-8, cutting 3-6, brazing 3-4. See note (9)
Cutting, Torch brazing, Torch soldering	Optical radiation	Spectacles or welding face-shield. Typical shades, 1.5-3. See notes (3), (9)
Glare	Poor vision	Spectacles with shaded or special-purpose lenses, as suitable. See notes (9), (10).

Notes to Eye and Face Protection Selection Chart:
(1) Care should be taken to recognize the possibility of multiple and simultaneous exposure to a variety of hazards. Adequate protection against the highest level of each of the hazards should be provided. Protective devices do not provide unlimited protection.

(2) Operations involving heat may also involve light radiation. As required by the standard, protection from both hazards must be provided.

(3) Faceshields should only be worn over primary eye protection (spectacles or goggles).

(4) As required by the standard, filter lenses must meet the requirements for shade

designations in 1910.133(a)(5). Tinted and shaded lenses are not filter lenses unless they are marked or identified as such.

(5) As required by the standard, persons whose vision requires the use of prescription (Rx) lenses must wear either protective devices fitted with prescription (Rx) lenses or protective devices designed to be worn over regular prescription (Rx) eyewear.

(6) Wearers of contact lenses must also wear appropriate eye and face protection devices in a hazardous environment. It should be recognized that dusty and/or chemical environments may represent an additional hazard to contact lens wearers.

(7) Caution should be exercised in the use of metal frame protective devices in electrical hazard areas.

(8) Atmospheric conditions and the restricted ventilation of the protector can cause lenses to fog. Frequent cleansing may be necessary.

(9) Welding helmets or faceshields should be used only over primary eye protection (spectacles or goggles).

(10) Non-sideshield spectacles are available for frontal protection only, but are not acceptable eye protection for the sources and operations listed for "impact".

(11) Ventilation should be adequate, but well protected from splash entry. Eye and face protection should be designed and used so that it provides both adequate ventilation and protects the wearer from splash entry.

(12) Protection from light radiation is directly related to filter lens density. See note (4) . Select the darkest shade that allows task performance.

Source: www.osha.gov, 29 CFR 1910, Subpart I, Appendix B

Section 18

COLLATERAL DUTY SAFETY OFFICER (CDSO)

The CDSO is an additional duty appointment to assist commanders to fulfill their responsibilities for implementing the Army Safety Program. The CDSO is appointed in writing, receives training in Army safety and OSHA standards, accident reporting, and safety inspection procedures and responsibilities. The CDSO is normally appointed for an organization that does not have a full-time safety and occupational health professional assigned at the unit or division level.

Supervisors and leaders are still responsible for providing a safe and healthful work environment. The CDSO assists with implementing the safety program at organizational level. The CDSO also monitors safety program performance and advises leaders and supervisors regarding safety performance.

The CDSO should be provided adequate duty-time to perform assigned functions. CDSO duties often include:

- Conducting surveys and hazard analyses.
- Observing unit operations to detect and correct unsafe practices.
- Prioritizing hazards identified during the survey by accident probability and severity.
- Recommending controls or corrective action.
- Tracking abatement of the identified hazards, and advising the commander and unit leaders as appropriate.
- Ensuring unit accidents are reported and investigated and coordinate. investigation and reporting with the garrison or command safety office.
- Assisting in developing and reviewing unit Standing Operating Procedures (SOP).
- Performing other actions to enhance and promote the unit safety program and individual worker involvement in accident prevention.

 Appointing a CDSO does not relieve the commander or supervisor of his or her safety responsibilities. A trained and motivated CDSO can improve safety performance ensuring that hazard analyses, safety surveys, and accident investigations get the necessary attention. DA Pam 385-1 addresses additional duty safety officer / NCO duties and responsibilities in more detail and is an excellent reference for the CDSO as well.

CDSO should attend a CDSO course, usually offered at garrison or organization level. They should also take the online Additional Duty Safety Course. The course can be launched from https://safety.army.mil/Portals/training/DISTANCELEARNINGONLINETRAINING/tabid/1210/Default.aspx.

Section 19

EMERGENCY ACTION PLANS (EAP)

Emergency action plans (EAPs) describe actions employees should take to protect themselves and reduce facility damage in the event of a fire or other emergency situation.

