

# **BUREAU OF INDIAN AFFAIRS**

## **SAFETY AND HEALTH HANDBOOK FOR FIELD OPERATIONS**



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25 IAM - Safety and Occupational Health Program

# Safety and Health for Field Operations



**BIA Safety and Health Handbook**

U.S. Department of the Interior  
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# INTRODUCTION

This Manual Handbook was developed to complement 25 Indian Affairs Manual. This Handbook lays the groundwork for incorporating occupational safety and health into the planning of all bureau work projects and tasks. This Handbook will assist supervisors in providing a safe and healthful workplace for bureau employees. It will provide employees with information on safe work practices, identification of hazards, and reporting of unsafe working conditions.

This Handbook is a tool that supports the supervisor's and manager's responsibility to promote positive safety and health attitudes among employees, and integrates safe procedures standards into all bureau activities. Supervisors are responsible for recognizing and rewarding employees for outstanding performance in the area of occupational safety and health.

Every bureau employee is responsible for following safe work practices and procedures, and identifying and reporting unsafe conditions. The purpose of this Handbook is to provide assistance in carrying out those responsibilities.

All employees are responsible for familiarizing themselves with this Handbook and for utilizing safe work practices and procedures during performance of duties. For the purposes of this Handbook, bureau volunteers are considered to be employees.

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**Note: Chapter 28: Recordkeeping and Reporting** was added to this online handbook in May 2020 (but was developed in July 2006). It comes right after Chapter 27 but page numbers do not match.

APPENDIX - FACILITIES SAFETY INSPECTION CHECKLIST now begins on actual page 341 of this document (not page 367)

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***TOPIC 1***  
**JOB HAZARD  
ANALYSIS**

1.1 **References**

- A. 485 OM Safety & Health Handbook Chapter 14.

1.2 **Procedures.** Job Hazard Analysis (JHA) procedures include identification of tasks, potential hazards, and safe job practices/procedures. Employees and supervisors should work together in the development of the JHA to assure that all characteristics of the job are addressed and that the safest and most efficient means of performing a job will be utilized. A JHA is required to be completed for:

- A. Jobs or work practices that have potential hazards
- B. New, non routine, or hazardous tasks to be performed where potential hazards exist
- C. Jobs that may require employee use of out-of-the-ordinary personal protective equipment (PPE)
- D. Changes in equipment, work environment, conditions, practices, policies, or materials

1.3 **Responsibility.** Supervisors shall discuss the job hazards with employees prior to beginning new projects or upon changing work sites, identify any hazards not noted on the JHA, and discuss ways to reduce these hazards, including the use of protective equipment. Supervisors and appropriate line managers shall ensure that established JHAs are reviewed and signed prior to any nonroutine task, or at the beginning of the field season or fire season.

- A. Conducting a Job Hazard Analysis.** In order to develop a JHA, the job to be evaluated is broken down into basic steps by the supervisor and the employee assigned to perform the job. They identify hazards and safe job procedures.

DSRM Form, Job Hazard Analysis, is used for the preparation of JHAs.

1. **Identification of Tasks.** Each step of a job should identify a major task and briefly describe each in the order in which it is performed. Three or four words may be sufficient to describe each job step. Avoid steps that are too detailed. They will make the JHA unnecessarily long and trivial. For example, sanding and painting a picnic table are major tasks to be listed; opening a paint can is not considered a major task and would not be included on the JHA.  
Most jobs can be separated into 12 to 15 basic steps.
2. **Potential Hazards.** Each step is examined to identify potential hazards. Hazards may be associated with work practices, procedures, equipment, materials, or environment. Questions to be considered to help identify specific hazards include: Could the worker come in contact with; be struck by; strike against; be caught in, under, between; slip, trip, or fall; or suffer from overexertion?
3. **Safe Job Procedures.** Safe job procedures to reduce or abate the hazards are identified. The use of general terms such as "be careful", "use caution", or "work safely" should be avoided. Safe job procedures will normally fall into one of the categories listed below:
  - a. Environmental change
  - b. Reduction in the frequency task is performed
  - c. Personal protective equipment changes
  - d. Job procedures/work practices
  - e. Safe behaviors

- B. **Job Hazard Analysis Review.** A JHA review by the local safety manager is done to ensure that bureau policy and OSHA standards are integrated into the JHA, and that the PPE required is properly selected and meets the appropriate ANSI standard. The safety manager will sign the JHAs after review and return the original to the supervisor.
- C. **Job Hazard Analysis Reevaluation.** Established JHAs should be reevaluated periodically, at least every three years, to ensure that they reflect the latest, safest, and most efficient way to perform the task. New equipment, tools, methods, and changes in safety standards should require modifications in JHAs.
- D. **Job Hazard Analysis Recordkeeping.** Supervisors are responsible for maintaining JHA records within their work group.



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## ***TOPIC 2*** **TRAINING**

## 2.1 References

- A. 29 CFR 1960 Subpart H.
- B. p.L. 91-596, Occupational Safety and Health Act of 1970
- C. 485 DM Chapter 13.1.

## 2.2 Procedures. Supervisors are responsible for establishing when, where, and how to do each job safely. They are to ensure the proper use and care of personal protective equipment (PPE) and bureau property. Supervisors shall ensure that their employees receive the training necessary to safely perform job tasks. The supervisor may obtain assistance for developing and conducting safety training from qualified and experienced employees, safety managers, private industry, OSHA, and other federal programs. However, it is the supervisor's responsibility to ensure the quality and timeliness of the safety training.

**A. General Training.** It is imperative that all bureau employees be provided safety training prior to assignment and throughout the course of their employment.

**B. Mandatory Training Requirements.** There are numerous jobs throughout the Bureau that require training and/or certification prior to performing certain tasks. Supervisors are advised to check with appropriate safety personnel if an area is not covered. Mandatory training must be documented.

C. The following table summarizes mandatory and optional training requirements based upon tasks assigned and do not apply to everyone. Consult with the local safety manager or training officer for specific requirements.

### **Mandatory Safety Training Dependent on Position or Job Hazard Analysis (JHA)**

<b>Position/Task</b>	<b>Authority</b>	<b>Frequency</b>
Safety Training for Managers	29 CFR 1960.54	Once
Safety Training for Supervisors	29 CFR 1960.55	Once
Safety Training for Safety Specialists	29 CFR 1960.56	Yearly
Safety Training for Collateral Duty Safety Personnel	29 CFR 1960.58	Once-within six months
Safety Committee Training	29 CFR 1960.58	Once -within six months
Safety Orientation for Employees	29 CFR 1960.59	Once
HazCom (Employee Right-to-Know)	29 CFR 1910.120	Once-unless job change or new chemical added (all employees)
Job Hazard Analysis	485 OM Chapter 14	Once-recurrent review as Job Hazards change
Bloodborne Pathogen Level I	29 CFR 1910.103	Once

## **Mandatory Safety Training Dependent on Position or Job Hazard Analysis (JHA)**

<b>Position/Task</b>	<b>Authority</b>	<b>Frequency</b>
Forklift Safety	29 CFR 1910.178	Once—or as determined by JHA
Respiratory Protection	29 CFR 1910.134	Once—as determined by JHA
First Aid/CPR	26 CFR 1910.151	Every 2 years for CPR, Every 3 years for First Aid—as determined by JHA
Fire Extinguisher	29 CFR 1910.157	Once
Evacuation/Fire Drill	29 CFR 1910.38	Once- yearly
Hearing Conservation	29 CFR 1910.95	Once—as determined by JHA
Welding	29 CFR 1910.252	Once—as determined by JHA
Sign and Tag Recognition	29 CFR 1910.145	Once—as determined by JHA
Lockout/Tagout	29 CFR 1910.147	Once—as determined by JHA
Confined Spaces	29 CFR 1910.21	Each space—as determined by JHA
OSHA PPE Standard Personal Protective Measures	29 CFR 1910.132 & 29 CFR 1926.21	Once—as determined by JHA
Power-Operated Hand Tools	29 CFR 1926.302	Once—as determined by JHA
Woodworking Tools	29 CFR 1926.304	Once—as determined by JHA
Gas Welding	29 CFR 1926.350	Once—as determined by JHA
Arc Welding	29 CFR 1926.354	Once—as determined by JHA
Commercial Driver's License (CDL)	49 CFR 383-395	5 years—as determined by JHA
Fall Protection -Towers -Telecommunication	29 CFR 1926.500 29 CFR 1910.29 29 CFR 1910.268	As determined by JHA
Blaster's Certification and Training	BIA Safety H- Chapter 29	16 hours initial training, first aid certification, 8 hours renewal course every 3 years
ORV (Off-Road Vehicle) Operation	BIA Safety H- Chapter 4	Once—as determined by JHA

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***TOPIC 3***  
**FIELDWORK**

### 3.1 **References**

A. 29 CFR 1910.142 Temporary Labor Camps.

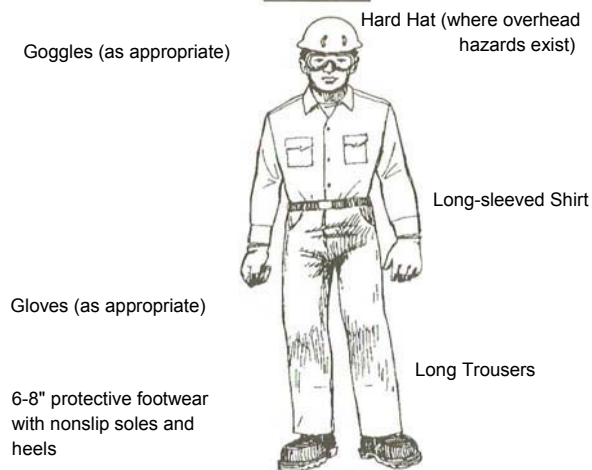
### 3.2 **Procedures.** Bureau activities sometimes require employees to travel and work alone in remote and hazardous areas. At least two employees should be assigned to work in such areas, and always with dependable, established communications. Assessing field hazards is a continual process. The Job Hazard Analysis (JHA) process will assist both supervisors and employees in minimizing or eliminating those hazards. Safety orientation is mandatory for employees involved in field activities.

**A. Check-Out/Check-In System.** The Bureau's check-out/check-in system requires maintaining a written record containing the itinerary, name of employee, work area, estimated time of return, and miscellaneous information such as names of other crew members, etc. In the event an employee does not return or contact the office at the designated times, search and rescue procedures shall be initiated. All field camps must have established communications to request assistance.

### 3.3 **Field Attire.** Safe field attire will be determined by management, JHA, or as required by specific activity. For general working conditions, the recommended attire is the following: 6- to 8-inch protective footwear with nonslip soles and heels, long trousers, and long-sleeved shirt (see Illustration 3-1).

### 3.4 **Foot Travel.** Always notify other workers of intended route and destination, and work close enough to them to permit a quick response to a call for assistance.

**A. Avoid** travel, resting, or camping in snag or high windfall areas when windy weather or lightning may endanger life and property.

**Illustration 3-1**

- B. **Avoid using** rotten or loose-barked logs as foot logs over creeks or gullies. Have secure footing at all times. Rocky slopes, especially slide rock and steep country, can be treacherous. Have one hand free to protect against falls or obstructions. Carry hand tools on lower side when walking along contours or slopes.
- C. **Always be on guard against** injury from falling trees, snags, limbs, rolling logs, or rocks. Don't run blindly from a falling rock, log, or tree. Determine its falling direction, get out of its path, and alert others.
- D. **Guard against** twigs or branches striking face and protect co-workers from similar whiplashes.
- E. **When possible, detour around hazardous areas** such as rock slides, lava flows, rim rock, sand dunes, steep or undercut river banks, quicksand, dense brush, deep gullies, canyons, bear dens, hornet nests, poison ivy or poison oak, etc.

**3.5 Vehicle Travel.** In case of a disabled or stuck vehicle, remain with the vehicle. The vehicle can be more easily seen from the air than a person can alone, and it also provides shelter from the sun or the cold. If lost and without radio contact, sweep the horizon during the daytime with the light beam of a signal mirror. This beam is visible over a great distance and might be seen by someone. Flash vehicle headlights (three rapid flashes) at night, especially if aircraft can be heard.

**3.6 Winter Travel.** Prior to winter travel, follow office check-out/check-in procedures for personnel and winter survival equipment. To minimize the hazards associated with winter driving, both the vehicle and the driver must be prepared in advance. Always drive at a speed that matches visibility, traffic, and road conditions.

- A. To see and be seen by others requires the driver to clean all snow and ice from the **entire** vehicle hood, roof, trunk, lights, and windows. Snow left on any of these areas increases the possibility that visibility will be affected when the vehicle is in motion.
- B. Follow manufacturers' recommendations when equipping vehicles with studded tires or chains.
- C. Snow tires are recommended, but chains provide the best starting and stopping performance in severe snow and on icy surfaces. Radial tires are not snow tires unless they have a snow-tread configuration and are marked "M&S" for "mud and snow."
- D. If your vehicle breaks down and you are stranded, it is best to stay with your vehicle. You should only run your heat for 10 minutes every hour or so to conserve fuel. Make sure the exhaust pipe is clear of snow. Open a window every once in a while to let in fresh air.



- 3.7 Desert and Arid Areas. Never go into the desert without first informing someone of your destination, your route, and when you will return (check-out/check-in). Stick to your plan.
- A. Carry at least 1 gallon of water per person per day of your trip. Plastic jugs are handy and portable.
  - B. Be sure your vehicle is in good condition.
  - C. Keep an eye on the sky. Flash floods may occur any time you are downslope from "thunderheads," even though it may not rain where you are.
  - D. If your vehicle breaks down, stay near it. Your emergency supplies are with the vehicle. (See 4.3 C and E)
  - E. If water is limited, keep your mouth shut and breathe through your nose to reduce water loss and drying of mucous membranes. Do not talk, eat, smoke, drink alcohol, or take salt.
  - F. Do not sit or lie directly on the ground. It may be 30 degrees or more hotter than the air.
  - G. Although nights can be very cold, necessitating proper attire, clothing for the desert should be lightweight, light colored, and cover the whole body. Have appropriate eyewear to protect eyes from sun glare.
- 3.8 Reserved
- 3.9 Remote Camp Safety and Sanitation. All sites used for camps must be adequately drained. They shall not be subject to periodic flooding, nor located within 200 feet of swamps, pools, sinkholes, or other surface collections of water, unless mosquitoes can be controlled on such still-water surfaces. The camp must be located 50 the drainage from and through the camp

will not endanger any domestic or public water supply. All sites must be graded, ditched, and rendered free from depressions in which water may become a nuisance. All sites must be adequate in size to prevent overcrowding of necessary structures. The principal camp area where food is prepared and served and where sleeping quarters are located must be at least 500 feet from any area in which livestock are kept.

#### **A. References**

1.29 CFR 1910.141-142.

**B. Gray Water.** Gray water disposal pits shall be constructed to permit leaching within 24 hours. If leaching does not occur because of water table, a series of shallow small canals shall be constructed for evaporation and leaching. Gray water disposal area will be located at least 50 feet down gradient from water source.

**C. Potable Water.** Transported potable water must be obtained from a treated source, or chlorinated, if obtained from a nontreated source, and kept pure and free from contamination through proper handling and storage procedures. Request the advice of local health departments, prior to the use of any surface water such as lakes, springs, rivers, and streams. Canteens, if not in use, must be emptied, disinfected, and dried.

**D. Toilet Facilities.** Approved toilet facilities adequate for the capacity of the camp must be provided and must be located 200 feet or more from any water source. A description of toilet facilities requirements is stated in 29 CFR 1910.142(d).

**E. Kitchen Tents.** Keep kitchen tents clean and tidy and keep foodstuffs away from cleaning supplies. Two fire extinguishers should be present and ready.

1. Store foodstuffs in rodent- and pest-proof containers.
2. Make sure pots and pans are clean and inverted for dust and germ control. Silverware should be clean and covered.
3. Freezer temperature should be set at zero or below; refrigerators should be set at 45 degrees.

**F. Propane Tanks and Generators.** Propane tanks will be properly anchored. Generators should be placed downwind with plywood noise control. Electrical panel boxes are to be protected from the weather. Propane tank and other fuel storage containers should be at least 50 feet away from camp and properly posted with "No Smoking" signs.

**3.10 Camp Aviation Procedures.** When established, a camp fueling site must have the proper fuel containment. Both fuel bladders and barreled fuel must be kept in secondary containment (diked) in case of a fuel spill. The daily fuel log must be kept current. "No Smoking" signs must be posted and visible at any approach to the site. (No smoking is allowed within 50 feet of fueling site). Fuel source must be grounded and bonded through machinery (filters, pumps, etc.) and then to aircraft. The site must be located a minimum of 100 feet from personnel quarters and must be kept tidy with no loose articles allowed in area that might be blown into helicopter rotors or aircraft propellers.

A. A windsock shall be installed in accordance with GAS Heliport Specifications.

B. The fuel tank pump will be equipped with a remote switch.

3.11 **Lightning Storms.** Lightning seeks the easiest route (not necessarily the shortest) between positive and negative regions within a cloud or between positive charges on the ground and negative charges in the cloud. The human body offers a path of least resistance. The hazard of lightning occurs in two ways, either as a direct hit or as a ground current.

#### **A. General Guidelines During Lightning Storms**

1. Seek shelter inside a building.
2. Select fiberglass or plastic hard hats rather than those of metal construction.
3. Don't work on fences, electrical lines, pipelines, or structural steel fabrication.
4. Don't use metal objects like fishing rods, soil augers, well-logging equipment, etc., that are in contact with the ground.
5. Automobiles provide a safe shelter because the metal body creates a pathway for the lightning around your body. Avoid contact with metal objects in the car where your body could become a pathway.
6. Lightning tends to strike the highest electrically conductive object in the area peaks, ridges, towers, trees, isolated sheds (especially with metal roof or siding), wire fences, etc. Seek lower elevation, as in valleys or canyons.

7. Avoid streams and lakes. If in a low area, be cautious of flash floods and sloughing off of earthen or rock materials from above.
8. Sit on some insulating material **if** possible, such as coiled rope, a wooden pack board, a folded sleeping bag, a wool shirt, etc.
9. A crouched position-sitting on your feet with the knees drawn up and feet close together-seems best to minimize the distance spanned by your contact points. Avoid any position with a hand, shoulder, or head touching a surface.

3.12 **Horse Travel.** Only experienced personnel should ride, handle, saddle, or pack horses. A demonstrated ability to ride on all types of terrain, handle, saddle, and pack horses is required. Use of personally owned horse and equipment must be authorized.

**A. Inexperience with Horses.** Inexperienced personnel who must use horse transportation must at all times be supervised by experienced personnel and be provided with specific step-bystep instructions during each phase of activity. Inexperienced personnel must not engage in any nontransportation horse activity (wrangling, roundup, etc.). Inexperienced personnel should consider the following guidelines:

1. Speak to animals upon approach. Avoid quick movements and coming up to them from the rear.
2. Lead animals around gently after saddling. Check cinch for tightness before mounting or packing; frequently when riding.
3. Never wrap reins or lead rope around hand.
4. Avoid carrying too much gear and equipment

on a saddle horse. Balance the weight on both sides.

5. Avoid excess lead rope to prevent entanglement.
6. When tying an animal, avoid slack that might entangle person or animal. Never tie to a barbed wire or woven wire fence.
7. When tying an animal, use a halter.
8. Tie animals to objects that they can't walk completely around. Take special precautions with animals that might panic easily.

**B. Tips for Riding a Horse.** Personnel should consider the following suggestions:

1. Don't wear shoes or boots that may hang up in the stirrup.
2. Wear snug-fitting clothing.
3. Use chaps or tapaderas when riding in brush.
4. Never beat or abuse an animal.
5. Always mount and dismount from the left side, keeping near rein tight. On slopes, mount from the upper side. Never wrap rein around saddle horn.
6. Don't gouge horse with spur or heel or surprise animal with erratic actions.
7. Dismount horse when lightning is near or overhead. A clap of thunder might stampede an unpredictable animal.
8. Avoid running a horse on pavement, frozen ground, or up and down hills.

9. Never shoot a firearm while on horseback.
10. Don't force an animal into impossible situations. Get off and lead the horse across areas where there is poor footing or clearance.
11. Picket or hobble animals only when necessary, but be aware of hazards such as mud holes, obstructions, other animals, etc.

**3.13 Potentially Violent Personal Encounters.** Employees need to be aware of the potential for personal violence directed against them while they are in the field and be alert to the warning signs during personal encounters with individuals. Employees need to plan ahead and request permission in advance from landowners to ensure that they are not trespassing on private lands. If advance permission is not obtained from the landowner, an employee needs to find another way around the property or must wait until permission is granted. Employees need to be aware of potential criminal activity. (e.g., illegal dumping on public lands, clandestine drug labs, marijuana cultivation, etc.) in remote areas of public lands and be prepared to leave the area immediately, if necessary, because persons engaged in such criminal activity can be hostile and violent if discovered. If an employee meets a member of the public who is hostile, the employee should be polite and non-threatening, and leave the area as soon as possible and report the incident to his or her supervisor and law enforcement authorities if appropriate.

The vast majority of public land users are courteous and friendly, and want to use public lands properly and legally. Most employees' contacts with them will be friendly and educational to both parties. However, there are exceptions to this rule, and employees should cultivate a situational awareness when they are out in the field. If an employee feels at all uneasy or uncertain about a situation in the field, he or she should not be embarrassed to leave the area. The job can always

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***TOPIC 4***  
**MOTOR VEHICLE  
AND EQUIPMENT  
SAFETY**



#### 4.1 References

- A. 370 DM Appendix A
- B. 485 DM Chapter 16
- C. 5 CFR 930 Subpart A Motor Vehicle Operators
- D. 49 CFR 383-395 Commercial Drivers License (CDL)
- E. 29 CFR 1926.601 Motor Vehicles

- 4.2 **Procedures.** When an employee's duties require operation of a motor vehicle for official business, whether bureau-owned, GSA Fleet, commercially leased, or privately owned, the employee will be required to submit a request for a driver's authorization. Form DI-131 (Application for U.S. Government Motor Vehicle Operator's Identification Card), or equivalent form and Form OF-345 (Physical Fitness Inquiry for Motor Vehicle Operators), or equivalent form, are used to obtain a driving authorization. The employee must hold a valid state driver's license in order to obtain and retain the authorization. Authorization to drive on official business must be renewed every year.

##### **A. Driving Limitations**

1. **Maximum Driving Time Restriction.**  
Employees will not exceed eight hours of driving time (behind the wheel) during a 16-hour duty period. Breaks of 15 minutes are recommended every two hours when driving continuously.
2. **Rest Requirement.** At least eight consecutive hours of rest, without duty, are required prior to each duty period that requires driving.

3. **Cell Phone use** by the operator of a motor vehicle while the vehicle is in motion is prohibited.
4. **Other Limitations.** Management employees may place further limitations on the above hours of duty and/or driving time due to safety factors (i.e., fatigue, weather, illness). Supervisor should be notified of changes and delays.

## B. Types of Operators

1. **Operators of Sedans and Light Trucks.** The 5 CFR 930 requires the employee to have a valid state driver's license in his or her possession at all times while driving on official business. An incidental operator is any employee who is required to operate a motor vehicle in order to properly carry out his/her assigned duties but whose principal duties are not operating a motor vehicle and his/her position is not classified as a motor vehicle operator.
2. **Full-Time Operators.** Employees operating any motor vehicle with a GVWR of 26,000 pounds or more, towing a vehicle 10,000 pounds GVWR or more, hauling hazardous material requiring the vehicle to be placarded, or transporting 16 or more persons, including the driver, must possess a valid Commercial Drivers License (CDL) with all applicable endorsements. Employees shall be at least 21 years of age and shall comply with the necessary health monitoring requirements for a CDL. Authorization must be noted in the personnel file or maintained following local recordkeeping procedures.

**3. Operators of Specialized Equipment.**

Authorization to operate specialized equipment (Le., 4x4 vehicles, dump trucks, front-end loaders, dozers, forklifts, backhoes, tracksters, skid-steer equipment, snowmobiles, all-terrain vehicles (ATVs), boats, etc.) must be noted in the personnel file or maintained following local recordkeeping procedures.

**C. Supervisory Responsibility.** Supervisors are responsible for ensuring that employees can satisfactorily operate the vehicle/equipment for which they are authorized. Supervisors have the authority to restrict or terminate authorizations of poor or unsafe drivers. Supervisors are responsible for educating the employee regarding Bureau/Government policy on:

1. Mandatory seat belt use
2. Alcohol/drugs prohibition
3. Vehicle misuse
4. Official passengers
5. Accident reports

**D. Poor Drivers/Unsafe Drivers.** A driver whose known deficiencies make his/her driving unsafe will not drive on official business **until** deficiencies are remedied, or his/her driving must be restricted to compensate for limiting factors. Any driver who has a poor accident record, is careless, uses poor judgment at the wheel, or has numerous driving violations may have his or her driving privileges suspended or revoked even though he or she possesses a valid state driver's license.

- E. **Driver Training.** All drivers whose job duties require the use of a motor vehicle will receive initial defensive driver training within three months of entering on duty and refresher driver training every three years thereafter.

4.3 **Equipment.** Government-owned or Government-leased vehicles will be maintained in good mechanical condition.

- A. **Defective Vehicle.** Vehicle defects identified by the operator or during safety inspections shall be immediately reported to the supervisor and fleet manager. Defective vehicles shall be removed from service until repaired.
- B. **Disabled Vehicle.** The operator may make only authorized emergency repairs to a government vehicle. The operator shall have it towed, if necessary. *(Refer to the vehicle book).*
- C. **Vehicle Inspections.** Monthly vehicle inspections shall be performed and documented by the vehicle operator or designated person. The inspection shall include checking vehicle lights (brake, tail, backup), mirrors, wipers, washers, defroster, gauges, brakes, fluids, and belts. Operators will ensure emergency equipment (firstaid kit, reflectors, jack/lug wrench) is in the vehicle.
- D. **Seat Belts.** Seat belts must be available and used in Bureau motor vehicles. *(Reference Executive Order 13043, April 16, 1997)*
  - 1. Without exception, seat belts must be worn at all times by motor vehicle operators and passengers, regardless of the distance to be traveled or the time involved. If any employee fails to fasten his/her seat belt while riding in a vehicle on official business, he/she is subject to disciplinary action as determined by local management.

2. All heavy, self-propelled equipment fitted with rollover protective structures must have a seat belt for the operator. Seat belt use by the operator is mandatory.

**E. Safety/Survival Equipment.** Every field vehicle shall be equipped with warning flags or reflectors, a tool kit, and a first-aid kit. Additional emergency equipment may be carried in each vehicle as determined by local need.

**F. Fire Extinguishers.** Approved fire extinguishers are required in buses, ambulances, fire engines, fire trucks, heavy motorized mobile equipment, special use vehicles, and as required by Department of Transportation (e.g., hauling of hazardous materials, such as gasoline, explosives, chemicals, etc.). (49 *CFR* 393.95) Fire extinguishers (ABC type) are not required in other vehicles. If installed, they must always be properly maintained and inspected annually.

**G. Accident Reporting Kit.** All bureau-owned or operated motor vehicles, including off-road vehicles and special-use equipment, will carry a packet containing all accident report forms and other information needed by the driver in case of an accident or other emergency. These packets will be General Services Administration (GSA) or BIA Motor Vehicle Accident Reporting Kits.

*SF-91 Operator's Report of Motor Vehicle Accident SF-94  
Statement of Witness  
CA-1 Notice of Traumatic Injury and Claim for  
Continuation of Pay/Compensation (in case of  
injury)*

**4.4 Vehicle Servicing and Repairs.** Maintain and operate vehicles as recommended by the manufacturer. Comply with GSA and bureau requirements on use, care, maintenance, and inspections contained in the looseleaf vehicle book in each vehicle. In case of accident, be familiar with "WHAT TO DO IN CASE OF ACCIDENT" material. Additionally all drivers should:

- A. Maintain records of all repairs and inspections.
- B. Replace tire when the tread depth of any tire on the front steering wheels of any vehicle exceeding 10,000 GVWR falls below 4/32 inch.
- C. Keep interior and exterior of vehicle clean at all times and free of trash and loose items.
- D. Have maintenance done by a qualified mechanic. Always check items repaired before driving vehicle away from repair shop.
- E. Comply with local laws on studded tire use.
- F. Emergency equipment and tools carried inside vehicles shall be secured.
- G. Securely anchor weight ballasts in pickup trucks, if needed. Do not use rocks or boulders.
- H. If vehicles or equipment to be used or transported are equipped with hydraulic lifts, ensure that they are secured in place with safety locks or other devices to prevent accidental lowering.
- I. Before adjusting the chassis of a dump truck with the dump box in an elevated position, secure body with props to prevent accidental lowering.
- J. Use only approved-type safety cans for storage and transportation of gasoline and other flammable liquids. Approved metal cans carried in a pickup bed with a plastic liner can become

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***TOPIC 5***  
**HEAVY**  
**EQUIPMENT**

## 5.1 References

### A. OSHA Standards

1926.600	Equipment
1926.602	Material Handling Equipment
1926.604	Site Clearing
1926.1000	Rollover Protective Structures (ROPS) for Material Handling Equipment
1926.1001	Minimum Performance Criteria for Rollover Protective Structures for Designated Scrapers, Loaders, Dozers, Graders, and Crawler Tractors
1926.1002	Protective Frame (ROPS) Test Procedures and Performance Requirements for Wheel-Type Agricultural and Industrial Tractors Used in Construction
1926.1003	Overhead Protection for Operators of Agricultural and Industrial Tractors
1928.51	Rollover Protective Structures, Agriculture
1928.57	Guarding of Farm Field Equipment

## 5.2 Procedures

### A. Heavy Equipment Operators. Bureau

operators of Government-owned or leased heavy equipment must have a valid state driver's license and Bureau authorization. Prior to authorization, operators must study



and comprehend the operator's manuals for the equipment they will be authorized to operate. Prior to operating specialized equipment, including dozer, loader, grader, etc., proper training and certification shall be completed and documented in employee's personnel file.

**B. Hazardous Conditions.** Under hazardous conditions or in hazardous locations (Le., weather conditions or environmental features that increase risk), radio contact should be maintained with operators. When contact cannot be maintained, another employee should accompany operators.

**C. Compliance with Applicable Regulations.** Load weight, width, height limits, and other requirements for transporting equipment and materials shall be observed. Loads shall be secured and flagged as required.

**D. Job Hazard Analysis.** Prior to operating equipment and performing job tasks, a Job Hazard Analysis (JHA) will be completed as required by BIA Safety Handbook, Chapter 1. The JHA will be completed jointly by supervisor and employees and reviewed by the safety manager.

**E. Personal Protective Equipment and Other Safety**

**Equipment.** Personal protective equipment (PPE) will be provided and used in accordance with *OSHA requirements and bureau regulations*. Rollover Protective Structures (RaPS) and Falling Object Protective Structures (FOPS) will be installed on equipment as required by the OSHA standards previously referenced. Seat belts will be installed and used on all equipment equipped with RaPS or FOPS. Backup alarms will be installed on all bi-directional heavy equipment such as rollers, compactors, loaders, track-mounted excavators, dump trucks, bulldozers, etc. The alarms will be maintained and operable at all times, and will be audible above the background noise at the work site.

- F. **Timber Operations.** Tractors/crawlers used in fire suppression work, brushing, or pioneering will be equipped with a logging package including sweeps, side screens, additional uprights, rollover protection, etc. Work area should be assessed for hazards, such as dangerous snags, green trees, trees uprooted while piling brush, blowdown, etc.

- 5.3 **Other Special Equipment - General.** Investigate and correct hazards before moving equipment into operating positions. Locate and operate equipment where there is no danger of blasts, cave-ins, etc. Don't move equipment into blasting area until instructed to do so by foreman or blaster in charge.

#### **A. Basic Safety Rules**

1. Provide heavy-equipment operator with an observer when needed to ensure safety or to assist with work.
2. When changing operators, make sure that person in charge discusses plan of work, existing hazards, hand signals, etc., with new operator and crew.
3. Don't stand directly in front or in back of a self-propelled machine while it is being started.
4. Don't go under or around equipment without notifying operator. Look out for hazards.
5. Never get on or off moving equipment.
6. Rope off area of swing to provide ample clearance for a person between any solid material and tail swing of a dragline, shovel, or crane.

7. Stop all engines before refueling. When filling fuel tank, keep funnel or container in contact with tank to prevent static spark. Never fill tank over a hot engine. Provide grounding as appropriate.
8. Always leave machines with movable parts that are lowered by gravity, such as shovels, buckets, and skip loaders, resting on the ground while not operating.
9. Don't operate internal combustion engines indoors, except with proper ventilation.
10. Have a qualified person inspect machinery or equipment, including that under contract, when it's received or repaired. Be sure it's in safe operating condition before turning it over to the operator.
11. Have operators continually inspect their machines for safe operating conditions. Promptly notify supervisors, verbally and in writing, when repairs are needed. Shut down defective machinery until repairs are made.
12. All gears, sprockets, shafts, augers, drivebelts or chains, pulleys, drums, gears, fans, or other hazardous moving parts must have guards. Replace guards after any repairs are completed.
13. Install operating platforms surfaced with nonskid materials on footwalks, ladders, steps, handholds, guardrails, and toeboards before operating machine.
14. Provide suitable protection for the operator against falling objects, swinging loads, overhead electrical wires, and similar hazards.

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*TOPIC 6*  
**OCCUPATIONAL HEALTH  
HAZARDS/INDUSTRIAL  
HYGIENE**

## 6.1 References

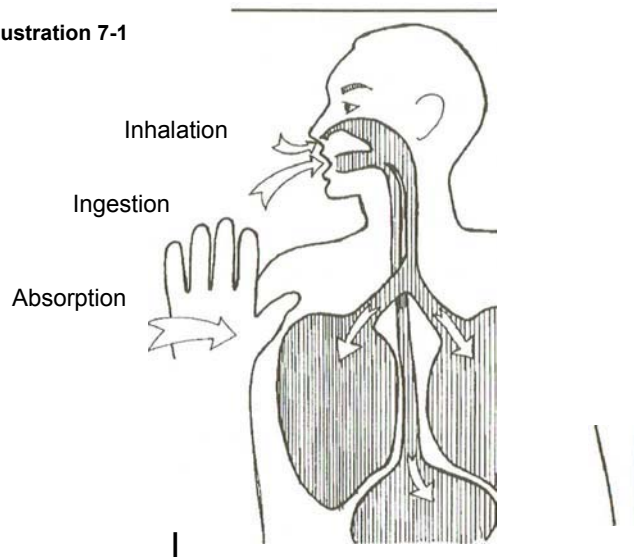
- A. Executive Order 12196 Occupational Safety and Health Programs for Federal Employees
- B. 370 OM 792.7 Medical Surveillance Program
- C. 485 OM 17 Occupational Health (Industrial Hygiene) Program
- O. 29 CFR 1910.20 Employee Exposure and Medical Records
- E. 29 CFR 1910.95 Occupational Noise Exposure
- F. 29 CFR 1910.120 Hazardous Waste Operations and Emergency Response
- G. 29 CFR 1910.134 Respiratory Protection
- H. 29 CFR 1910.1000 Air Contaminants
- I. 29 CFR 1910.1200 Hazard Communication
- J. 29 CFR 1910 Subpart H Hazardous Materials
- K. 29 CFR 1960 Subpart C Standards

- 6.2 **Procedures.** Because of the potential for exposing employees and volunteers to unhealthful, noisy, and ergonomically incorrect work environments, it is imperative that safety managers assist in designing workplace settings that inhibit such conditions. It is also important to ensure that designs and conditions are planned and prepared in a manner that ensures the safety and health of the visiting public. Employee exposure and medical records will be maintained in accordance with 29 CFR 1910.20.

**A. Health Hazards.** Health hazards may exist in a wide spectrum of chemical forms, including: mist, liquid, vapor, gas, dust, and fumes.

**B. Routes of Entry.** Employees may be exposed to health hazards in the following ways: skin absorption, inhalation (air contaminants), injection, and ingestion through poor hygiene practices (see Illustration 7-1).

**Illustration 7-1**



**C. Standards of Exposure.** To safeguard workers against health hazards, there are specific standards and exposure limits for each type of exposure. The limits sometimes have very strict boundaries between what is safe and unsafe. The safety manager or industrial hygienist should be consulted concerning standards of exposure.

**D. Reducing or Eliminating Employee Exposure.** Once an industrial hygiene evaluation has been conducted and a hazardous exposure has been identified, immediate action must be taken to reduce the exposure, as outlined below.

1. **Engineering Controls.** The most effective and inexpensive engineering controls are designed into the facility or process before construction. For existing construction, personal protective equipment (PPE) will be required as an interim measure until engineering controls are implemented.

**a. Ventilation Controls**

- (1) Local exhaust ventilation installed in an enclosure, or as close as possible to the point of contaminant generation, is much more effective and provides better protection than general or building ventilation.
- (2) Ventilation systems frequently are ineffective if adequate make-up air is not provided. Temper (heat) make-up air before it is introduced into the workplace in winter.
- (3) For information regarding lab safety, refer to 29 CFR 1910.1450, Occupational Exposure to Hazardous Chemicals in Laboratories, or consult the safety manager.
- (4) Many well-designed systems fail to protect employees because maintenance is minimal or nonexistent after installation. Regularly scheduled maintenance of environmental control systems must

be provided to ensure continued employee health protection.

2. **Work Methods as Controls.** Safe work practice, proper equipment, and good housekeeping will minimize unnecessary exposure to spilled substances. A housekeeping program must be established at each facility to clean up any spills of nontoxic substances promptly, and for regular cleanup and maintenance.
  - a. **Vacuum Cleaning.** Vacuum cleaning is the most efficient method of collecting settled dust particles without causing appreciable re-entry into the workplace air. Blowing the settled dust particles with an air hose should never be done.
  - b. **Wet Methods.** When vacuum cleaning equipment is not available, wet methods, such as using water and/or other wetting agents to remove dust particles on floors, may be done to minimize airborne dust caused by sweeping.
  - c. **Cleaning Up Liquid Spills.** Contact the Hazardous Materials Program Coordinator in the event of a chemical or toxic spill.
3. **Administrative Controls.** Administrative controls assist in reducing employee exposure. Time exposure limitation is achieved by rotating jobs or by reducing work periods. At best, administrative controls should only be used for brief periods until engineering corrections can be implemented.