Responding to emergencies is always easier if actions are thought out ahead of time and everyone knows their duties and how to perform them.

An EAP should be based on a workplace hazard assessment.   The written hazard assessment determines physical hazards and chemical hazards that could cause an emergency, and specific workplace or process procedures necessary to prevent chemical release or provide for orderly shut-down to minimize hazards and prevent additional losses from occurring.

Written EAPs and periodic drills can prepare employees to act appropriately should an emergency occur.

Key elements of the EAP include:

- Chain of command and assignment of responsibilities and names / titles of individuals responsible for the EAP development and training.
- Employee alarm system (Method for reporting an emergency and use of alarm systems).
- Establishment of alarm procedures, including distinct sounds for fire or tornado or other foreseeable emergency.

- What employees must do   (Are there critical processes or systems that must be shut down?)
- Identification of any employees with special needs (such as hearing or mobility).
- Where to exit buildings and work areas (such as emergency escape routes, floor plans, route assignments and refuge areas).
- Where to assemble for accountability once employees have exited the building.

- Evacuation Wardens with assignment of responsibility for accountability of employees (usually one warden for each twenty employees).   Before exiting wardens ensure rooms and work areas are clear.

Review EAPs annually to ensure they are up-to-date.

EAP training

Provide initial and new employee orientation training as well as annual refresher training for all

assigned employees.   All workers must be informed if changes are made to the EAPs that may affect their specific emergency action response, exit routes, or assigned responsibilities.

Fire Prevention Plan (FPP)

A fire prevention plan is a written hazard prevention plan to assure fire hazards are controlled, fire protection equipment is provided and maintained, and fire response procedures are addressed.

The fire prevention plan may be combined with the EAP and include the elements of the EAP addressed above.

29 CFR 1910.39 applies to organizations that are required to have a FPP plan by a particular OSHA standard.   29 CFR 1910.157 requires development of a fire prevention plan or the training of designated employees to use the fire extinguishers in the facility.

Fire prevention plans must include:

- A list of all major fire hazards
- Proper handling procedures for hazardous materials
- Potential ignition sources and their control
- Type of fire protection equipment necessary to control each major hazard
- Procedures to control accumulation of flammable and combustible waste material
- Procedures for regular maintenance of safeguards installed on heat-producing equipment to prevent accidental ignition of combustible materials
- Name and job title of employees responsible for the control of fire source hazards and periodic plan reviews and updates

The fire prevention plan is tailored for the specific workplace.   It is based on a thorough workplace hazard assessment, which will identify physical or chemical hazards that could cause a fire hazard.

The hazard assessment identifies areas with the following fire hazard classes:

- Class A fire hazards: combustible materials such as paper, wood, cloth, rubber, and plastics.   Class A or ABC fire extinguishers must be available for Class A fire hazards.
- Class B fire hazards: flammable liquids, gases, and greases create Class B fires.   Class B extinguishers include foam, carbon dioxide, and dry chemical extinguishers.
- Class C fire hazards: potential electrical fires.   Carbon dioxide and dry chemical are used for Class C fires; never use foam or water based extinguishers on these fires.
- Class D fire hazards: combustible metals, such as magnesium, titanium, zirconium, and sodium fires are Class D.   These fires requires specialized extinguishers.

The fire prevention plan identifies potential ignition sources, and actions to prevent ignition sources and combustible materials from coming together.   Specific handling procedures, storage, and housekeeping procedures can prevent the hazardous interaction between flammable, combustibles, and potential ignition sources.

Reference:

29 CFR 1910.38 and 1910.157 requires employers to develop an emergency action plan.
29 CFR 1910.39 Requires employers to develop fire prevention plan.

Section 20

CONTRACTING SAFETY

The Army has an overall goal of ensuring that contracted work is performed using procedures and risk controls that ensure workers, the public, and the environment are not endangered.

Contractor safety is influenced positively by workplace emphasis on safety with a safe work environment.   Contract safety has many implications and can impact the Army mission. When contractor accidents happen work stops, if the contractor is a small business chances are that they will not be able to continue the mission.