4. **Personal Protective Equipment (PPE).** Some operations are not amenable to engineering controls, so PPE may be the only practical way to limit employee exposure. PPE may also be used for brief periods during repair of engineering controls and/or to ensure greater personal protection. It is essential that PPE be fitted to the individual employee and that the employee be carefully trained in the use and limitations of the equipment.
5. **Substitution/Isolation.** Eliminate or minimize, to the extent possible, hazardous materials, equipment, or processes by replacing all or part of the hazardous elements. Carefully investigate all substitutions to ensure that new hazards are not introduced. Hazardous processes may be isolated or enclosed to eliminate employee contact.

- 6.3 **Respiratory Protection Program.** This program applies to all bureau personnel whose duties require wearing respiratory protective equipment. It is intended to prevent exposure to airborne contaminants greater than permissible exposure limits (PEL) established by OSHA standards. In the absence of OSHA standards, use guidelines established by agencies such as the National Institute for Occupational Safety and Health (NIOSH), the American Conference of Governmental Industrial Hygienists (ACGIH), and the Environmental Protection Agency (EPA). Respiratory protection must not be considered a substitute for installing engineering controls to reduce hazardous conditions. When engineering controls are not possible or feasible, in case of an emergency, or when working with carcinogens, these respiratory protection measures must be implemented.

**A. General Requirements.** Assign respirators only to workers who have been determined by a physician to be physically able to perform the work and use the equipment. The physician should determine which health and physical conditions are limiting. The respirator user's medical status should be reviewed annually by a physician.

1. **Personnel in charge of operating activities** must route all requests for the requisition of respirators through the safety manager for approval to ensure that the proper equipment is properly matched to the level of hazard. Acquisition of the equipment is the responsibility of the operating activity.

**B. Classification and Description of Respiratory Protective Devices.** Respiratory protective devices generally fall into two categories: air purifying and atmosphere supplying.

1. **Air-purifying respirators** remove contaminants from the atmosphere. This type of respirator cannot be used in oxygen-deficient atmospheres. Half-mask respiratory devices cover the nose, mouth, and chin, and do not afford protection against eye irritation from exposure to airborne contaminants. **Full** facepiece devices cover a larger facial area, including the eyes.
2. **Air-supplying devices** are used in oxygen-deficient atmospheres, defined as less than 19.5 percent oxygen.

**C. Respirator Training.** Qualified personnel must conduct training for both supervisors and workers. Training must be documented and maintained by the local field office. Minimum training includes the following:

1. Instructions on the nature of the hazards (whether acute, chronic, or both) and a description of what may happen if the respirator is not used.
2. A discussion of the respirator's capabilities and limitations, including recognition of the end of the service life of cartridges/ canisters or filters (e.g., tasting or smelling of contaminants), manufacturers' expiration date, or increased breathing resistance.
3. Classroom and field training to recognize and cope with emergency situations.
4. Instructions on cleaning and maintaining a respirator.

**D. Training Records.** Local records of respirator training, facepiece fit, and leak testing must be kept for at least the duration of employment of the user or as specified by specific contaminant exposure.

**E. Facepiece Fit and Leak Testing.** Each respirator wearer must receive fitting instructions, including demonstrations and practice on how the respirator is to be worn, how to adjust it, and how to determine whether it fits properly.

1. Before initial use, each respirator must be properly fitted, leakage tests performed, and the face piece seal tested.
2. Good face piece-to-face seals cannot normally be obtained when the wearer has a beard, long sideburns, or a skull cap that projects under the face piece. Facial deformities, such as scars, deep skin creases, prominent cheekbones, severe acne, and the lack of teeth or dentures can prevent a respirator from sealing properly. Individuals with any of

these conditions should be precluded from using any respiratory protection devices.

3. Sealing tests for routine donning of respirators, which consist of both positive and negative pressure tests, must be performed each time the respirator is worn.
4. Warning properties. Odor, as well as eye and respiratory irritation, should alert the wearer that the respiratory protection is malfunctioning or inadequate. This may be the result of improper facepiece fitting, old/inappropriate cartridges or canisters, etc. The worker should leave the hazardous area and rectify the problem. The worker must notify the supervisor if the condition persists. It should be noted that some chemicals and substances have no warning properties.

F. **Maintenance and Cleaning.** When respirators are issued to individuals, the responsibility for primary maintenance and cleaning of the respirator rests with the user. Equipment must be properly maintained, in accordance with manufacturers' specifications, to retain its original effectiveness.

6.4 **Hearing-Conservation Program.** The bureau's hearing conservation program must comply with 29 CFR 1910.95 and address the points identified in the following:

A. **General Requirements.** Implement hearing conservation programs at workplaces where noise exposures for an eight-hour time-weighted average (TWA) are 85 decibels measured on the A scale (dBA) or higher. The exposed employees must be provided with, and required to use, hearing protectors. Workplaces where exposure to noise equals or exceeds an eight-hour TWA of 85 dBA (permissible exposure during an eight-hour shift) must be identified and employees' hearing tested annually.

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1. Warning signs indicating high noise levels and the requirement that hearing protectors must be worn shall be posted in work areas or on equipment where the noise level is 85 dBA or higher.
2. Audiometric test results will be maintained in the employee's medical folder as required by 29 CFR 1910.95.
3. No employee will be exposed to the following noise levels without protection in excess of 115 dBA for one-fourth hour or in excess of 85 dBA eight-hour TWA.
4. Employees or their representatives will be provided noise measurements upon request. Audiogram results will be provided to tested employees.

**B. Identification of Exposed Employees.** A roster will be maintained at the local level of employees at risk to noise hazardous situations and revised as necessary. These employees must be included in all aspects of the hearing conservation program.

**C. Hearing-Protection Devices.** Supervisors shall provide and replace as necessary a variety of hearing-protection devices (HPD) for all employees in a designated high-noise area. Hearing protection is provided at 85 dBA and is mandatory at 90 dBA.

1. Each employee will use and maintain the HPD as originally intended. Re-usable insert type HPDs should be disposed of or cleaned after each use and stored in a sanitary location.

2. Supervisors will evaluate the HPD for effectiveness in the particular environment in which it will be used.
3. Employees shall be trained in the selection, use, and maintenance of HPDs and shall be responsible for using them in designated high-noise areas.

6.5 **Hazard Communication Program.** The Hazard Communication Program (Employee Right-to-Know) encompasses handling and storage of hazardous materials (products) in the workplace. The Hazard Communication Program does not apply to hazardous waste, tobacco or tobacco products, wood or wood products, articles (as defined in 29 CFR 1910.1200(c)), food, drugs, cosmetics, alcoholic beverages, or products/ substances used in the workplace in the same manner as household use.

**A. Manufacturers' Instructions.** Manufacturers' instructions for safe handling and storage should be followed.

**B. Hazard Determination.** The manufacturer, supplier, or employer must evaluate chemicals to determine the hazards. Normally, this evaluation is done by the manufacturer and provided via a Material Safety Data Sheet (MSDS).

**C. Material Safety Data Sheet.** The MSDSs are to be available at the point of use. Consult the product MSDS for information regarding: Physical and chemical characteristics (flashpoint, vapor pressure)  
Physical hazards (fire, explosion, reactivity) Health hazards  
Primary routes of entry  
Permissible Exposure Limit (PEL) or Threshold Limit Value (TLV)

Carcinogenicity  
Safe handling procedures  
Control measures (engineering controls, work practices, PPE  
Emergency and first-aid procedures

**D. Employee Training.** Supervisors shall ensure that employees using hazardous materials have been trained as mandated in 29 CFR 1910.1200 Hazard Communication Standard.

**E. Hazard Communication Plan (HazCom Plan).** Each facility is required to have a written HazCom Plan. That plan includes information on: Site-Specific Policy  
Nonroutine Tasks  
Employee Information  
Informing Contractor Employees  
Inventory of Hazardous Materials  
Waste Minimization

1. **Waste Minimization.** It is essential that bureau employees, supervisors, and managers incorporate waste-minimization practices into procurement, use, and disposal of hazardous substances.

a. Waste minimization should be promoted by:

- (1) substituting less hazardous products when feasible;
- (2) reducing to a minimum the number and variety of products used;
- (3) purchasing only the amount absolutely needed;

(4) controlling product storage and handling practices to reduce damage and loss;

(5) separating incompatible products during handling and storage and ensuring storage facilities are properly built, located, and equipped; and

(6) planning work projects in a manner that prevents the acquisition of excess products and materials.

**F. Labeling.** All products must be properly labeled to include:

Contents

Appropriate Warning

Name and Address of Manufacturer Cross-check with MSDS

Note: Pesticides are excepted from the HazCom labeling requirements.

**G. Storage/Handling of Hazardous Materials.**

Storage/handling of flammable and combustibles shall be in compliance with 29 CFR 1910.106. This is outlined under Topic 11, Materials Handling and Storage.

**6.6 Hazardous Materials Management.** The bureau is required to comply with all Federal environmental and safety laws and regulations governing storage, handling, and use of hazardous materials, and governing disposal of hazardous waste. The bureau must also comply with state hazardous materials laws and regulations, as required.



**A. Hazardous Materials in the Field.** Any employee may encounter hazardous materials situations in the field. Hazardous materials or waste may be found on public lands in a variety of forms, such as clandestine drug lab waste, mining wastes, midnight dumping, and transportation accidents. Bureau employees who may encounter such situations in the field must be trained as mandated by OSHA 1910.120(q), First Responder Awareness Level, to recognize, retreat, and report any discovery.

1. **Clandestine Drug Lab Waste.** This waste material is often the result of illegal manufacturing of the drug commonly known as "methamphetamine" or "crank." The waste may look like household garbage at first glance. Drug lab waste can be identified by the presence of gallon plastic jugs, large plastic bags, 5-gallon buckets, and various laboratory equipment (beakers and tubes). Drug lab waste may contain any number of chemical combinations and should be considered dangerous. Employees shall retreat from the area immediately, and report to the program manager (Le., Supervisor, HazMat, Law Enforcement Officer, or Special Agent). Do not examine, investigate, touch, smell, or taste such waste for any reason.
  
2. **Midnight Dumping.** The presence of barrels or other containers, discoloration of land, plants, or water, and the presence of dead vegetation or animals may recognize a midnight dumping on public lands. Upon discovery of midnight dumping waste, retreat from the area immediately and report to the program manager (Le., Supervisor, HazMat, Law Enforcement Officer, or Special Agent). If you discover a midnight dumping site, remember that self-protection is your primary responsibility.

3. **Transportation Accidents.** Truck, rail, or pipeline accidents on public lands may result in danger to life, property, or resources. When encountering such an accident, take steps to protect yourself by retreating from the area and reporting to the Hazardous Materials Coordinator.

6.7 **Hantavirus.** Hantavirus is a respiratory disease caused by a virus carried by the deer mouse and other rodents, such as squirrels, rats, and chipmunks. Humans acquire the infection after exposure to rodent excreta, especially after it dries and becomes airborne and is directly introduced into broken skin, eyes, nose, mouth, or possibly ingested with contaminated food or water. Employees who enter gas-metered houses, work in the renovation of old buildings, or clean up existing areas that may have rodent excreta may be at risk of the disease. All rodents should be treated as if they carry the virus.

**A. General Precautions.** Avoid direct contact with rodents (live or dead), their droppings, urine, saliva, nests, or other items that may be contaminated by them. Do not feed mice, chipmunks, or other rodents. Preventive measures should be taken to eliminate rodents from buildings by reducing the availability of food sources, nesting sites, and access routes into a building.

**B. Elimination of Rodents Inside Buildings and Reducing Rodent Access.** Rodent infestation can be determined by direct observation of animals, from the presence of feces, and from evidence that rodents have been gnawing at food. If rodent infestation is detected inside a building, rodent-abatement measures should be undertaken.

1. Prior to any cleanup, ventilate closed buildings or areas inside buildings by opening doors and windows for at least 30 minutes. Use an exhaust fan or crossventilation if possible. Leave the area until airing-out period is completed.
  2. Seal, screen, or otherwise cover all openings into the building that have a diameter of one-fourth inch or greater, because rodents can enter through holes this small. Pay special attention to openings where pipes and wires enter the building. It is best to plug holes with sheet metal or metal screening material.
  3. Trap rodents using spring-loaded traps. Traps should be placed on a newspaper, along suspected paths like baseboards, or near the corner of a room. Do not use live traps.
  4. Rodenticide should only be considered rapid knockdown of heavy rodent infestations and elimination of rodents in areas of known hantavirus.
- C. **Cleanup of Rodent-Contaminated Areas.** Areas with evidence of rodent activity should be thoroughly cleaned to reduce the likelihood of exposure to Hantavirus-infected materials. Cleanup procedures must limit the potential for aerosolization of dirt or dust from potentially contaminated surfaces and household goods.
1. Employees involved in a cleanup should wear rubber or plastic gloves when handling rodents or their nests, or cleaning infested areas. In heavily rodent-infested areas, workers should wear coveralls, rubber boots or disposable shoe covers, and protective goggles. When removing rodent nests or rodents from traps, and cleaning up infested

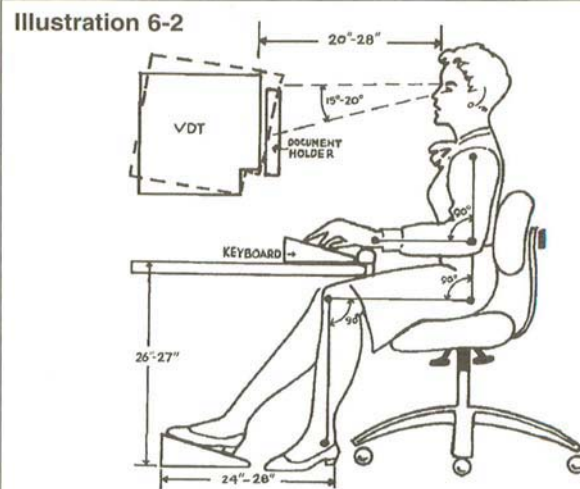
areas, workers should wear a half-face airpurifying respirator or Powered Air Purifying Respirator equipped with High Efficiency Particulate Air filters. Respirator use practices should be in accord with a respirator program and should be supervised by a knowledgeable person.

2. Spray dead rodents, rodent nests, excreta, and foods or other items that have been tainted by rodents with a general-purpose household disinfectant or a prepared disinfectant bleach solution using 3 tablespoons or capfuls of household bleach in 1 gallon of water. Soak the contaminated items thoroughly and place in a plastic bag. When cleanup is complete (or when the bag is full), seal the bag, then place it into a second plastic bag and seal. Dispose of the bagged materials by burying them in a 2- to 3-foot-deep hole. If burying is not possible, contact the local or state health department about other appropriate disposal methods.
3. After the above items have been removed, disinfect all floors, countertops, cabinets, and other durable surfaces with a solution of water, detergent, and disinfectant. Do not sweep with a broom or vacuum until the area has been soaked with disinfectant. Launder contaminated bedding and clothing with hot water and detergent.
4. After cleanup is completed and when removing gloves, wash gloved hands in a disinfectant and then in soap and water. Thoroughly wash hands with soap and water after removing the gloves. Do not reuse rubber or plastic gloves. They should be disposed of in the plastic bags containing the rodent carcasses, nests, and/or feces.

- D. **Symptoms of Hantavirus.** Early treatment is crucial. Symptoms may appear one to six weeks (usually two to three) after contact and include fever, nausea, headache, muscle aches, cough, and increasingly acute respiratory trouble. Seek prompt medical attention if you suspect you have been exposed to hantavirus.

6.8 **Ergonomics.** Ergonomics is the study of the relationship between the worker and the work environment. It recognizes that work methods, equipment, facilities, and tool design all influence the worker's fatigue, motivation, productivity, and the likelihood of sustaining an occupational injury or illness.

- A. **Principles of Ergonomics.** The objective of ergonomics is to adapt the job and workplace to the worker by designing tasks, workstations (see Illustration 6-2), controls, displays, safety devices, tools, lighting, and equipment to fit the worker. Some jobs expose workers to excessive vibration and noise, eye strain, heavy lifting, and repetitive motion. Also, workplace temperature extremes may aggravate or increase ergonomic stress.



- B. Types of Injuries.** Pulled or strained muscles, ligaments, tendons, and disks are the *most* common back problems. The majority of workplace back disorders result from chronic or long-term injury to the back rather than from one specific incident. Back disorders are frequently caused by excessive or repetitive twisting, bending, and reaching; carrying, moving, or lifting loads that are too heavy or bulky; staying in one position for too long; poor physical condition; and poor posture.

Cumulative trauma disorders (CTDs) are disorders of the musculoskeletal and nervous systems that are caused or made worse by repetitive motions or prolonged activities. Other risk factors for cumulative trauma and back disorders include:

1. forceful exertions, usually with the hands,
2. pinch grips,
3. prolonged static postures, either sitting or standing,

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*TOPIC 7*

**PERSONAL PROTECTIVE  
CLOTHING AND  
EQUIPMENT**

## 7.1 References

### A. OSHA Standards. Subpart I Personal Protective Equipment.

29 CFR 1910.132 General Requirements

29 CFR 1910.133 Eye and Face Protection

29 CFR 1910.134 Respiratory Protection

29 CFR 1910.135 Occupational Head Protection

29 CFR 1910.136 Occupational Foot Protection

29 CFR 1910.137 Electrical Protective Devices

29 CFR 1910.252 Welding

29 CFR 1910.1030 Bloodborne Pathogens

### B. 29 CFR 1926 Subpart E Personal Protective and Life-Saving Equipment

29 CFR 1960.8 Agency Responsibilities

### C. 370DM Appendix A

7.2 **Procedures.** Field offices shall assess the workplace to determine if hazards are present, or are likely to be present, which necessitate the use of personal protective equipment (PPE). Refer to 1910.132 General Requirements for guidance.

**A. Using the Job Hazard Analysis to Determine Appropriate PPE.** The Job Hazard Analysis (JHA) process is used to identify hazards in a job task (see Topic 1). The JHAs are reviewed by the local safety manager to ensure **PPE** meets appropriate standards (ANSI, NIOSH, MSHA).



- B. Mandatory Use of PPE.** When specific PPE is found necessary and is purchased, it is mandatory for the employee to use such equipment. Should an employee fail to do so, it is the supervisor's responsibility to take the necessary steps to ensure compliance, including appropriate disciplinary action within the guidelines of DM 370.

- 7.3 Eye and Face Protection.** Protective eye and face shields shall be required when there is a reasonable probability of injury that can be prevented by use of such equipment. Eye protection shall meet ANSI 287.1.

- A. Goggles and Glasses.** Use goggles, safety glasses, face shields, or welder helmets when subjected to the following:

1. Small flying particles when cutting, drilling, scaling, and grinding metals; cutting, chipping, or dressing stone and brick; woodworking; overhead pruning; brushing; and machine plating.
2. Flying objects when hand drilling, chipping, caulking, riveting, quarrying, rock cutting and crushing, or when using a cyclone seeder or brush cutter.
3. Concentrations of cement or other dust, or dust and sand when sandblasting.
4. Hot metal when handling babbitt or pouring lead joints, or shaping metal on an anvil.
5. Gases, fumes, and liquids when handling acids and caustics such as sulfuric or muriatic acids, ammonia or creosote.
6. Injurious radiant energy and flying hot particles.

7. Grinding wheels. Wear goggles, glasses, or face shields at all times when using grinders or buffer wheels.
8. Welding. Appropriate eye protection shall be worn. Refer to 29 CFR 191 O.252(e)(2) when purchasing eye protection.
9. In field situations where eye injury hazards such as brush, twigs, and limbs exist.

**B. Care of Goggles.**

1. Keep goggles in protective containers.
2. Wipe the lenses frequently with a clean cloth or soft tissue.
3. Keep goggle frames, including side screens, free from dust and grit.
4. Change headband frequently, keeping the webbing flat.
5. Treat lenses to prevent fogging when necessary, or use goggles ventilated around the lenses.
6. Replace goggles when they become scratched, pitted, or otherwise damaged in a way that inhibits visibility.

**7.4 Head Protection.** Protective headgear shall be required where there is a reasonable probability of injury, which could be prevented by use of such equipment. Refer to 29 CFR 1910.135. Head protection shall meet ANSI Z89.1 standards.

**A. Hard Hats.** Hard hats must be worn when working in all construction activities, working in confined spaces, or engaged in active fire suppression work. Hard hats must be worn if

there is danger from falling or flying objects or in timber areas due to danger of falling loose bark, limbs, or weak tops.

**B. Nonconductive Hard Hats.** Wear electrically insulated hard hats, if working near electrical conductors.

**C. Proper Fit and Care.** Adjust headband and hammock to fit snugly, with an air space of one-half inch or more between the head and top of crown of hat. Wear hard hat evenly centered to protect head properly. Clean and sterilize headband and hammock regularly. Integrity of head protection is essential; therefore, head protection shall be replaced when it becomes dented or damaged (some paints weaken integrity).

- 7.5 **Respirators.** Use of respirators shall be required when there is a reasonable probability of injury that could be prevented by use of such equipment. Respirators must provide adequate protection against the particular hazard for which they were designed and must be approved by the National Institute for Occupational Safety and Health (NIOSH) and Mine Safety and Health Administration (MSHA). Refer to Topic 7 of this Handbook.
- 7.6 **Hand Protection.** Use of hand protection shall be required when there is a reasonable probability of injury that could be prevented by use of such equipment. Appropriate hand protection will be provided for the task. It is especially important when working with chemicals to ensure that the appropriate glove is selected for the chemical being used.
- 7.7 **Safety Belts, Ropes, and Nets.** Employees must use safety belts, ropes, and nets on unguarded above-ground surfaces over excavations, moving machinery, swift or deep waters, on steep slopes, or where there is danger of falling.

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***TOPIC 8***  
**FIRE SAFETY**

8.1 **References**

- A. 29 CFR 1910.35-39 Means of Egress
- B. 29 CFR 1910.157-165 Portable Fire Suppression Equipment
- C. 29 CFR 1926.150-155 Fire Protection and Prevention
- O. National Fire Codes
- E. Uniform Building Codes
- F. National Fire Protection Association (NFPA) 101 Life Safety Code
- G. 485 OM Chapter 19

8.2 **Procedures.** The responsible bureau official must ensure that buildings and facilities are inspected annually by qualified safety inspectors.

- A. Detection Devices.** All bureau facilities used to house employees and their families on a year-round basis must be equipped with approved smoke-detection devices. Trailers and other facilities used as sleeping quarters by field crews must be similarly equipped.
- B. Fire Extinguishers.** Place approved and appropriate fire extinguishers inside of repair shops and storage areas, or near oil or gas dispensers and other potential hazard areas. Fire extinguishers need to be placed near doors or other areas that have quick accessibility, and in a position that does not endanger personnel when a fire emergency arises.

**C. Exits.** Every building designed for human occupancy must be provided with a sufficient number of exits to permit the prompt escape of occupants in case of emergency.

1. One- and two-family dwellings are to have a second means of escape, in accordance with *NFPA 10121-2*.
2. Exits and the paths of approach and travel from exits must be maintained so that they are unobstructed and are accessible at all times. Widths of aisles and corridors must be in compliance with *NFPA 101*.
3. All exits must discharge directly to the street or other open space that gives safe access to a public way.
4. Exits must be marked by readily visible or suitably illuminated exit signs. Specifications for color and size of exit signs can be found in 29 *CFR 1910.37*.

**8.3 Emergency Procedures and Evacuation Plans.** Every bureau business facility for employees, volunteers, or other personnel that is leased or bureau-owned must have an Emergency Procedures and Evacuation Plan that is current and posted on-site.

**A. The plan shall address** emergency and evacuation procedures for fire and other emergencies such as bomb threats, chemical spills, earthquakes, sabotage/ecotage, public demonstrations, and civil disobedience. The plan shall be updated annually. The plan shall include the following:

1. Building evacuation routes.
2. Procedures to account for evacuated employees.

3. Special duties, such as rescue, medical, and physically challenged assistance, and names of designated personnel.
4. Proper reporting procedures.
5. Names and job titles of emergency procedures personnel.

8.4 **Personal Safety for Fire Emergencies.** The Federal Hotel and Motel Safety Act of 1990 prohibits employees from staying at non-sprinkler-equipped hotels with more than three floors. Although approved hotels and motels will have smoke detectors and sprinkler systems, selfprotection is essential.

- A. **Become familiar with** emergency exits, evacuation routes, fire extinguishers, fire alarms, emergency telephone numbers, first-aid supply locations, etc.
- B. **Do not use** elevators during fire emergencies.
- C. **Look over your room.** Take notice of what is outside the window and make sure it can be opened. Make sure there's a smoke detector and that it appears to be operational.
- D. **If there is a fire, or a suspected fire,** before opening the door, feel the door and knob. If they are hot, do not open the door. Close vents and cover cracks around doors to keep smoke out of the room.
- E. **Get in the habit of** placing your room key and a flashlight where you can grab them on your way out of the room. Always take the key with you. You should close the door behind you to keep smoke and heat out of the room, but you may find conditions in the hall to be unbearable and need to return. The key is vital.

- 8.5 **Vehicle Fires.** The inherent danger from vehicle fires is from explosions, burns, and asphyxiation. Immediate response is key to your survival. Getting away from the fire is in your best interest. A frequent cause of vehicle fires has been ignition of dry grass by hot parts of vehicle exhaust systems - that is, catalytic converters. If there is time, the following actions can be taken:

**A. Turn off ignition.**

- B. **Exit the vehicle** and use a fire extinguisher, if available. Use sand, dirt, blanket, or coat to smother flames if no extinguisher is available. Remember that water may be used, but petroleum fires react violently to water if it is not applied correctly.

- C. **Remember that** smoke from vehicle fires may emit noxious and/or fatal emissions from fabrics, petroleum, rubber, and plastics. Avoid these emissions or minimize them when possible.

- 8.6 **Prescribed/Wildland Fire Safety.** Detailed safety policies for prescribed/wildland fires are located in *NFES #1077, Incident Response Pocket Guide*. Bureau employees shall be trained, qualified, and carded to participate in prescribed/wildland fire activities. The following are general safety procedures:

- A. Wildfire Hazards.** The wildland fire environment has hazards not normally found in a typical work environment, including lightning, fireweakened timber (standing or down), rolling materials, entrapment by running fires, smoke, aerially delivered fire suppressants, heat exposure, dehydration, and many others. When these hazards are present, there are two options: not to enter the environment or to adhere to safe procedures.



**B. 18 Situations That Shout, "Watch Out!"**

**18 SITUATIONS THAT SHOUT, "WATCH OUT!"**

1. Fire not scouted and sized up.
2. No familiarity with location in daylight.
3. Safety zones and escape routes not identified.
4. Unfamiliar with weather and local factors influencing fire behavior.
5. Uninformed on strategy, tactics, and hazards.
6. Instructions and assignments not clear.
7. No communication link with crew members or supervisor.
8. Constructing line without safe anchor line.
9. Building fireline downhill with fire below.
10. Attempting frontal assault on fire.
11. Unburned fuel between you and fire.
12. Cannot see main fire; not in contact with someone who can.
13. On a hillside where rolling material can ignite fuel below.
14. Weather becoming hotter and drier.
15. Wind increases and/or changes direction.
16. Getting frequent spot fires across line.
17. Terrain and fuels make escape to safety zones difficult.
18. Taking nap near fireline.

**C. 10 Standard Firefighting Orders****10 STANDARD FIREFIGHTING ORDERS**

1. Fight fire aggressively, but provide for safety first.
2. Initiate all action based on current and expected fire behavior.
3. Recognize current weather conditions and obtain forecasts.
4. Ensure instructions are given and understood.
5. Obtain current information on fire status.
6. Remain in communication with crew members, your supervisor, and adjoining forces.
7. Determine safety zones and escape routes.
8. Establish lookouts in potentially hazardous situations.
9. Retain control at all times.
10. Stay alert, keep calm, think clearly, act decisively.

**D. Safe Fireline Procedures.** The wildland fire environment has many hazards, as stated above, but four basic hazards exist: lightning, fireweakened timber (standing and down), rolling rocks, and entrapment by running fires. When these hazards exist, there are two options: a) not to enter the environment, or b) adhere to safe procedures. The key to these safe procedures is "LCES."

1. **LCES stands for "lookout(s), communication(s), escape route(s), and safety zone(s)."** These are the same items stressed in the **FIRE ORDERS** and

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***TOPIC 9***  
**FIELD INJURY PREVENTION  
AND FIRST AID**

9.1 **References**

- A. American Red Cross
- B. 29 CFR 1910.151 Medical Services and First Aid
- C. 29 CFR 1910.1030 Bloodborne Pathogens

9.2 **Procedures.** All employees whose work assignment in the field places them beyond reasonable accessibility to a medical facility in terms of time and distance (15 minutes and/or 10 miles) must be trained to render first aid or be accompanied by someone who has a valid certificate in first aid and CPR.

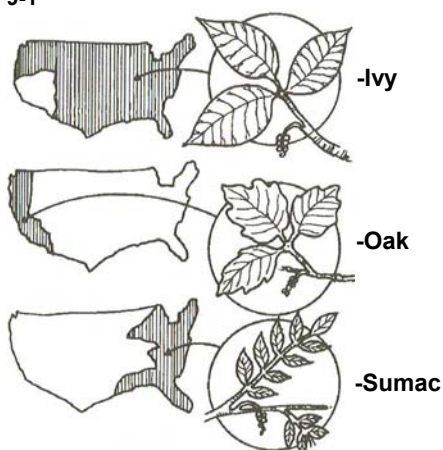
- A. Camp Safety.** First-aid kits should be available in two central areas (e.g., kitchen, shop area, recreation tent, project leaders tent, etc.). Kits should be large enough to accommodate the number of people in the crew.
- B. Preventive Inoculations.** Preventive inoculations may be obtained for Rocky Mountain Spotted Fever, certain insect stings, poison oak and ivy, Hepatitis B, or other diseases. Hepatitis A Virus (formerly called infectious hepatitis) is excreted or shed in feces. Direct contact with an infected person's feces or indirect fecal contamination of food, the water supply, raw shellfish, hands, and utensils may result in sufficient amounts of virus entering the mouth to cause infection. Hepatitis B Virus (HBV; formerly called serum hepatitis) is spread through sexual contact, blood transfusions, contaminated needles, contact with body fluids, or *from* mother-to-child at birth.

- 1. Inoculations may be obtained at Bureau expense.

2. Inoculations may be administered only if it can be clearly shown that conditions warrant preventive inoculations, that the inoculations are necessary to protect employee health, and that the official duties of the employees expose them to contact by poison or disease.

- 9.3 **Poisonous Plants.** Instruct all employees subject to exposure to poison sumac, oak, and ivy on how to identify them (see Illustration 9-1). Take extra precautions with persons known to be highly sensitive to poison sumac, oak, and ivy. If practical, do not assign allergic people work in areas where exposure could occur.

**Illustration 9-1**



**A. Identifying Poisonous Plants**

1. Wear proper field attire. Since dried poison oak resin on clothing can cause a rash if it touches the skin, wash clothing at regular intervals - daily if you are very sensitive.
2. The palms of the hands rarely are affected, but poison oak resin can be transferred from the hands to other parts of the body. It can

be removed by rinsing the affected areas with water. Wash hands before urinating. Be careful about wiping sweat from the face and around the eyes with your hands.

3. **DO NOT** use unidentified leaves as emergency toilet paper in the field.
4. Tools can also be contaminated with the resin. This can be removed by rinsing them with water.
5. **DO NOT** attempt to desensitize yourself by eating the leaves. This can cause severe lesions in the mouth, and around the rectum, and can cause kidney damage.
6. **DO NOT** stand in the smoke of fires made of brush; it may contain unburned particles of poison oak.
7. **DO NOT** use a leaf mulcher in areas with poison oak unless your legs and arms are covered and you are wearing a face shield.

9.4 **Poisonous Insects (Arthropod Stings and Bites).**

Employees assigned to areas of heavy arthropod (Le., ticks, chiggers, spiders, scorpions, bees, wasps, yellow jackets) infestation should do the following:

1. Wear proper field attire as defined in Topic 3. Additional protective clothing or equipment for specific activities will be determined by the Job Hazard Analysis (JHA) process and by management.
2. Secure trousers by tucking pant legs into socks to prevent insects from going up pant legs.

- A. **Bee Stings.** Hair sprays, hair tonics, sun lotions, other perfumed toiletries, and suede or leather odors attract these insects and should be avoided. Bright colors and bright metal objects, such as jewelry, belt buckles, etc., also attract bees.
1. Swatting or running appears to aggravate stinging insects. Shield your face with your arms and move slowly out of a danger zone, or lie face down on the ground **if** under attack. DO NOT poke at bee or wasp nests.
- B. **First Aid for Bee Stings.** The following applies also to stings from bumblebees, hornets, and wasps. Of these, the honeybee has a barbed stinger that could be left in the skin. The venom sac of the honey bee stinger may be attached and continue to inject venom for some time after the bee has left. The stinger only penetrates into the skin for a very small distance. It should be removed promptly. To avoid squeezing, which would inject more venom, it should be removed by scraping the skin surface with a knife blade or a fingernail.
1. Single stings from any of these insects rarely require medical attention. There may be an immediate sharp pain followed by some redness and swelling. The application of cool water will reduce the intensity and duration of the swelling.
  2. Moderate to severe medical emergencies may result from single or multiple bites. Tolerance to bee stings may vary by individual. If a reaction occurs, the victim should be transported for medical care.
  3. Some individuals have become sensitized to these stings and react with a widespread rash, asthmatic breathing, tissue swelling, a fall in blood pressure, and sometimes

unconsciousness. This is known as anaphylactic shock. Such employees should carry an appropriate prescription and inform supervisors and co-workers of its location and use. This can be an extreme medical emergency, and such individuals should work only within an area providing fairly rapid transport to a medical facility. These individuals should be advised to wear a Medic-Alert tag or similar device containing information about their sensitivity and emergency phone numbers.

**C. Ticks.** When working in areas infested with ticks:

1. Tuck your pant legs into your socks.
2. Tuck your shirt into your pants.
3. Use a tick repellent on your clothes.
4. Do a body check at the end of each work day, paying particular attention to armpits, navel, behind the ears, and the groin area.
5. At night, place clothing where ticks, spiders, or scorpions cannot get in them. Arrange bedding so insects cannot crawl into it during the day and night.
6. **Tick Removal.** The sooner ticks are removed, the better.
  - a. Tweezers work best at removing ticks. If fingers are used, shield them with a piece of paper.
  - b. Grasp the tick as close to the skin surface as possible and pull outward with a steady, even pressure. **DO NOT** jerk or twist, as this may cause the head of the tick to break off in the skin.



- c. Take care not to squeeze, crush, or puncture the body of the tick, as this may cause the injection of fluids from the tick to enter the wound.
  - d. After removing the tick, disinfect the area with alcohol or soap and water. You may want to keep the tick in a small jar for later identification in case you become sick with Lyme disease or another illness.
  - e. Folklore methods of tick removal, such as painting the tick with Vaseline, fingernail polish or alcohol or applying a hot matchhead, **DO NOT WORK.**
7. **Lyme Disease.** Ticks carrying Lyme disease can be found in many parts of the United States. The carriers are deer ticks and can be identified by their small size and color (black and reddish-brown).
- a. Ticks must be attached to the skin for 12 to 24 hours in order to transmit the spirochete that causes Lyme disease, so prompt removal is a safeguard against disease.
  - b. **Symptoms of Lyme Disease.** Lyme disease can cause severe health problems if left untreated. Prompt and accurate diagnosis is essential. Symptoms usually develop within a few days to a few weeks after the bite of an infected tick. Symptoms include headache, stiff neck, fever, muscle ache, flu-like symptoms, and general malaise. In approximately 70 percent of Lyme disease cases, a "bull's eye" rash

or lesion is exhibited. If these symptoms occur following tick exposure, seek medical attention.

- 9.5 **Poisonous Snakes.** Snakes tend to be temperature-sensitive. At cool to cold temperatures, they are slow and lethargic; at hot temperatures, they are quick, but also uncomfortable and will seek cool shelter. On a cool morning, the snake may be sunning on a warm ledge; in the heat of the day, it might be under a rock or brush where it is cool. Be aware also of these other characteristics:

Snakes have excellent camouflage, so train your eye to see the correct shapes and colorations.

Don't underestimate the speed and agility of a snake. Rattlesnakes can strike over a distance of about one-half their length and can strike faster than you can jump. Give them a wide margin.

Wear clothing and appropriate boots. Be careful when walking in back country, especially if ground is obscured by foliage. Walk on clear paths as much as possible. Don't step over a large log without looking on the other side first.

Watch where you are putting your feet and hands at all times. Don't pick up rocks or other objects that might conceal a snake. Use a tool to turn the rock over first.

**A. First Aid for Snake Bites.** If medical help can be secured within one hour, no first-aid measures are necessary.

1. Keep still; avoid panic.
2. Get away from the snake.
3. Apply constricting band, 2-inches wide, above the bite.

4. Immobilize extremity.
5. Do not give aspirin.
6. Remember that not all strikes by rattlesnakes deposit venom. If there is an absence of pain and swelling shortly after the strike, it was probably a "dry bite." In such a case, extraordinary measures are not indicated. "Dry bites" occur about 20 to 25 percent of the time.

9.6 **Cold Injuries.** Hypothermia and frostbite are the two most common types of cold injuries. Frostbite is local cooling. Most commonly affected are the ears, nose, hands, and feet. When a part of the body is exposed to intensely cold air or liquid, blood flow to that particular part is limited by the constriction of blood vessels. When this happens tissues do not receive enough warmth to prevent freezing. Ice crystals can form in the skin. There are three degrees of frostbite.