Contract Requirements

Army contractors will be required to have a Safety and Occupational Health Program implemented that is tailored to meet the safety requirements of each contract and the associated tasks and products of that contract.   Contractors are required, to abide by 29 CFR 1910 and 1926, as well as, DOD, Army, State, and local safety standards.

For all construction related contracts, contractors are also required to abide by the U.S. Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1.   Keep in mind that all safety program requirements are not in one place; the Federal Acquisition Regulations are not the only reference. Have a safety professional get involved in the process.

The government does not assume responsibility for ensuring the protection of contract workers.

 Unless the situation is Immediately Dangerous to Life and Health (IDLH), government personnel must avoid taking actions which would put them, or appear to put them, in direct control of a worksite owned or controlled solely by a contractor or contract personnel.   Bring safety concerns to the project's Contract Officer Representative (COR) and allow him/her to address the issue with the contractor.

Contracts should not include any language that establishes a requirement for the government to provide Safety or Occupational Health services.

Requirements have been established through Federal law mandating that contractors provide a safe workplace for their employees, and that contractors not expose Government employees or equipment to known hazards.

Contracts should include language that establishes standards for complying with Federal law and Army regulations.

What We Can Do to Influence Contract Safety:

The organization (requiring activity) can:

- Establish requirements (Statement of Work, Performance Work Statement).   Clearly define jobs, roles, responsibilities, and direct reports.   Include site specific safety requirements, responsibilities, and recordkeeping.
- Recommend CORs. Generate Quality Assurance Surveillance Plan (QASP).
- Prepare an onsite safety orientation for contractors to be conducted prior to their work beginning.

The contracting command can:

- Generate contractual documentation.
- Appoint a COR.
- Provide guidance and oversight.
- Report accidents.
- Select contracts with good safety policies and records, low workers' compensation rates, and low incident/illness rates.

Acquisition Strategy Checklist

- Identify requirement in terms of desired outcome(s) to be satisfied.
  Generate contractual documentation. How will the contractor manage, administrate, and operate an effective safety program that is capable of implementing Federal, Department of Defense, organizational safety, and occupational health standards as well as other requirements to reduce accidental risk to our resources?
- Metrics (How We Know Safety Performance is Measured).
  Identify the performance standards/metrics (i.e., quality, timeliness, quantity, cost.) that will be used to measure contractor performance against the requirements.   Identify the method(s) that will be used to assess contractor performance against the performance standards/metrics. (Are accidents being reported?)
- Quality Assurance Surveillance Plan (QASP)
  Has a Quality Assurance Surveillance Plan (QASP) been prepared (including safety metrics) IAW Secretary of the Army Memorandum dated Feb. 9, 2007, entitled, "Contract Administration and Surveillance for Service Contracts?
- Has a qualified applicant been nominated and trained to ensure a properly qualified COR is appointed prior to contract award?

   Other critical elements must be included when ammunition, explosives, or chemicals are involved.

Notes

Contractor Accident Reporting*:* Under certain circumstances occupational injuries and illnesses reported by a contractor or subcontractor may be required to be recorded on appropriate Army accident forms and the Army civilian OSHA 300 Log.   For more information please refer to Section 5 on Accident Investigation and Reporting in this guide.
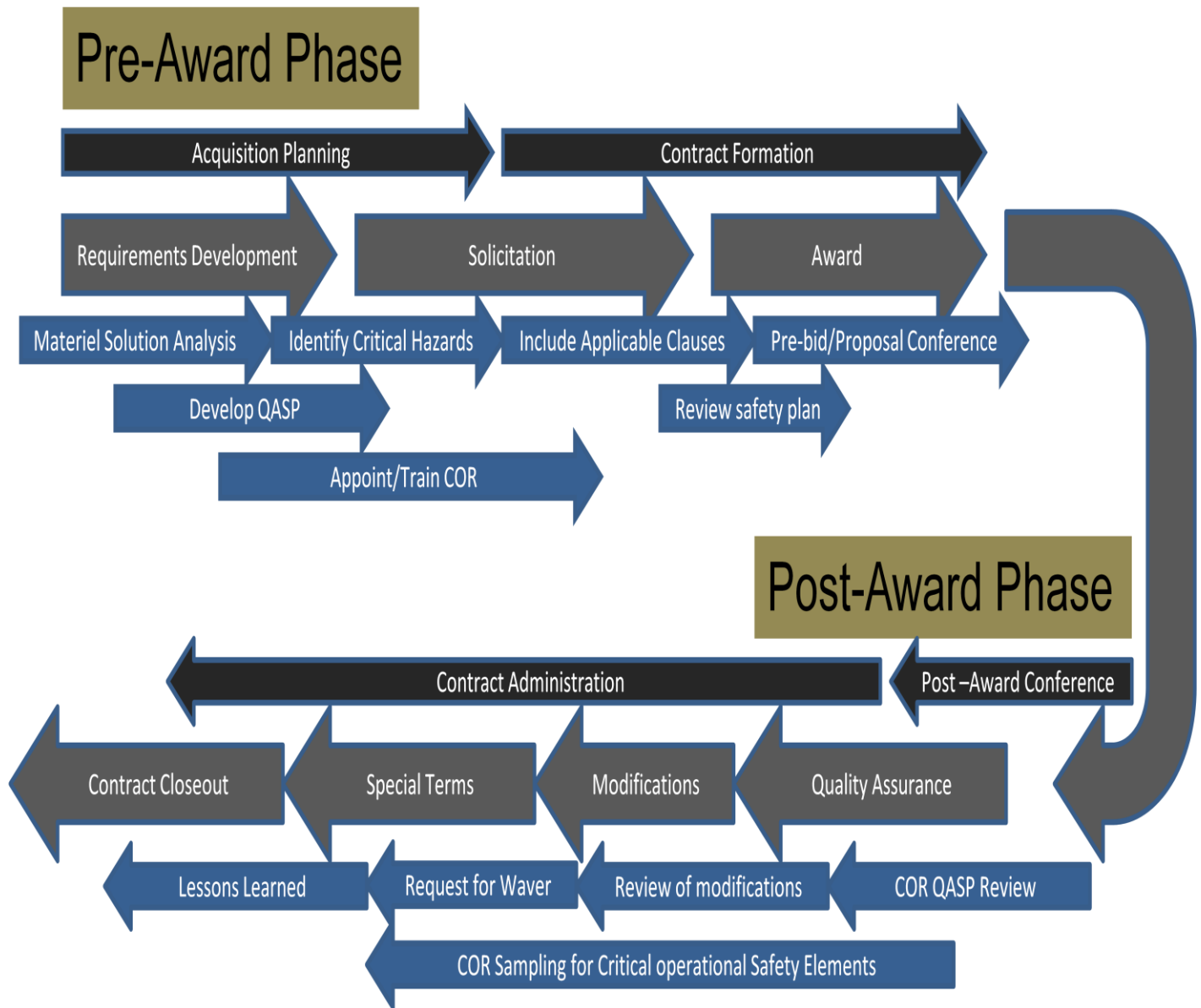
References:

Army Contracting Command (ACC) Safety Office E-mail; redstone-hqacc-safety@conus.army.mil

AR 385-10: The Army Safety Program

DA Pam 385-40: Army Accident Investigation and Reporting

Secretary of the Army Memorandum dated 09 Feb 2007, entitled "Contract

Administration and Surveillance for Service Contracts

Contracting Safety Process

Pre-Award Phase

Acquisition Planning → Contract Formation →

Requirements Development → Solicitation → Award →

Materiel Solution Analysis | Identify Critical Hazards | Include Applicable Clauses | Pre-bid/Proposal Conference

Develop QASP

Review safety plan

Appoint/Train COR

Post-Award Phase

← Contract Administration ← Post –Award Conference

← Contract Closeout ← Special Terms ← Modifications ← Quality Assurance

Lessons Learned | Request for Waver | Review of modifications | COR QASP Review

COR Sampling for Critical operational Safety Elements

Blue Arrows Are:

Involved in the contract safety process

65

Section 21

REFERENCES

DA Pamphlets

- DA Pam 385-1: Small Unit Safety Officer/ NCO Guide
- DA Pam 385-10: Army Safety Program
- DA Pam 385-40: Army Accident Investigation and Reporting

Federal Personnel Manual

- Chapter 810, Injury Compensation

National Safety Council (NSC)

- Accident Prevention Manual for Industrial Operations, 7th Ed.