#### **A. Types of External Cold Injuries (Frostbite)**

1. **Frostnip** is the first stage of frostbite, brought about by direct contact with a cold object or exposure of a body part to cold air. Wind chill and water chill also can be major factors. This condition is not serious. Frostnip develops slowly, and often a person is not aware of the condition until someone calls attention to it. The affected part blanches, or becomes discolored or pale. As the cooling process continues, numbness replaces any sensation of cold or discomfort.

- a. **Treatment.** A person afflicted with frostnip usually cares for the problem by gently warming the affected body part, holding it in his or her bare hand, blowing warm air on it, or, if fingertips are involved, holding them in the armpits. If for some reason a person is unable to do this alone, another person can take the same steps. Transfer the frostbite victim to a medical facility if it appears he or she has suffered more than a mild case of frostnip.
2. **Superficial Frostbite** is commonly called "frostbite". The outer and inner layers of skin become involved. If frostnip goes untreated, it becomes superficial frostbite. The affected part becomes discolored and pale. It will feel frozen to your gentle touch. However, when the skin is gently pressed, it will feel soft and pliable beneath the frozen area.
  - a. **Treatment.** Superficial frostbite treatment includes applying a cover and gentle handling of the affected part. If transportation to a hospital is delayed, apply steady warmth by submerging the body part in warm water. The skin turns purple during thawing and can be painful. The person should receive follow-up medical care.
3. **Deep Frostbite** is where the inner and outer layers of the skin and the deeper structures of the body are affected. Muscles, bones, deep blood vessels, and organ membranes can become frozen. The affected part becomes a mottled or blotchy blue or gray. The tissue feels frozen to the touch, without the underlying resilience that is characteristic of superficial frostbite.

- a. **Treatment.** Emergency care for deep frostbite requires the victim to be immediately transported to a hospital. Dry clothing over frostbite will help prevent further injury. The frostbitten part should not be rubbed. Do not apply ointment or cover frostbitten parts with snow. If the tissue is frozen, keep it frozen until care can be initiated. Also, never initiate thawing procedures if there is any danger of refreezing - keeping the tissue frozen is less dangerous than submitting it to refreezing. If blisters appear, do not open them.

#### **B. Types of Internal Cold Injuries (Hypothermia).**

Hypothermia is caused by exposure to cold. It is a condition that occurs when inner body temperature drops to a subnormal level. It impairs a person's ability to think and act rationally and can cause death. It is accelerated by wet or damp clothing, wind, exhaustion, or sudden contact with cold water.

1. **Detection of Hypothermia.** Watch for symptoms of hypothermia in yourself and others whenever outdoors. The following are symptoms of hypothermia:
  - a. Uncontrollable spells of shivering or continuous shivering over a long period of time.
  - b. Slurred or slow speech; incoherent and vague statements.
  - c. Memory lapses.
  - d. Fumbling hands; frequent stumbling; lurching gait.
  - e. Drowsiness.

- f. Exhaustion - inability to get up after a rest.
2. **Treatment.** Move the victim of hypothermia to shelter and warmth as quickly as possible. If shelter is not readily available, immediately build a fire to warm the person. Prevent further heat loss.
- a. Handle the victim with care and prevent him or her from walking around.
  - b. If the victim is only mildly impaired, give him or her warm drinks (do not give alcohol) and get him or her into dry clothes and a warm sleeping bag.
  - c. If the victim is semiconscious or worse, try to keep him or her awake. Remove the victim's clothing and put him or her in a sleeping bag with another person, also stripped, allowing that person's body heat to warm the victim.
  - d. Transport the victim to the nearest medical facility. Transport him or her gently and keep the victim lying down, as still as possible.
  - e. Do not ever assume that a person suffering from severe hypothermia is dead, even though he or she may appear to be. There may be no detectable heartbeat, breathing, or any other sign of life. CPR can be given en route to a hospital.
3. **Prevention.** The best defense against hypothermia is to avoid exposure. Recognize hypothermia-producing weather and dress for it. Choose clothing that will keep the body dry and warm. Check weather conditions

and be familiar with the area before trips. Prepare and pack a survival kit to be carried by each person.

- 9.7 **Heat-Related Injuries.** The body's chemical activities take place in a limited temperature range. They cannot occur with the efficiency needed for life if the body temperature is too high or too low. Heat is generated as a result of the constant chemical processes within the body. A certain amount of this heat is required to maintain normal body temperature. Any heat that is not needed for temperature maintenance must be lost from the body or hyperthermia, an abnormally high body temperature, will ensue. If allowed to go unchecked, it will lead to death.
- A. **Heat Cramps** are severe muscle cramps, usually in the legs or abdomen, brought about by dehydration and exhaustion, and sometimes accompanied by dizziness and periods of faintness.
1. **Treatment.** Move the victim to a nearby cool place. Give person water to drink, or halfstrength commercial electrolyte fluids. Massage the "cramped" muscle to help ease the person's discomfort.
- B. **Heat Exhaustion's symptoms include** displays rapid and shallow breathing, weak pulse, cold and clammy skin, heavy perspiration, total body weakness, and dizziness that sometimes leads to unconsciousness.
1. **Treatment.** Move the person to a nearby cool place. Keep the person at rest. Remove enough clothing to cool the person without chilling him or her (watch for shivering). Fan the person's skin. Give the person salted water or half-strength commercial electrolyte fluids. Do not try to give fluids to an unconscious person. At this stage, treatment at a medical facility is essential.

**C. Heat Stroke** starts out with deep breaths, followed by shallow breathing, then rapid, strong pulse, followed by rapid weak pulse. The skin becomes hot and dry. The victim may lose consciousness, and seizures or muscular twitching may occur.

1. **Treatment.** Cool the victim rapidly in any manner. Move the victim out of the sun or away from the heat source. Remove the victim's clothing and wrap him or her in wet towels and sheets. Pour cold water over these wrappings. Body heat must be lowered rapidly or brain cells will die.
  - a. If cold packs or ice bags are available, wrap them and place them under victim's armpits, behind each knee, on the groin, on each wrist and ankle, and on each side of the his or her neck.
  - b. Transport the victim to a hospital as soon as possible. Should transport be delayed, immerse the person up to the face in a tub or container of cool (not cold) water. Constantly watch the victim so he or she does not drown. This is a life-threatening, heat-related emergency. CPR may need to be given.
2. **Prevention.** Reduce activity level immediately and seek a cooler environment. Stay in the shade. Keep food intake, especially intake of protein, to a minimum if sufficient water is not available, since protein increases metabolic heat production and water loss.



- a. Keep clothing on, including shirt and hat. Clothing slows the evaporation rate of perspiration and prolongs the cooling effect, in addition to giving protection from the sun.
- b. Drink water to prevent dehydration.
- c. Do not sit or lie on the hot ground. It can be up to 30 degrees hotter on the ground than it is just one foot above the ground. To avoid skin burns, avoid sitting on metal surfaces unless material is placed between skin and place of contact.
- d. If foot travel is unavoidable, walk only at night and rest often.

9.8 **Lightning-Strike Injuries.** The passage of electricity through the body can either burn tissues or cause only muscle spasms or contractions. Vital nerve centers may be blocked, causing the heart or breathing to stop. Immediate revival should be attempted using appropriate artificial respiration and cardiac massage (CPR) techniques. Be assured, however, that a lightning-shock victim can be touched without any risk of shock to you.

9.9 **Altitude-Related Problems (above 8,000 feet).** Most difficulties at high altitude are a direct result of the lowered concentration of oxygen in the atmosphere. High-altitude pulmonary edema (excessive fluid in the lungs) usually occurs in the unacclimatized individual who rapidly ascends to an altitude that exceeds 8,000 feet, particularly if heavy exertion is involved. Symptoms include shortness of breath, coughing up white phlegm, weakness, easy fatigue, rapid heart rate (greater than 90 to 100 beats per minute at rest), nausea, vomiting, headache, insomnia, and acidic taste in mouth.

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*TOPIC 10*  
**MATERIALS HANDLING  
AND STORAGE**

## 10.1 References

### A. OSHA Standards

29 CFR 1910.132 Personal Protective Equipment 29

CFR 1910.176 Handling Materials - General

29 CFR 1926.250 Materials Handling, Storage,  
Use and Disposal

29 CFR 1926.550 Cranes and Derricks, Helicopter,  
Hoists, Conveyors, etc.

29 CFR 1926.602 Material Handling Equipment 29

CFR 1926.953 Materials Handling

29 CFR 1926.1000 ROPS, Protective Frames,  
Enclosures, etc., on Vehicles

**10.2 Procedures.** Observe established procedures and precautions when lifting, carrying, or otherwise handling heavy loads. Remember that weight, shape, and size of objects determine limits of safe handling. Don't overexert. If help is needed, get it. Use required personal protective equipment (PPE).

### A. Lifting Heavy Loads

1. Inspect ground or floor area immediately around object.
2. Inspect route of travel for clearance and tripping hazards.
3. Examine object to determine safest way to handle. Check for snags, burrs, splinters, greasy surfaces, etc.
4. Wear protective gloves and safety shoes.

**B. Lifting in a Proper Manner**

1. Make a trial lift to be sure load can be handled safely.
2. Stand close to object, with feet solid and slightly apart.
3. Assume a crouching position close to load. Bend legs at knee.
4. Keep back as straight as possible without arching. Leg and arm muscles should do the work.
5. Secure a firm grip on object. Lift by straightening legs.
6. To shift the load to shoulder height or higher, bend knees. Rest object on a bench or ledge. Shift hands and boost.
7. Don't twist. Shift feet to turn body.
8. Make allowances for fatiguing effects of stairs and ramps.
9. Take precautions to avoid bruising or crushing hands and arms in narrow passageways.
10. Lower object in same manner in which it was raised. Take necessary precautions to keep fingers clear when placing object.

**Illustration 10-1**



**C. When Two or More Persons Lift**

1. Select persons of similar size and strength.
2. Station one person at rear to give predetermined signals or orders.
3. Carry long objects such as ladders, pipes, and lumber on shoulders on same side. Walk in step.
4. Handle packaged articles in boxes by grasping them at opposite top and bottom corners. Grasp sacked material by opposite corners.
5. Upending full drums is a two-person job. When rolling a drum, push hands on center of the barrel. Snub drums with safety ropes or other tackle on inclines or skids.

6. Provide help for handling odd-shaped objects if combination of irregularities and weight makes them hazardous for one person.

**D. Equipment**

1. Provide a wide range of tools, fixtures, jigs, hooks, crowbars, cribbing, rollers, blocks and tackle, slings, jacks, chain hoists, hand trucks, dollies, etc., for safe handling of materials and equipment.
2. Provide appropriate hand protection.
3. Inspect all tools and equipment frequently to ensure safe operating conditions.
4. Use bolted-down toolboxes to carry loose tools in vehicles. Fasten other materials securely so they don't shift and strike occupants in case of a vehicle accident, or drop out of vehicles.

**10.3 Powered Industrial Trucks and Tractors (Forklifts, etc.).** Each operator is responsible for the safe and careful handling of the equipment. Operators shall be qualified and authorized to operate such equipment, and the authorization shall be noted on individual training records. Equipment and operators shall be in compliance with *OSHA 1910.178 and ANSI 856.1-1969*.

**A. Minimum Forklift Operation Requirements**

1. Falling Object Protective Structures (FOPS).
2. Backup alarm.
3. Capacity decal.
4. No passenger on lift.
5. No passengers on pallets.

6. Initial training and documentation.

**B. Basic Safety Rules for Operating Forklifts**

1. Before operating, check brakes, steering, horn, gas, oil, and water levels. Irregularities should be reported to supervisor.
2. Do not exceed the truck's rated capacity or the floor load limits. Take a good look at the load before picking it up. Consider its weight and balance. If load appears unsafe, split load or use other equipment.
3. Pick up load squarely and do not make quick or jerky starts and stops.
4. Never "butt" the loads with the forks or the rear end of a truck.
5. Always face the direction the truck is moving and maintain clear vision of the way ahead.
6. Keep arms and legs inside truck. Do not put them between the mast's uprights nor outside the running lines of the truck.
7. Passengers are prohibited on forklifts and forklift loads.
8. If following other trucks, maintain safe distance.
9. On wet or slippery floors, slow down. Use low gear when descending ramps.
10. Be sure the wheels of highway trucks and trailers at loading docks are chocked.
11. Make certain that bridge plates into trucks are wide enough, strong, and secured.

12. Don't cut corners. Before passing a doorway or turning a blind corner, slow down and sound horn.
13. When entering main aisles, intersections, or roadways, come to a full stop, look, and sound horn.
14. Watch out for pedestrians.
15. Carry the loads of high-lift trucks 6 inches off the floor and tilted backward for better stability.
16. Always travel forward up ramps and in reverse down ramps.
17. When high-lift trucks are unloaded and in motion, keep their forks near the floor to prevent damage or injury.
18. Be careful in elevating loads. Watch out for overhead and wall obstructions, fire extinguishers, sprinklers, pipes, electrical conduits, switches, etc.
19. Use extreme caution in high tiering.
20. Do not use the fork of a high-lift truck as a personnel elevator, unless a safety platform is attached to the forks.
21. Lower loads slowly and stop gently. Never lift or lower when truck is in motion.
22. Park safely, without obstructing aisles. Before leaving a gas or diesel truck, turn off the engine.
23. Stop the engine when refueling.



24. Lock the truck or remove control handle when not in service.
25. Observe fire-prevention rules. Equip industrial trucks with a fire extinguisher, and make sure that drivers know how to operate it.
26. Use gas-, diesel-, or propane-fueled equipment in well-ventilated areas.
27. Forklift battery management:
  - a. Always wear the proper personal protective equipment when changing a battery.
  - b. Be aware of the nearest eyewash or shower station.
  - c. Shut off the engine.
  - d. Do not smoke or have an open flame in the battery-changing area.
  - e. Make sure the brake is set on the forklift before changing the battery.
  1. Make sure the battery-lifting device is secure prior to the lift.
  - g. Stand clear when moving the battery.
  - h. Make sure that the ventilation system is working properly before charging a battery.
  - i. Always add battery acid to water never add water to battery acid.
  - j. If charging the battery on the forklift, uncover the battery compartment to prevent the build-up of heat and hydrogen gas.

- k. Make sure that metal objects do not come in contact with the terminals on the battery.
- l. Make sure the charger is off before connecting it to the battery.
- m. Make sure the vent caps are not plugged.
- n. Make sure charger is properly connected to battery before plugging it into electrical outlet.

**10.4 Storage Yards.** Use a level, well-drained yard for storing materials, vehicles, equipment, etc. Storage yard should be fenced in with an 8-foot high, vandal-proof fence.

- A. Provide adequate roadways and walkways for safe movement of personnel, trucks, lifts, and cranes, etc.
- B. Keep storage yards free of surplus material and obsolete equipment that clutter the area.
- C. Provide and maintain approved types of fire extinguishers in storage yards.
- D. Provide 5- to 8-foot corridors both inside and outside of perimeter fence to facilitate fire control and keep out rodents and snakes.
- E. Keep storage area free of vegetation, debris, and rubbish.
- F. Use cribbing to prevent direct contact with the ground. Dunnage may inhibit bottom ventilation.
- G. Use tarpaulins to protect materials subject to weather and sun damage.

H. Arrange heavy pieces and palletized material in a manner that will allow for mechanical handling.

I. Block or nest round objects to prevent roll.  
If drums and kegs are piled on end, use planks between layers.

J. Stack piles of lumber. Make the height of the pile no greater than the width.

K. Use cross-binding and step back methods when storing bagged material and masonry products.

L. Store reinforcing steel and small-diameter pipe on racks. Make permanent separations to prevent pulling from the pile.

M. Provide loading docks and hand trucks for moving heavy and bulky items.

N. Label all barrels according to their contents and properly dispose of unneeded barrels.

O. Sign flammable storage areas as "No Smoking" areas.

P. Ensure that surface of storage yard is protected from contamination by stored liquid materials.

**10.5 Warehouse Storage.** Store materials at safe distances from heating devices such as stoves, steam pipes, heating ducts, and radiators. Store materials in separate areas, according to the degree of hazard. DO NOT defeat the effectiveness of fire sprinklers by placing stored materials within the restricted distances (18-inch clear space) established by National Fire Protection Association.

A. Provide adequate aisle space for handling heavy or bulky bounded, stacked, or racked materials. Plainly define aisles and passageways. Keep them free of obstacles and other materials.

- B. Plan storage to permit safe lifting and handling and prevent toppling. Don't load storage bins beyond safe capacity.
- C. Keep tops of storage bins, racks, and cabinets free of material.
- D. Provide racks designed to hold stock of pipes and bars.
- E. Don't allow stored materials to exceed safe floor loads. Keep floors clean and in good repair.
- F. Keep areas around warehouses and other buildings free of dry grass, vegetation, and debris. Take adequate fire-prevention measures to prevent loss or damage of stored materials.
- G. Provide metal containers with tight-fitting covers for disposing of waste packing materials and rubbish. Never permit large amounts of waste material to accumulate in warehouse.
- H. Provide adequate illumination for storage and warehouse operations. (See 29 CFR 1926.56.)
- I. Store compressed gas cylinders in cool, dry, well-ventilated places. Close valves tightly. Keep protective caps in place. Place cylinders upright and fasten securely. Store cylinders compatibly. (For example, oxygen and acetylene must be stored separately.) Separate full and empty cylinders. See Illustration 11-2 for more information on compressed gas cylinders.
- J. Store corrosive and toxic liquids in a cool, dry, well-ventilated, isolated place, with concrete floors treated to reduce solubility.

- K. Segregate flammable materials or supplies from other items. Store flammable liquids, paints, oils, etc., in approved containers equipped with tight-fitting closures. Use metal storage cabinets and safety containers for even small quantities of flammable liquids.
- L. Provide good ventilation in buildings where flammable liquids are stored. Where mechanical ventilation, heating, lighting, or exhaust systems are necessary, install them in accordance with electrical and fire code requirements.
- M. Prohibit smoking in areas in which flammable liquids are stored or handled. Post "No Smoking" signs in these areas. Be sure this rule is strictly observed. Don't store empty drums that have contained low-flash-point products (e.g., gasoline, acetone, alcohol, etc.) inside buildings.