- Supervisors Safety Manual, 5th Ed.

Occupational Safety and Health Act (OSHA)

- 29 CFR 1910: Code of Federal Regulations, Occupational Safety & Health Standards.
- 29 CFR 1960: Code of Federal Regulations, Basic Program Elements for Federal Employee
- Occupational Safety & Health Programs and Related Matters.
- Public Law 91-596: Occupational Safety & Health Act of 1970

Regulations

- AR 385-10: The Army Safety Program

Web Links:

- Caterpillar Toolbox Safety Talk: http://safety.cat.com/cda/files/1440453/7/Building+a+Safety+Culture_V1010.1.pdf
- DoD Ergonomics Working Group: http://www.denix.osd.mil/ergoworkinggroup/publications/ergonews.cfm
- OSHA web site: www.osha.gov
- USACR/SAFETY CENTER: https://safety.army.mil/

Section 22

APPENDIX A

GETTING STARTED

New supervisors often ask: "Where do I start?" Two primary areas to consider:

1. Are physical facilities safe?   When was the last safety inspection of work areas and what were the results?   Was action taken to resolve identified hazards?
2. What written programs / procedures are necessary to manage the safety and health program and reduce likelihood of accidents and injuries?

Start by assessing what safety standards and programs apply to your work areas and operations.   Several OSHA standards require written programs to identify responsibilities and ensure compliance with requirements.   The following are selected OSHA requirements that apply to most organizations:

- **Hazard Communication Program**. This standard is designed to ensure that employers and employees know about hazardous chemicals in the workplace and how to protect themselves.   Employers with employees who may be exposed to hazardous chemicals in the workplace must prepare and implement a written Hazard Communication Program and comply with other requirements of the standard.
    - Review your organization's Hazard Communication Plan to ensure it is up-to-date, adequately addresses assignment of responsibilities, and incorporates requirements called for in the recent modification of the Hazard Communication Standard's adoption of the Globally Harmonizing System (GHS).
    - For more information see OSHA standard 1910.1200: www.osha.gov.
        - OSHA's web site includes a fact sheet, a sample program: Model Plans and Programs for the OSHA Bloodborne Pathogens and Hazard Communications Standards; OSHA Publication 3186 (2003). http://www.osha.gov/Publications/osha3186.pdf
        - OSHA Safety and Health Topics Page: Hazard Communication – OSHA Standards at http://www.osha.gov/dsg/hazcom/index.html

- **Emergency Action Plans**.   OSHA recommends that organizations have an Emergency Action Plan.   An Emergency Action Plan describes the actions employees should take to ensure their safety in a fire or other emergency situation.
    - For more information see OSHA web site: www.osha.gov: 1910.38.
    - Principal Emergency Response and Preparedness – Requirements and Guidance. OSHA Publication 3122 (2004). http://www.osha.gov/Publications/osha3122.html

- How to Plan for Workplace Emergencies and Evacuations. OSHA Publication 3088 (2001). http://www.osha.gov/Publications/osha3088.pdf

- **Fire Safety**.   OSHA recommends that all employers have a Fire Prevention Plan that identifies responsibilities for fire prevention, potential fire sources, and fire prevention measures.
    - For more information see OSHA standard 1910.39: www.osha.gov
    - OSHA Fact Sheet: Fire Safety in the Workplace http://www.osha.gov/OshDoc/data_Hurricane_Facts/floodcleanup.pdf
    - Review plan requirements. OSHA eTool: Evacuation Plan and Procedures http://www.osha.gov/SLTC/etools/evacuation/index.html
    - OSHA Safety and Health Topics Page: Fire Safety

- **Exit Routes.**   Maintain exit routes ready for use.   All employers must comply with OSHA's requirements for exit routes in the workplace.
    - For more information see OSHA standard 1910.34 / 1910.35 / 1910.36 / 1910.37: www.osha.gov
    - OSHA QuickCard: Emergency Exit Routes.
    - OSHA Publication 3183 (2003) http://www.osha.gov/Publications/osha3183.pdf
    - OSHA Fact Sheet: Emergency Exit Routes http://www.osha.gov/OshDoc/data_General_Facts/emergency-exit-routes-factsheet.pdf

- **Walking/Working Surfaces**.   Floors, aisles, platforms, ladders, stairways, and other walking/working surfaces are present, to some extent, in all general industry workplaces. Slips, trips, and falls from these surfaces constitute the majority of general industry accidents. The OSHA standards for walking and working surfaces apply to all permanent places of employment, except where only domestic, mining, or agricultural work is performed.   Workers must be protected from falls when working at four feet or higher.
    - For more information see OSHA standard 1910 Subpart D: www.osha.gov
    - OSHA booklet. Stairways and Ladders. OSHA Publication 3124 (2003) http://www.osha.gov/Publications/ladders/osha3124.html
    - OSHA Safety and Health Topics Page: Walking/Working Surfaces

- **Medical and First Aid**.   OSHA requires employers to provide medical and first-aid personnel and supplies commensurate with the hazards of the workplace. The details of a workplace medical and first-aid program are dependent on the circumstances of each workplace and employer.
    - For more information see OSHA booklet   Best Practices Guide: Fundamentals of a Workplace First-Aid Program OSHA Publication 3317 (2006)
    - 29 CFR 1910.151

- OSHA Safety and Health Topics Page: Medical and First Aid – OSHA

- **Machine Guarding**. If you have employees who operate machinery (e.g., saws, slicers, shears, slitters, power presses, etc.), you may be subject to OSHA's Machine Guarding requirements.

  - For more information see OSHA standard 1910. Subpart O: www.osha.gov
  - OSHA Publication: Concepts and Techniques of Machine Safeguarding
  - OSHA Quick Card. Amputations
  - OSHA Fact Sheet: Amputations
  - OSHA Safety and Health Topics Page: Machine Guard

- **Lockout / Tagout**. If your employees service or maintain machines or equipment that could start up unexpectedly or release hazardous energy, you need to implement a written Lockout/Tagout program and train workers.

  - For more information see: OSHA Fact Sheet: Lockout/Tagout http://www.osha.gov/OshDoc/data_General_Facts/factsheet-lockout-tagout.pdf
  - OSHA standard 29 CFR 1910.147
  - OSHA Safety and Health Topics Page: Lockout/Tagout

- **Electrical.** Electrical hazards, such as wiring deficiencies, are one of the hazards most frequently cited by OSHA. OSHA's electrical standards include design requirements for electrical systems and safety-related work practices.

  - For information see OSHA standard 1910. Subpart S
  - OSHA Quick Card. Electrical Safety http://www.osha.gov/OshDoc/data_Hurricane_Facts/electrical_safety.pdf
  - OSHA booklet. Controlling Electrical Hazards. OSHA Publication 3075 (2002)
  - OSHA Safety and Health Topics Page: Electrical http://www.osha.gov/SLTC/electrical/index.html

- **Personal Protective Equipment**. Employers must perform an assessment of each operation in their workplace to determine if their employees are required to wear personal protective equipment (PPE). Note that engineering controls and work practices are the preferred methods for protecting employees — OSHA generally considers PPE to be the least desirable means of controlling employee exposure. A written PPE program identifies responsibilities for conducting the hazard assessment, purchase of PPE, user training and enforcement of equipment use.

  - For more information: OSHA 1910 Subpart I
  - OSHA Fact Sheet: Personal Protective Equipment
  - OSHA booklet. Personal Protective Equipment.
  - OSHA Publication 3151 (2003). www.**osha**.gov/**Publications**/**osha3151**.pdf

- OSHA Safety and Health Topics Page: Personal Protective Equipment

- **Respirator Program**.   If necessary to protect the health of your employees, you must provide appropriate respirators.   Worker who must routinely wear respirators must be enrolled in a Respiratory Protection program that meets the requirements of OSHA's Respiratory Protection standard.   This involves medical evaluation, fit testing, and individual training for proper use.   Industrial hygiene testing and support is necessary to help determine potential exposure and selection of appropriate respiratory equipment.