## 10.6 Storage and Handling of Hazardous Materials

### A. OSHA Standards

*29 CFR Subpart H Hazardous Materials*

*29 CFR 1910.101 Compressed Gases  
(General Requirements)*

*29 CFR 1910.102 Acetylene*

*CFR 1910.103 Hydrogen*

*29 CFR 1910.104 Oxygen*

*29 CFR 1910.105 Nitrous Oxide*

*29 CFR 1910.106 Flammable and  
Combustible Liquids*

## Safety and Health for Field Operations

*29 CFR 1910.107 Spray Finishing Using  
Flammable and  
Combustible Liquids*

*29 CFR 1910.108 Dip Tanks Containing  
Flammable or  
Combustible Liquids*

*29 CFR 1910.109 Explosives and  
Blasting Agents*

*29 CFR 1910.110 Storage and Handling of  
Liquefied Petroleum Gases*

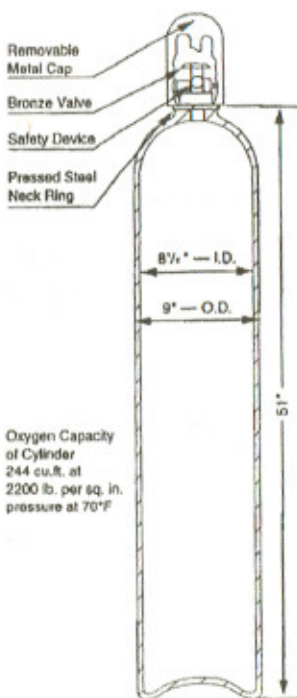
*29 CFR 1910.111 Storage and Handling of  
Anhydrous Ammonia*

Illustration 10-2

# THE SLEEPING GIANT

I AM A HIGH PRESSURE, COMPRESSED GAS CYLINDER

I stand 57 inches tall.  
 I am 9 inches in diameter.  
 I weigh in at 155 pounds when filled.  
 I am pressurized at 2,200 pounds per square inch (psi).  
 I have a wall thickness of about .25 inch.  
 I wear a regulator and hose when at work.  
 I wear a label to identify the gas I'm holding. My color is not the answer.  
 I transform miscellaneous stacks of material into glistening ships and many other things — when properly used.  
 I may transform glistening ships and many other things into miscellaneous stacks of material — when allowed to unleash my fury unchecked.  
 I can be ruthless and deadly in the hands of the careless or uninformed.  
 I am too frequently left standing alone on my small base without other visible means of support — my cap removed and lost by an unthinking workman.  
 I am ready to be toppled over — when my naked valve can be damaged or even snapped off — and all of my power unleashed through an opening no larger than a lead pencil.  
 I am proud of my capabilities — here are a few of them:  
 — I have on rare occasions been known to jetaway — faster than any dogster.  
 — I might smash my way through brick walls.  
 — I might even fly through the air.  
 — I may spin, ricochet, crash and slash through anything in my path.  
 You can be my master only under these terms:  
 — Full or empty — see to it that my cap is on, straight and snug.  
 — Never — repeat — never leave me standing alone.  
 Secure me so that I cannot fall.



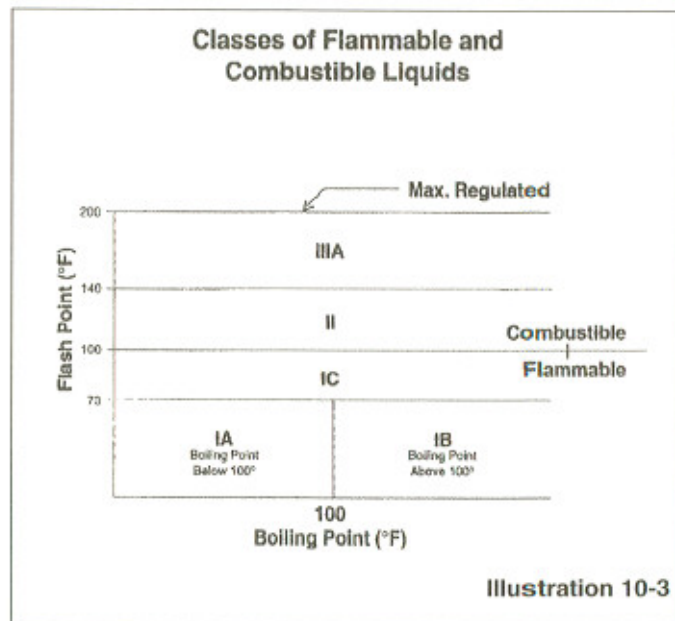
Oxygen Capacity  
 of Cylinder  
 244 cu.ft. at  
 2200 lb. per sq. in.  
 pressure at 70°F

**B. Flammable and Combustible Liquids.**

Flammable liquids are those that give off flammable or explosive vapors at or below 100°F (37.8°C).

1. Flammable liquids (Class I) have a flash point below 100°F, such as:  
Gasoline 49  
Acetone 0  
Lacquer 0 to 80  
Shellac 40  
Ether 45  
Alcohol 52 to 91  
Varnish 80 or less  
Turpentine 95
2. Combustible liquids (Class II) that have flash points above 100°F and below 200°F include:  
Diesel Fuel 100  
Kerosene 150+  
Stoddard Solvent 100+  
Penetrating Oil 100+
3. Class III Liquids are those combustible liquids with flash points at or above 140°F, such as creosote oil, which is 165°F. See Illustration 11-3.





Safety and Health for Field Operations



***TOPIC 11***  
**MACHINES AND TOOLS**

## 11.1 References

- 29 CFR 1910.211 *Definitions*
- 29 CFR 1910.212 *General Requirements*
- 29 CFR 1910.213 *Woodworking Machinery Requirements*
- 29 CFR 1910.215 *Abrasive Wheel Machinery*
- 29 CFR 1910.219 *Mechanical Power Transmission Apparatus*
- 29 CFR 1910.241 *Definitions*
- 29 CFR 1910.242 *Hand and Portable Powered Tools Equipment - General*
- 29 CFR 1910.243 *Guarding of Portable Power Tools*
- 29 CFR 1910.244 *Other Portable Tools and Equipment*
- 29 CFR 1910.252 *Welding, Cutting, and Brazing*
- 29 CFR 1926.300 *General Requirements*
- 29 CFR 1926.301 *Hand Tools*
- 29 CFR 1926.302 *Power-Operated Hand Tools*
- 29 CFR 1926.303 *Abrasive Wheels and Tools*
- 29 CFR 1926.304 *Woodworking Tools*
- 29 CFR 1926.305 *Jacks*
- 29 CFR 1926.350 *Gas Welding and Cutting*
- 29 CFR 1926.351 *Arc Welding and Cutting*

29 CFR 1926.352 *Fire Prevention*

29 CFR 1926.353 *Ventilation and Protection*

29 CFR 1910.268 *Telecommunications*

**11.2 Procedures.** Machines and tools shall be properly maintained, operated, stored, and inspected.

### **11 .3 Portable Hand Tools**

#### **A. Chopping Tools (Axe, Pulaski, Hoedad, etc.)**

1. Use the right tool for the job. Keep it well sharpened with a splinter-free handle and a tight head.
2. Treat the ends of ax handles and other swinging tools to prevent slippage. Inspect wedges for tightness.
3. When swinging an ax or similar tool, place feet firmly and shoulder-width apart. Grip handle near the end. Make sure there is ample clearance from objects and persons near the swing arc. Always chop away from feet, legs, and body. Guard against loss of grip or control of tool if a glancing blow is struck against the target object.
4. Sheathe all chopping tools when not in use. Never leave an ax or similar tool in normal path of movement or sticking in a tree or stump.
5. Observe safe spacing between crew members carrying sharp or pointed tools. Travel on foot in single file. Sheathe tools and hand-carry on the downhill side, but do not carry on shoulder. Keep other hand free. If tripping, slipping, or falling, throw the tool to

the downhill side. Use both hands to regain balance or break fall.

6. Be watchful of the force released by cutting a sapling that is being held in a bowed position by adjacent trees or brush.
  7. Maintain 15-foot intervals between workers using tools.
  8. Allow overhead clearance when using a brush-cutting tool. Use the proper handhold. Keep body well braced and balanced. Make each stroke productive.
- 8. Chipping Tools.** Protect eyes from flying particles. Use screens to protect other persons from flying chips. Use tool holders when holding chisels or drills.
- C. Wrenches.** Place the wrench on the nut so that pull on the handle tends to force the jaws further onto the nut. Make sure you have a good footing before applying force to the wrench. Pull, don't push, the wrench when turning the nuts.
- D. Screwdrivers.** Never use a screwdriver as a chisel. Don't carry a screwdriver loose in pockets. Use a screwdriver with an insulated handle and shaft for all electrical work.
- E. Hammers.** Select hammers with secure heads that are of suitable type, and weight, and have a proper handle length for the job to be done. Allow sufficient working space.
- F. Picks.** Use picks with handles that are free from splinters and securely fastened to the head. When swinging a pick, make sure that you have overhead and side clearance.

**G. Files.** Fit files with substantial handles and guards. Never use a file as a pry. Keep files clean to reduce slipping. Protect hands with proper gloves when filing sharp objects.

**H. Handsaws.** Keep handsaws properly sharpened. Use the thumb to guide the handsaw in starting a cut. Use teeth guards when carrying a crosscut or ripsaw.

**I. Air Tools**

1. Wear specified personal protective equipment (PPE), such as earplugs, protective shoes, respirator, gloves, etc., when operating air tools.
2. Do not use air tools unless a fixture on the tool retains the replaceable bit or jack set. Inspect retainers daily for cracks.
3. Air hose couplings must have safety chains to keep them from whipping loose if coupling fails.
4. Place line oilers so that oil cannot drain back into the air tank.
5. Release pressure before connections are broken, do not kink hose.
6. Make sure no one is in line of airflow. Never aim an air hose at anyone.
7. If the tool becomes detached from air hose under pressure, turn air off at the base control valve before air is turned on. Keep it closed until hammer is ready to use.
8. Never use pressurized air to blow dust or chips from hair or clothing.

- J. **Chain** saws. Follow manufacturers' operating and safety instructions. Training and PPE are required for chain-saw operators. Required PPE for chain-saw operators are chaps, ear, eye, face, head, foot, and hand protection. Other required equipment includes wedges and a single-bit ax.
1. Stop and place the blade vertically before carrying a saw. The chain must be guarded. Carry saw on downhill side with blade to rear. Secure saw when transporting it in a vehicle.
  2. Stop the engine and cool for about 5 minutes before refueling. Fill the fuel tank on bare ground. Wipe spilled fuel off the engine. Start saw at least 10 feet away from refueling area. Do not smoke while fueling or while saw is running.
  3. Safe chain-saw starting techniques should be established and followed, always keeping the saw away from the body. Keep co-workers away from chain saw starting and operation.
  4. Stop engine for cleaning, adjustments, or repair.
  5. Fuel tanks shall be purged prior to storage.

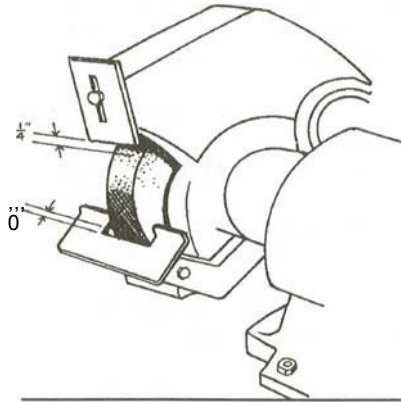
#### 11.4 Portable Electric Tools

- A. Inspect and test all power tools regularly and maintain in good condition. Establish a definite schedule for inspection, testing, maintenance, and repairs. All electric tools must be three-wire grounded, and fault-interrupter protected, or double-insulated.
- B. Regularly test and maintain three-wire ground systems supplying electric power tools.

- C. Use only electric cords and plugs in good condition. Make sure tool cords do not become tripping hazards. Protect tool cords against insulation damage during use. Unplug tools when not in use.
- D. Do not operate power tools without training and authorization.
- E. Do not operate portable electric tools where flammable vapors or gases are present or in wet areas.
- F. All portable electric circular saws must have automatic guards that completely cover the cutting edges when saw is not in use. Do not use cracked, bent, dull, or damaged blades.
- G. Drill-chuck wrenches must be ejecting type. Unplug the tool when changing bits or accessories. Anchor any material being drilled.
- H. Keep portable grinder guards in place. Tool rest must be one-eighth inch away from stone; tongue guard must be one-fourth inch away (see Illustration 12-1).
- I. Inspect motor-driven grinding stones at least weekly for cracks. Discard defective stones.
- J. Keep stones free from oil and properly dressed.



**Illustration 11-1**



**11.5 Radio Equipment.** AC-powered radio equipment cabinets must be locked, and keys must be available only to specially instructed and authorized radio technicians or personnel.

- A. Never use any radio or extend any antenna on a portable set if a lightning storm is within 1 mile.
- B. Do not use radio transmitter within 300 feet of any electric blasting or any area where electric detonators are handled or stored.
- C. Provide unextended whip antennas with safety knobs, closed loops, or other protective devices to prevent injury.
- D. Only those qualified and trained may climb high structures. Wear appropriate PPE, such as safety belt, harness, etc., when climbing high structures. Do not work on energized antennas.

### 11.6 Fixed Machines

A. Woodworking and Metalworking. Only qualified and authorized personnel may operate shop equipment. Personnel must not wear loose clothing, ties, or jewelry, or have loose hair that may catch in moving machinery. Required PPE must be used.

1. Machines will be located to ensure adequate space for movement of the operator and handling of stock. Safety zones must be marked around each machine. Machine switches must be within immediate reach of the operator.
2. Floor and work areas must be kept free of sawdust, scrap, and excess material.
3. Machines designed for a fixed location shall be anchored.
4. Machines must be shut down and locked in accordance with lockout/tagout requirements before authorized and experienced persons make repairs only.
5. Machines that are operating must be attended at all times.
6. No machines may be operated unless required guards are in place and functional.

11.7 Compressors. All tanks must be in compliance with the American Society of Mechanical Engineers (ASME) standard and conform to state laws.

A. Make thorough monthly inspections for leaks and signs of corrosion on surfaces. Replace any worn parts and remove corrosion.

- B. Don't replace the brass fusible plug with an ordinary pipe plug.
- C. Clean or replace air filters as needed.
- D. Make sure that all pressure tanks or lines have safety valves, air-pressure gauges, and a drain cock at the lowest point on the tank that is opened at least monthly to drain the condensation.

11.8 **Welding and Cutting.** Allow only qualified welders, mechanics, machinists, or specially qualified personnel to use welding equipment.

- A. Welders shall wear appropriate PPE.
- B. Confine welding activities to well-ventilated areas and away from flammable and combustible materials.
- C. Keep sparks and flames away from cylinders and hose lines. All flammable or explosive material in the areas of welding operations must be removed.
- D. Keep the correct type of fire-extinguishing equipment easily accessible at all times during welding operation.
- E. Before cutting into tanks or drums, determine the present or previous contents. Drain, steam clean, and thoroughly dry if they held oil, gasoline, or other highly flammable fluids. Fill with water up to the point to be welded. Leave an opening for steam generated during welding to escape.
- F. Use a respirator or point-of-operation exhaust ventilation when welding on metals coated with paint containing lead or zinc or when welding brass, because fumes from these metals are toxic. Adequate exhaust systems must be provided to ensure removal of injurious fumes and gases. If respirator is used, make sure that it is appropriately matched to the toxicity types and levels being generated and that it *meets all respiratory requirements in 7.5*.

- G. Inspect hose lines and/or power cables frequently. Replace or repair damaged items.
- H. Curtains or screens must be used around all welding locations.

11.9 **Spray Painting.** Where spray-painting operations are regularly performed indoors, painting must be done in specially constructed, isolated, fire-resistant areas with approved electrical equipment. All motors, fixtures, switches, and electrical devices must be explosion-proof. All sources of ignition must be eliminated, and spray booths are to be fitted with sprinkler heads in accordance with National Fire Protection Association requirements.

- A. Only qualified and authorized personnel may operate painting equipment.
- B. Painting areas must have adequate ventilation to remove flammable and toxic substances. Respirators must be worn when spray painting.
- C. Smoking is expressly prohibited. A fire extinguisher of the correct type and size must be available.
- D. All paint labeled "Flammable" must be stored and mixed in an approved liquid storage cabinet or flammable storage shed.



***TOPIC 12***  
**ELECTRICAL SYSTEMS  
AND EQUIPMENT**

## 12.1 References

### **A. The National Electric Code**

### **B. National Fire Protection Association (NFPA 70)**

### **C. OSHA Standards - Subpart S - Electrical**

29 CFR 1910.147 *Control of Hazardous Energy  
(Lockout/Tagout)*

29 CFR 1910.211 *Definitions*

29 CFR 1910.212 *General Requirements*

29 CFR 1910.213 *Woodworking Machinery  
Requirements*

29 CFR 1910.215 *Abrasive Wheel Machinery*

29 CFR 1910.219 *Mechanical Power  
Transmission Apparatus*

29 CFR 1910.241 *Definitions*

29 CFR 1910.242 *Hand and Portable Powered  
Tools Equipment - General*

29 CFR 1910.243 *Guarding of Portable  
Power Tools*

29 CFR 1910.244 *Other Portable Tools  
and Equipment*

29 CFR 1910.252 *Welding, Cutting, and Brazing*

29 CFR 1910.334 *Use of Equipment*

**12.2 Procedures.** Only trained and qualified personnel are to operate electrical devices in accordance with manufacturers' instructions applicable to the device. Supervisors are to ensure that all equipment (devices) identified as not meeting specifications contained in 29 CFR 1910 and the National Electric Code are properly tagged and removed from use.

**12.3 Inspections of Electrical Equipment.** Inspections of portable electrical devices shall be conducted prior to use and shall include: inspection of the service cord and plug; inspection of the case for cracks, corrosion, and loose or missing parts; inspection of on/off switches and "dead man" switches; inspection of guards over blades and rotating/reciprocating parts; and inspection of electrical filter assemblies.

**12.4 Other Electrical Appliances and Equipment.** Electrical appliances and equipment are defined as coffee pots, computer systems, fans, radios, clocks, typewriters, and other equipment not normally moved from one location to another. Only equipment listed by Underwriters Laboratories (UL) or other recognized certifying authority are allowed in the work space and shall be used only for their intended purpose. They shall be energized only through approved electrical outlets and power poles installed in accordance with the National Electric Code. Use of extension cords (flexible cords) for permanent installation of appliances and equipment, except as provided by the manufacturer as service cords, is prohibited. Use of electric space heaters is prohibited unless such heaters are equipped with tip-over safety switches and thermostat heat controls, and their use is authorized.

A. If using extension cords in a temporary situation (not to exceed 90 days per Uniform Building Code of authority having jurisdiction), observe these safe practices:

1. Disconnect by pulling the plug, not the cord.
2. Replace when worn, frayed, or brittle. Don't splice, kink, allow to overheat, or come in contact with chemicals.
3. Use cord to operate one appliance only. Don't use cords in lieu of fixed wiring, and do not run through openings, attach to building surface, or conceal in walls, ceilings, and floors.
4. Protect from physical damage, keep them from being run over by wheeled equipment, etc.
5. Extension cords shall be used only as allowed in 29 CFR 1910.305(g).
6. It is good management practice to test extension cords for proper wiring, impedance, and plug tension.

**12.5 Electrical Work at BIA Facilities.** Only a licensed electrician will perform all work, repair, or maintenance.

**12.6 Electrical Safety.** (See 29 CFR 1910.301-399) Use only **UL** listed wire and apparatus and only as intended.

- A. Ensure that breaker-box switches always indicate on the index the room, office number(s), and area or item where they control the electricity. Other markings indicating voltage, current, or wattage are required.
- B. Treat all loose wires hanging from buildings or poles as "hot," unless certain they are not connected to a live source of electricity.
- C. Exercise caution when installing or using fixed power equipment or portable power tools in hazardous or damp locations. Be careful when using household appliances in kitchens,



bathrooms, or basements, because of the proximity to ground sources such as water pipes.