  - For information: OSHA 1910.134
  - OSHA booklet. Respiratory Protection.
  - OSHA Publication 3079 (2002) www.**osha**.gov/**Publications**/**osha3079**.pdfOSHA Safety and Health Topics Page: Respiratory Protection
  - OSHA Safety and Health Topics Page: Respiratory Protection – OSHA Standards

- **Hearing Conservation Program.** - Noise.   Employers whose employees are exposed to excessive **noise** (e.g., conditions that make normal conversation difficult) may be required to implement a Hearing Conservation program.
  - OSHA Standard 1910.95
  - OSHA booklet. Hearing Conservation. OSHA Publication 3074 (2002).
  - OSHA Safety and Health Topics Page: Hearing Conservation

- **Confined Space Program**.   Employers should evaluate their workplaces for the presence of **confined spaces**.   Permit-required confines space operations require written procedures, entry permit system, atmospheric testing, rescue equipment, and training for supervisors, attendant, and entrant.

  - For more information see: 29 CFR 1910.146, www.osha.gov
  - OSHA Safety and Health Topics Page: Confined Spaces
  - Use an online tool to determine if you are subject to OSHA's standard for permit-required confined spaces.
  - OSHA eTool: Confined Spaces Advisor
  - OSHA Safety and Health Topics Page: Confined Spaces

- **Bloodborne Pathogen Program (BBP)**. If employees may be exposed to **blood or bodily fluids** as part of their assigned duties, you may be subject to OSHA's Bloodborne Pathogens standard. BBP requires written procedures, PPE and training.

  - For more information see: 1910.1030, www.osha.gov
  - OSHA Fact Sheet: Bloodborne Pathogens
  - OSHA Safety and Health Topics Page: Bloodborne Pathogens Safety and Needlestick Prevention

- **On Duty driving**: On-duty Civilian driving accidents do happen. In addition to licensing and training requirements for government vehicles and OSHA Powered Industrial truck (PIT) requirements, take into account road conditions, weather, and other risk factors every time your drivers hit the road.

  - For more information see: Travel Risk Planning System (TRiPS). TRiPS is an automated trip planning tool that incorporates the principals of Risk Management and facilitates a dialogue between supervisor and subordinate prior to POV travel.
  - Driver's Training Toolbox https://safety.army.mil/drivertrainingtoolbox/DTTBAKOLogin/tabid/2139/Default.aspx?returnurl=%2fdrivertrainingtoolbox%2fHome%2ftabid%2f1869%2fDefault.aspx. Please direct your questions, comments or suggestions to the Ground Directorate at Safe.helpdesk@conus.army.mil or call (334) 255-1390.
  - GSA Fleet Drive thru: http://drivethru.fas.gsa.gov/drivethru/drivethru/ for Information and Instructional videos on GSA Fleet vehicles.
  - If your employees operate powered industrial trucks (**PIT)** (i.e., forklifts, tugs, and motorized material movers), you are subject to OSHA's Powered Industrial Trucks standard.   OSHA standards address operator training and licensing, equipment inspection and safe operating procedures.   The standard requires initial operator training and re-evaluation every three years.1910.178, Powered Industrial Trucks www.osha.gov
  - Review materials related to the standard's operator training requirements, including sample daily checklists and an outline of a sample training program. OSHA Training Materials: Powered Industrial Trucks Operator Training
  - OSHA booklet.   Materials Handling and Storage.   OSHA Publication 2236 (2002).
  - OSHA Safety and Health Topics Page: Powered Industrial Trucks

This is not a comprehensive list of all OSHA / Army safety requirements. Additional standards may apply to your workplace. Be sure to review OSHA's general industry standards (29 CFR 1910) for other requirements.   In addition, section 5(a)(1) of the Occupational Safety and Health Act, known as the General Duty Clause, requires employers to provide their employees with a workplace that is free of recognized hazards likely to cause death or serious physical harm.   Always be on the lookout for unsafe conditions and unsafe behaviors that set the stage for accidents and injuries.

Everyone should know and apply the three "R"s.
• Recognize hazards.
• Reduce/remove hazards.
• Report hazards to ensure they get fixed.