- D. Branch circuit receptacles should be tested periodically (annually) to ensure proper connection, low impedance, and tension.
- E. De-energize switch before removing or replacing cartridge-type fuses.
- F. Don't overload circuits. Where excessive use of appliances results in frequent fuse failure, redistribute plug-in appliances or install additional circuits. Don't change fuses to higher rating than wire size permits and do not use an alternate item as a fuse replacement.

**12.7 Electrical Equipment.** Keep electrical test equipment and hand tools in good repair. Restrict them to proper use.

- A. Use only nonconducting ladders for electrical work. Keep ladders clean and free from dirt.

**12.8 Power Lines.** Treat all power lines as dangerous. Notify Power Company in advance concerning work on or near power lines or installations. Have the electrical utility perform work for which they are responsible, such as tree trimming or other maintenance activities.

**12.9 Lockout/Tagout.** This policy establishes the minimum requirements for the lockout of energy-isolating devices whenever maintenance or servicing is done. It ensures that the machine or equipment is stopped, isolated from all potentially hazardous energy sources, and locked out before employees perform any servicing or maintenance, where the unexpected energization or startup of the machine, or release of stored energy, could cause injury. Authorized employees or contractors shall do servicing with these procedures followed at all times. All employees, upon observing a machine or piece of equipment that is locked out for servicing or

maintenance, shall not attempt to start, energize, or use that machine or equipment.

This policy does not apply to cord-and-plug-connected electric equipment where unexpected energization of the equipment is controlled by unplugging the equipment and under the exclusive control of the person performing the service or maintenance.

#### **A. Sequence of Lockout System Procedure**

1. Notify all affected employees that a lockout system is going to be utilized and the reason for this step. The authorized employee will know the type and magnitude of energy that the machine or equipment utilizes and will understand the hazards.
2. If the machine or equipment is operating, shut it down by the normal stopping procedure (Le., depress stop button, open toggle switch, etc.).
3. Operate the switch, valve, or other energy-isolation device(s) so that the equipment is isolated from its energy source(s). Stored energy (such as that in springs, elevated machine members, rotating flywheels, hydraulic systems, and air, gas, steam, or water pressure, etc.) must be dissipated or restrained by methods such as grounding, repositioning, blocking, bleed down, etc.
4. Lockout the energy-isolating devices with assigned individual locks with attached identification tags.
5. After ensuring that no personnel are exposed, and as a check to ensure that the energy sources are disconnected, operate the push button or other operating controls to make certain the equipment will not operate.

6. The equipment is now locked out.

### **B. Restoring Equipment to Normal Operation**

1. After the servicing and/or maintenance is complete and equipment is ready for production, check the area around the machines or equipment to ensure that components are operational.
2. Check the work area to ensure that all employees have safely been positioned or removed from the area. Remove the lockout devices and tags, then re-energize the machine or equipment.

### **C. Multiple Lockout Procedures**

1. If more than one individual is required to lock out equipment, each will place his/her own personal lockout device and identification tag on the energy isolating device(s). When an energy-isolating device cannot accept multiple locks, a multiple lockout device (hasp) must be used that allows the use of multiple locks to secure it. Each employee will use his/her own lock to secure the multiple lockout device complete with his or her identification tag.
2. When work is completed and each person no longer needs to maintain his or her lockout protection, that person will remove his/her lock and tag from the multiple lockout device. This is the only procedure to be used for multiple lockout.

### **D. Shift or Personnel Change**

1. If a machine or piece of equipment must be locked out beyond the end of one shift, the supervisor of the shift going off duty must

place his/her lock and tag on the machinery. Then all other employees who had locked the machine out may remove their locks and tags. The maintenance supervisor on the next shift will then place his or her lock and tag on the machine. When all employees who may be working on the machinery the next shift, have placed their locks and tags on the machine, the supervisor of the present shift may then remove his or her lock.

2. If a machine will be locked out for several shifts and no work will be done during that time, then a supervisor's lock must be left on the machine. In this case the importance of the identification tag is paramount.

#### **E. Outside Contractors**

1. When outside service personnel are engaged in service or maintenance activities that require energy control procedures, management and the outside contractor shall inform each other of their respective lockout procedures.
2. Bureau Management shall ensure that all employees understand and comply with the restrictions and prohibitions of the outside contractors' lockout procedures.

#### **F. Glossary**

**Affected employee** - An employee who performs the duty of his or her job in an area in which the energy control procedure is implemented and servicing or maintenance operations are performed. An affected employee does not perform servicing or maintenance on machines or equipment and is not responsible for implementing the energy control procedure. An affected employee becomes an "authorized"

employee whenever he or she performs servicing or maintenance functions on machines or equipment that must be locked out.

**Authorized employee** - An employee who performs servicing or maintenance on machines and equipment. Lockout and tagout is used by these employees for their own protection.

**Capable of being locked out** - An energyisolating device is considered capable of being locked out if it meets one of the following requirements: (1) It is designed with a hasp to which a lock can be attached; (2) It is designed with any other integral part through which a lock can be affixed; (3) It has a locking mechanism built into it; or (4) It can be locked without dismantling, rebuilding, or replacing the energy isolating device or permanently altering its energy control capability.

**Energized** - Machines and equipment are energized when they are connected to an energy source or they contain residual or stored energy.

**Energy-isolating device** - Any mechanical device that physically prevents the transmission or release of energy. These include, but are not limited to, manually operated electrical circuit breakers, disconnect switches, line valves, and blocks.

**Energy source** - Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy.

**Energy control procedure** - A written document that contains those items of information an authorized employee needs to know in order to safely control hazardous energy during servicing or maintenance of machines or equipment.

**Examples** – Some common examples of machinery to be locked and tagged out while being worked on are table and reciprocal saws, drill presses, hydraulic lifts, grinders and cutters, presses, and electric motors.

Safety and Health for Field Operations



*TOPIC 13*  
**VISITING PUBLIC SAFETY  
AND HEALTH**

### 13.1 References

A. 485 DM Chapter 23.1

B. 43 U.S.C. 1457

**13.2 Procedures.** Established bureau visitor sites and facilities shall be managed to provide reasonable safeguards against known hazards and still provide a quality outdoor recreation experience for all visitors. Bureau sites and facilities shall be designed for maximum accessibility and maintained to minimize the risk of injury or illness to all visitors.

**13.3 Inspections.** Bureau-developed recreation sites, campgrounds, and facilities shall be inspected periodically, but no less than annually, for compliance with policies, standards, and codes to help ensure the safety and health of the visiting public. Qualified inspectors shall conduct safety and health inspections.

**13.4 Accident Reporting.** All known visitor accident! incidents on public lands that could reasonably result in tort claim action, must be reported on the Department's Safety Management Information System (SMISWWW.SMIS.DOI.GOV). Known accidents/ incidents involving visitors on the public lands shall be subject to the same reporting and investigation requirements as those involving bureau employees and volunteers.

**13.5 Coordination with Other Federal Programs.** The Visitor Safety Program shall be coordinated with the Regional Safety Program, Law Enforcement, Volunteer, Recreation, Engineering, and Hazardous Materials programs. Law Enforcement is responsible for ensuring compliance with visitor use and conduct regulations, including the requirement for seat belt use by the driver and all occupants of motor vehicles equipped with safety belts. The Recreation, Volunteer, and Engineering programs are responsible for managing and maintaining established bureau visitor sites and facilities, pursuant to policies, standards, and codes. The Environmental/



Hazard Materials Program is responsible for identifying and eliminating hazardous waste sites on the public lands that may pose safety or health dangers to the visiting public.

- 13.6 **Coordination with Outside Agencies.** The Bureau's Safety Program shall coordinate visitor safety and health activities with recognized national safety and health organizations. Coordination with Federal, state, and local law-enforcement agencies, search and rescue unit, and emergency medical service providers is the responsibility of the Law Enforcement Program.

Safety and Health for Field Operations



*TOPIC 14*  
**CONTRACTOR SAFETY  
AND HEALTH**

#### 14.1 References

- A. Federal Acquisition Standards (FAR)  
48 CFR, Chapter 1
- B. Department of the Interior Acquisition  
Regulations (DIAR)

#### 14.2 Procedures

- A. The Contracting Officer (CO) is responsible for, but may delegate these responsibilities to, the Contracting Officer's Representative (COR):
  - 1. Advise of Potential Hazards. The bureau will provide information regarding hazardous substances to contractor employees as required by OSHA 29 CFR 1910.1200 Hazard Communication Standard. The CO shall advise the contractor of all potential unsafe or unhealthful working conditions that have been determined to exist or have the potential to occur on the job site.
  - 2. Provide Material Safety Data Sheets (MSDS). Provide Material Safety Data Sheets (MSDS) to the contractor for all hazardous materials provided by the bureau for use by the contractor. If the contractor is to acquire, control, and use hazardous materials, the contractor is required to acquire MSDS for the hazardous products used.
- B. The Contracting Officer's Representative (COR) is responsible for:
  - 1. Inspecting Work Site. The COR shall inspect the work site or have a Project Inspector do so at reasonable intervals to ensure that the contractor and the contractor's employees are complying with safety and health standards applicable to the work being performed.

**14.3 Contracts.** All contracts shall have Occupational Safety and Health clauses wherein the contractor is required to comply with all applicable safety and health standards as directed by Federal OSHA. The clause shall advise the contractor that failure to comply with safety and health standards shall result in a stop order being issued. All costs related to a stop order for failure to comply with safety and health standards will be borne by the contractor.

#### **14.4 Records**

- A. All safety and health deficiencies noted during inspections will be recorded and maintained in the project contract files. Actions taken by the CO, COR, or Project Inspector to obtain compliance by the contractor shall be recorded and will be considered as limiting factors in future contract awards.
- B. Accidents will be reported to the COR. The COR will encode the accident/incident reported into the Department's Safety Management Information System (SMIS-[WWW.SMIS.DOI.GOV](http://WWW.SMIS.DOI.GOV)).

Safety and Health for Field Operations



***TOPIC 15***  
**FORESTRY**

15.1 References. None.

15.2 Procedures. All employees working in forested areas must have and use appropriate personal protective equipment (PPE), as determined by the job hazard analysis (JHA).

- A. Field Attire. Recommended proper field attire consists of hard hats, long pants, long-sleeved shirt, and appropriate footwear (6- to 8-inch leather lace-up boots with nonslip soles and heels). Where overhead hazards exist, hard hats are mandatory.

15.3 Environmental Conditions

- A. Weather. Work must be terminated during electrical storms and periods of high winds or during other weather conditions that constitute a hazard to employees.
- B. Widowmakers. Employees working in forested areas where dead, broken, or rotted limbs and tops are suspended overhead in the timber canopy should give wide berth to such widowmakers and exercise added precaution in breezy and windy conditions.
- C. Steep Terrain. Employees working on steep terrain shall wear proper boots to protect themselves from slips, trips, and falls. Hand tools will always be carried on the downhill side.
- D. Poison Oak and Ivy. Employees shall be trained in the identification of such plants and shall avoid them whenever possible.
- E. Bees, Snakes, etc. Employees shall be made aware of the pests that may be encountered when working in the woods, including identification, avoidance, and first-aid techniques.

## F.

**Climbing.** Environmental hazards must be considered prior to climbing. Climbing should be suspended during the following conditions:

1. Winds or wind gusts exceeding 25 mph
2. Rain
3. Darkness or poor visibility
4. Lightning storms
5. Temperatures below 40 degrees Fahrenheit or above 95 degrees Fahrenheit
6. Snow or ice on tree limbs
7. Trees close to power lines

Safety and Health for Field Operations



***TOPIC 16***  
**INSPECTIONS AND  
ABATEMENTS**



## 16.1 References

- A. 485 OM Chapter 6, Inspections and Abatement
- B. 29 CFR 1960 Subpart O Inspection and Abatement
- C. 29 CFR 1960 Subpart H Training

## 16.2 Procedures

**A. Routine Inspections.** The routine inspection of all operations, workplaces, and facilities is a continuous part of every supervisor's responsibility.

16.3 Formal Inspections. Procedures for conducting formal inspections can be found in BIA Safety Handbook, Chapter 36.

**A. Annual Inspections.** Personnel sufficiently trained to recognize unsafe or unhealthful working conditions and occupational hazards shall conduct formal annual inspections of workplaces and facilities. Annual inspections should be scheduled with management at the facility to be inspected.

16.4 **Inspection Checklists.** Inspection checklists are an excellent tool for conducting routine inspections. While checklists are helpful, they are not all encompassing. Hazards identified that are not included on checklists should be added as appropriate. The Appendix contains a sample inspection checklist.

16.5 **Supervisor Responsibility.** Supervisors are responsible for corrective actions on a continuing basis. Those corrective actions that cannot be implemented immediately by the supervisor will be referred to a higher level of management for corrective action.



***TOPIC 17***  
**EMPLOYEE REPORTS OF  
UNSAFE/UNHEALTHFUL  
WORKING CONDITIONS**

## 17.1 References

A. 485 OM Chapter 8, *Employee Reports of Unsafe Conditions and Allegations of Reprisal*

B. *Public Law 91-596, OSHA Act of 1970, Section 8 (f)(1)*

C. 29 CFR 1960.26-28 *Inspection and Abatement*

D. 29 CFR 1960.46 *Agency Responsibility* E.

29 CFR 1960.8(a) *General Duty Clause*

**17.2 Procedures.** Employees are responsible for identifying potentially hazardous conditions and correcting them when they have the ability and knowledge to do so. Employees may utilize *BIA Form 5-2513, Employee Complaint of Unsafe or Unhealthful Working Condition*, to report such conditions.

**A. Supervisor Responsibilities.** Supervisors are the key to ensuring that employee reports of unsafe conditions are followed up. This responsibility cannot be delegated to the safety manager/coordinator or to the employee. Supervisors to whom reports are made are responsible for investigating employee reports and implementing controls to protect employees from the hazard. Examples of such controls are the following:

1. Discontinue the operation or process until corrective action is completed.
2. Remove all employees from the hazardous condition, operation, or process.
3. Place barriers and signs in the hazardous area to prevent employee entry until corrective actions are completed.

4. Provide employees with appropriate clothing or personal protective equipment (PPE) or tools to allow them to continue the task safely.
5. Advise employees concerning corrective actions completed or planned.
6. Forward the report to the safety manager, or to a higher authority if the safety manager does not have the expertise, authority, or resources to accomplish corrective action.
7. Follow up to ensure corrective actions have been taken.

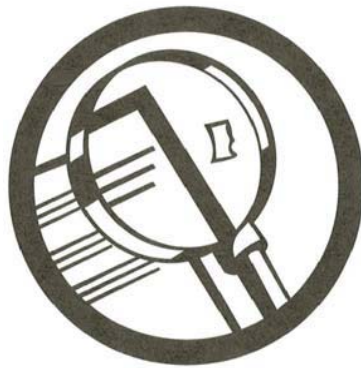
**B. Safety Manager Responsibilities.** The safety manager is responsible for providing technical assistance to supervisors and managers for proper identification of hazards and appropriate corrective actions.

**C. Management Responsibilities.** Management officials are responsible for implementing and supporting the reporting process by doing the following:

1. Training employees in proper reporting of unsafe or unhealthful working conditions.
2. Providing supervisors with the resources to ensure that employees are protected from the potential hazard(s) reported.
3. Ensuring that no employee is subjected to restraint, interference, coercion, discrimination, or reprisal by virtue of submitting a report either orally or formally within the organization or to higher levels of authority.

- 17.3 **Employee Rights.** The employee has the right to decline a task because of a reasonable belief that there is an imminent risk of death or serious injury and there is insufficient time for hazard reporting and abatement actions. See 29 CFR 1960.46. Employees have the right to make reports and to remain anonymous without fear of reprisal.
- 17.4 **Reports to OSHA.** Employees may also submit formal complaints alleging workplace hazards directly to the Department of Labor (OSHA); however, the Secretary of Labor encourages employees to use the Bureau inhouse hazard-reporting procedure as the most expeditious means to achieve abatement. Complaints outside the Bureau may serve as the basis for investigations or inspections by OSHA officials; therefore, employees should not contemplate such actions until in-house efforts prove to be ineffective.
- 17.5 **Workplace Violence.** Bureau offices shall implement a **zero-tolerance** policy on workplace violence. The policy shall be disseminated to all employees. Procedures for reporting workplace violence shall be established, and employees will be notified of the proper reporting procedure. Employees should receive training on prevention of workplace violence and proper reporting procedures. Employees who have potential exposure to conflict in the performance of duties shall receive training in conflict resolution or the equivalent.

Safety and Health for Field Operations



***TOPIC 18***  
**ACCIDENT/INCIDENT  
INVESTIGATIONS**

18.1 **References/Required Forms**

- A. BIA Safety Handbook, Chapter 33,  
Workers Compensation
- B. S.M.I.S. Supervisors Report Module,  
WWW.SMIS.DOLGOV
- C. 485 OM, Chapter 7, Accident/Incident  
Reporting/Serious Accident Investigation
- D. CA-1, Federal Employees Notice  
of Traumatic Injury
- E. CA-2, Notice of Occupational Disease  
and Claim for Compensation
- F. CA-16, Request for Examination  
and/or Treatment
- G. OWCP 1500A Uniform Health Insurance  
Claim Form
- H. SF-91 , Operator's Report of Motor  
Vehicle Accident
- I. SF-94, Statement of Witness
- J. What to Do in Case of an Injury Envelope

18.2 **Procedures.** For the employee's protection, he or she must prepare a Form CA-1, Federal Employees Notice of Traumatic Injury or Form CA-2, Notice of Occupational Disease and Claim for Compensation, and forward to his or her immediate supervisor for all on-the-job injuries or illnesses. The CA-1 must be completed as soon as possible but not later than 30 days from the date of injury. Both forms are to be completed by the employee and supervisor or the designated Workers' Compensation Specialist prior to medical treatment, except in critical situations, in which the reports can be completed after evacuation or

medical attention has been administered. A Report of Accident/Incident must be encoded into SMIS by the supervisor within six days.

**A. Obtaining Medical Treatment.** The CA-16, Request for Examination and/or Treatment, authorizes medical treatment of the injured employee at government expense. This form should accompany the employee to the medical facility unless the situation is determined critical and there is not enough time to complete the form. When possible, supervisors are encouraged to accompany injured employees to the medical facility to ensure assistance is given to the employee. The supervisor is responsible for informing the physician of light-duty alternatives.

**B. OWCP 1500A, Uniform Health Insurance Claim**

**Form.** OWCP 1500A form is a standard billing form and is the responsibility of the medical provider, not the employee. The attending health care personnel will submit the completed form to OWCP for payment. Most health care agencies have the OWCP 1500A form or its equivalent.

**C. Agency Provided Medical Care.** If the employee's injuries are treated via agencyprovided medical care (APMC)(Le., wildland firefighters), a report of accident/incident must be completed. The immediate incident supervisor will ensure that an Accident/Incident Report accompanies every Form CA-1 or CA-2 back to the home unit compensation specialist.



- D. Report of Accident/Incident.** An automated Report of Accident/Incident is the official process for reporting all accidents or incidents. The report of accident/incident is to be completed by the supervisor and submitted within six days after the incident. The reporting process should not be held up awaiting additional information. The report must be completed with the information known and, if necessary, the report can be updated to add, delete, or correct information previously reported on the original report of accident/incident. The Department's Safety Management Information System supports OSHA reporting requirements and the bureau's need for collecting, assimilating, and analyzing accidents, illness, and injury data.
- E. Supervisor's Investigation.** Following treatment of the injured employee, the supervisor must initiate investigations of all accidents/incidents, either personally or through a trained accident investigator. The accident investigation will include compiling facts that led up to the incident, actions or inactions culminating in the incident, and post-incident actions relating to the incident.
- F. Requested Forms and Time frames.**  
Bureau forms required for injury accidents are as follows:

**Accident Forms Required for Injury Accident**

<b>FORM</b>	<b>INITIATOR</b>	<b>RECIPIENT</b>
<i>CA-1 (Employee notice of injury)</i>	<i>Injured employee, as soon as possible</i>	<i>Immediate supervisor Employee Medical File OWCP</i>
<i>Online Accident/Incident Reporting</i>	<i>Supervisor, within 6 days</i>	<i>Safety Management Information System</i>
<i>CA-16 (Request for examination and/or treatment)</i>	<i>Supervisor CA-16 to accompany employee to attending physician</i>	<i>Attending physician District or State Office OWCP</i>

**G. Serious Accident! Fatality.** See 485 OM, Chapter 7, Incident/Accident Reporting/Serious Accident Investigation, for the accident investigation guide.

**18.3 Motor Vehicle Accidents.** All motor vehicle accidents involving Government-owned, leased, or privately owned vehicles (being used for official business) must be reported to the employee's supervisor immediately. If a private citizen and/or property is involved, the supervisor should anticipate and plan from the beginning that a tort claim may be filed. The information required includes the names and addresses of the private-sector persons involved, vehicle license numbers, driver's license information, insurance policy references, police reports, pictures, if possible, of the accident site and damaged property, and newspaper articles. When involved in an accident, employees should refrain from discussing the incident with private parties.

- A. **Required Forms.** Bureau forms required for motor vehicle accidents are as follows:

**Accident Forms Required for Motor Vehicle Accident**

FORM	INITIATOR	RECIPIENT
<i>SF-91 (all vehicles)</i>	<i>Operator (at the accident scene)</i>	<i>Local Safety Manager</i>
<i>SF-94</i>	<i>Witness (if any)</i>	<i>Local Safety Manager</i>
<i>On-line Accident Report</i>	<i>Supervisor within six days</i>	<i>Safety Management Information System</i>

- 18.4 **Visitor Accidents.** All known visitor accident/incidents on public lands could reasonably result in tort claim action must be reported.

Safety and Health for Field Operations



***TOPIC 19***  
**CONFINED SPACE**

#### 19.1 References

##### A. 29 CFR 1910.146 Confined Space

19.2 **Procedures.** The bureau has established procedures and policy for identifying permit-required confined space and associated hazards and controlling such hazards to allow safe entry. Employees will have appropriate training prior to entry of such spaces.

#### 19.3 Program Elements for Confined Space Entry

- A. Identification of Confined Spaces
- B. Hazard Identification/Risk Assessment
- C. Hazard Control
- D. Permit-System
- E. Employee Information and Training
- F. Site Control
- G. Authorized and Unauthorized Entry
- H. Equipment
- I. Rescue
- J. Protection from Internal Hazards
- K. Duty to Other Employees

#### 9.4 Reserved

9.5 **Inactive/Abandoned Mines.** Confined space entry requirements within the BIA have been expanded to include entry into inactive/abandoned mines. Due to the high potential of exposure to hazardous conditions during mine entry and examination, it is recommended

that the entry requirements outlined under the Confined Space Policy be followed to ensure the safety of those employees required to enter mines to perform their duties. Pre-evaluation for hazards shall be done until it is determined that no hazardous conditions exist. Continuous monitoring for hazards (Le., lower explosive limits, oxygen deficiency, toxic gases) is still recommended when in the mine. Use the JHA evaluation process for all entry situations.

Safety and Health for Field Operations



***TOPIC 20***  
**EXPLOSIVES SAFETY**

- 20.1 **References.** Regional Directors/Superintendents should make available the following regulations to employees who may use or are using explosives in their operations:

A. Occupational Safety and Health Administration (OSHA) Regulations

29 CFR 1910.109 Explosives and Blasting Agents

29 CFR 1926.900 General Provisions

29 CFR 1926.901 Blaster Qualification

29 CFR 1926.902 Surface Transportation of Explosives

29 CFR 1926.903 Underground Transportation of Explosives

29 CFR 1926.904 Storage of Explosives and Blasting Agents

29 CFR 1926.905 Loading of Explosives or Blasting Agents(r)

29 CFR 1926.906 Initiation of Explosive Charges-Electric Blasting

29 CFR 1926.907 Use of Safety Fuse 29 CFR

1926.908 Use of Detonating Cord

29 CFR 1926.909 Firing the Blast

29 CFR 1926.910 Inspection after Blasting

29 CFR 1926.911 Misfires

29 CFR 1926.912 Underwater Blasting

29 CFR 1926.913 Blasting in Excavation Work Under Compressed Air



## B. Other Regulations

27 CFR Part 55 Commerce in Explosives

46 CFR Parts 146-149 Water Carriers

49 CFR Parts 171-179 Highways, Railways and  
Aircraft

49 CFR Parts 390-397 Motor Carriers

NFPA Code 495 Explosive Materials Code

**20.2 Guidance** This handbook establishes guidance for the Bureau of Indian Affairs (BIA) on handling, transportation, storage and use of explosives. It is published to control the use of explosives so that employees, the public, and property under BIA jurisdiction will not be endangered. Due to the extreme hazards involved, there should be no deviation from the following instructions.

**20.3 Responsibilities.** Regional Directors are responsible for the decision to permit employees to use explosives in their operations or to contract for the use of explosives. If employees are permitted to use explosives, the Regional Director/Superintendent is responsible for seeing that applicable standards concerning explosive safety are observed by employees. The Regional Director/ Superintendent is also responsible for seeing that only authorized employees, qualified by approved training and experience, handle, store and use explosives. Regional Directors/Superintendents are responsible for the issuance of "Permits to Use" and "Permits to Blast," as required by National Fire Protection Association (NFPA) 495, Chapter 2. No employee should be in possession of explosive materials, or conduct an operation or activity requiring the handling, storage or use of explosive materials, or perform or supervise the loading and firing of explosive materials, without first obtaining the proper permit(s).

**20.4 Blaster Qualifications.** Employees receiving, transporting, storing, using or otherwise handling explosives are to be qualified as required by 29 CFR 1926.901 and NFPA 495, Chapter 2. They should demonstrate knowledge of and willingness to comply with all safety rules. They should be physically **fit**, capable, reliable, able to read and write the English language, not addicted to or under the influence of intoxicants, narcotics, or other dangerous drugs, and not less than 21 years of age. They should be trained and certified as blasters in one or more of the following ways:

- A. Assigned as apprentices to a journeyman blaster (certified blaster card carrying employee) until the apprentice is considered as qualified and passes a qualifying examination as approved by the Division of Safety and Risk Management (DSRM).
- B. Attend a basic 16-hour course conducted or approved by DSRM, participate in at least four hours of approved "hands on" training, and pass a qualifying examination (or examinations) approved by the DSRM as applicable to the advanced degree of explosive use desired. Normally, a basic examination is used to qualify for "single shot" certification discharging one charge (one blast hole) at a time. A more advanced examination is required to achieve "ten-shot" certification for discharging up to ten holes in a blast.
- C. Attend a renewal or review course of at least eight hours every three years in order to renew the DSRM blaster's card.
- D. Hold current first aid certification, at least equivalent to the American Red Cross 8-hour multi-media standard course.

## 20.5 Definitions.

- A. ANFO.** Ammonium nitrate-fuel oil; a blasting agent composed of ammonium nitrate and liquid hydrocarbons. Approximately six percent of No.2 fuel oil produces the proper oxygen balance.
- B. Detonator.** Any device containing a detonating charge of no more than 10 grams explosive weight that is used for initiating detonation of an explosive. The term includes, but is not limited to, blasting caps for use with safety fuse, electric blasting caps, detonating-cord delay connectors, and MS connectors for use with detonating cord.
- C. Explosive.** Any chemical compound, mixture or device, the primary or common purpose of which is to function by explosion (i.e., with substantially instantaneous release of gas and heat). The following depicts a partial listing of explosive classification for transportation purposes (Department of Transportation (DOT)» and storage purposes (Bureau of Alcohol, Tobacco and Firearms (ATF):

### 1. Department of Transportation (transportation):

- a. Class A. (Division 1.1 or 1.2)** Possessing, detonating, or otherwise, of maximum hazard such as: high explosives, dynamite, nitroglycerin, picric acid, lead azide, fulminate of mercury, black powder, low explosives, certain water gels or emulsions which are cap sensitive, detonating or cast primers, detonators and detonating cord having an explosive content exceeding 100 grains per linear foot or having a gross weight of all packages of detonating cord exceeding 100 pounds per transport vehicle.

- b. **Class B. (Division 1.2 or 1.3)** Those explosives which, in general, function by rapid combustion rather than detonation, and include some explosive devices, such as special fireworks, flash powders, some pyrotechnical signal devices, and liquid or solid propellant explosives which include some smokeless powders.
- c. **Class C. (Division 1.4)** Certain types of manufactured articles which contain Class A or Class B explosives, or both, as components, but **in** restricted quantities. Such articles include detonating cord not exceeding 100 grains per linear foot or not exceeding 100 pounds per transport vehicle, fuse lighters and igniters, safety fuse, igniter cord, and detonators which fuse lighters and igniters, safety fuse, igniter cord, and detonators which will undergo only limited propagation in the shipping package. Limited propagation means that if one detonator near the center of a shipping package is exploded, the aggregate weight of explosives in this and outside packaging that explode will not exceed 25 grams. Detonators that will mass detonate in the shipping package may not be classed as Class C explosives. "Mass detonate," for this section, means that more than 90 percent of the devices tested in a package explode practically simultaneously.
- d. **Oxidizer.** A substance, such as a nitrate, that yields oxygen readily to stimulate the combustion of organic matter.

- e. **Blasting Agent. (Division 1.5)** A material designed for Blasting which has been tested in accordance with 49 CFR 173.114a(b) and found to be so insensitive that there is very little probability of accidental initiation to explosion or of transition from deflagration to detonation.

## 2. **Bureau of Alcohol, Tobacco and Firearms (storage).**

- a. **High Explosives.** Explosive materials which can be caused to detonate by means of a blasting cap when unconfined such as: dynamite; certain water gels or emulsions; blasting caps; cast primers; and detonating cord.
- b. **Low Explosives.** Explosive materials which can be caused to deflagrate (rapid combustion rather than detonation) when confined such as: black powder; safety fuse; igniter cords; and fuse lighters.
- c. **Blasting Agents.** Any material or mixture, consisting of fuel and oxidizer, that is intended for blasting and not otherwise defined as an explosive, if the finished product, as mixed for use or shipment, cannot be detonated by means of a number 8 test blasting cap when unconfined such as: ammonium nitrate-fuel oil and certain water gels or emulsions.

**D. Extraneous Electricity.** Any unwanted electrical energy which may enter blasting circuits from any source.

**E. Fumes.** Toxic gases produced by all explosives.

- F. **Highway.** Any public street, alley, or road, including reservation roads.
- G. **Inhabited Building.** A building or structure regularly used in whole or part as a place of human habitation. The term "inhabited building" shall also mean any church, school, store, railway passenger station, airport terminal for passengers, and any other building or structure where people are accustomed to congregate or assemble, but excludes any building or structure occupied in connection with the manufacture, transportation, storage, or use of explosives.
- H. **Magazine.** A structure, building, or container, used for the storage of explosives, constructed to meet certain specifications to provide any of the following as required: bullet-resistance, water-resistance, theft resistance, fire resistance, and ventilation. The Bureau of Alcohol, Tobacco and Firearms' 27 CFR 55, Subpart K contains regulations for explosives storage including magazine construction, types, housekeeping, etc.
- I. **Misfire.** A charge that fails to detonate when it should.
- J. **Permit to Blast.** A "Blaster's Certificate" or "Blaster's Card" issued or approved to be issued to an individual by the Chief, Division of Safety and Risk Management. The Blaster's Certificate indicates the type of explosive work and handling for which the individual has been trained, tested and, therefore, deemed qualified. This card shall be carried by the permit holder during explosive handling or blasting operations.
- K. **Permit to Use.** A memorandum or other document, issued by the Regional Director or Agency Superintendent, authorizing the purchase, possession, transportation, storage, and use of explosive materials, for either a single

or an ongoing blasting activity, under his or her jurisdiction. A copy of this permit shall be available at each such operation.

- L. **Primer.** A cartridge of explosive with a cap or detonating cord in place.
- M. **Primer, Cast.** A priming charge consisting of a cylinder of compo 8 or similar military type explosive used with a cap or detonating cord to prime main charges of blasting agents.
- N. **Railway.** Any steam, electric, diesel electric, or other railroad or railway which carries passengers for hire on the particular line or branch in the vicinity where explosives are stored or where explosive manufacturing buildings are situated.
- O. **Semiconductive Hose.** A hose with an electrical resistance high enough to limit flow of stray electric currents to safe levels, yet not so high as to prevent drainage of static electric charges to ground; hose of not more than two megaohms resistance over its entire length and of not less than 5,000 ohms per foot meets the requirements.
- P. **"Springing" Shot Holes.** The procedure of enlarging a shot hole with explosives preparatory to the main loading. This practice is occasionally desirable in order to concentrate more powder in the bottom of the hole than could ordinarily be packed into it.
- Q. **Stemming.** Fine stone, dirt or drill cuttings used to plug the unloaded portion of a drill hole.
- R. **Straight Nitroglycerine Dynamite.** A type of dynamite in which nitroglycerine is the only material that, by itself, is explosive.

**S. Water Gel Slurries and Emulsions.** These comprise a wide variety of materials use for blasting. They contain proportions of water, or water and oil, and high proportions of oxidizer salts, such as ammonium nitrate. There are two broad classes of water gels: (1) those which are sensitized by a material classed as an explosive, such as TNT or smokeless powder; (2) those which contain no ingredient classified as an explosive; these are sensitized with metals such as aluminum or with other fuels. An emulsion's sensitivity is established by its bulking agent, for example, the amount of ultrafine air bubbles or artificial glass, resin, plastic, etc., dispersed throughout its matrix. All may be premixed at an explosives plant or mixed at the site immediately before delivery into the borehole.

**20.6 Transportation of Explosives.** The transportation of explosive materials over highways, including on reservation roads, shall be in accordance with Department of Transportation (DOT) or more stringent regulations as applicable. Department of Transportation regulations and changes lawfully on file and approved by DOT are hereby incorporated by reference as a part of this handbook. The transportation of explosives shall comply with the requirements as outlined in the applicable regulations listed in section 1.2 above.

A. No attempt should be made to fight a fire that cannot be contained or controlled before it reaches explosive materials. In such cases, all personnel should be immediately evacuated to a safe location, at least 2500 feet distant, and the area shall be guarded to prevent entry by spectators, intruders or emergency personnel.

B. No person shall smoke, carry matches or any other flame-producing device or carry any unauthorized firearms or loaded cartridges while in or near a motor vehicle transporting explosive materials; or drive, load, or unload such a vehicle in a careless or reckless manner.



- C. Explosive materials, other than those that are essential to promote safety of the passengers or the operation of the vehicle, shall not be carried or transported in or upon a public conveyance or vehicle carrying passengers.
- D. Explosive materials shall not be transferred from one vehicle to another within a city, county, state, or other area without informing the fire and police departments thereof. In the event of breakdown or collision, the local fire and police departments shall be promptly notified to help safeguard such emergencies. Explosive materials shall be transferred from the disabled vehicle to another only when proper and qualified supervision is provided. Remove all explosives before pulling apart vehicles involved in a collision.
- E. Explosives and detonators should be transported over the highways in separate vehicles.
- F. No employees shall store, handle, or transport explosives or blasting agents when such storage, handling and transportation of explosives or blasting agents constitutes an undue hazard to life and property.
- G. No employee should sell or give away any explosive or blasting agent to any unauthorized person.
- H. No employee should sell, display, or expose for sale, any explosive or blasting agent on any highway, street, sidewalk, public way, or public place or reservation roadway.

20.7 **Operation of Vehicles for Transporting Explosives.** Vehicles used for transporting explosive materials shall be strong enough to carry the load without difficulty and be in good mechanical condition. If vehicles do not have a closed body, the explosives shall be covered with a flame retardant and moisture proof tarpaulin or other effective protection against moisture and sparks. All

vehicles used for the transportation of explosive materials shall have tight floors and exposed sparkproducing metal on the inside of the body shall be covered with wood or other non-sparking materials to prevent contact with packages of explosives. Packages of explosive materials shall not be loaded above the sides of an open body vehicle.

A. Every vehicle transporting hazardous materials on public roads shall be placarded with 10 3/4 inch, diamond-shaped signs as required by the Department of Transportation's 49 CFR Part 172, Subpart F.

1. Exterior placards or markings are required on vehicles transportingexplosives within a jobsite. They may be in accordance with either the Department of Transportation requirements or may be as follows for the various classes of commodities:

Commodity	Type of Marking or Placard
Explosives, Class A, any quantity combination of Class A and Class B explosives.	EXPLOSIVES A (Red letters on or a white background).
Explosives, Class B, any quantity.	EXPLOSIVES B (Red letters on white background).
Explosives, Class C, (1,000 pounds or more gross weight).	DANGEROUS (Red letters on white background).
Oxidizing material (Ammonium nitrate, etc.) 1,000 pounds or more gross weight.	OXIDIZERS (Yellow letters on black background).
Blasting Agents (1,000 pounds or more gross weight).	BLASTING AGENTS (Black letters on orange background).

2. **BLASTING AGENTS, OXIDIZERS AND DANGEROUS** placards need not be displayed if a vehicle also contains Class A or Class B explosives and is placarded **EXPLOSIVES A** or **EXPLOSIVES B** as required. If explosives Class A and explosives Class B are loaded on the same vehicle, the **EXPLOSIVES B** marking need not be displayed.
3. **DANGEROUS** placards, instead of separate placards for each, may be used for any combination of Class C explosive, oxidizer, or blasting agent when their combined weight totals 1000 pounds or more. However, separate placards are needed for any of these materials for which 5000 pounds or more is loaded.
4. Markings constructed in accordance with the table in above Section 1.6A(I) shall consist of letters not less than four inches high, in the color specified, using approximately a 5/8 inch stroke. The placard must be larger than the lettering required thereon by at least one inch at the top, bottom, and sides. Markings or placards shall be contained in an area on the vehicle which has no other marking, lettering, or graphic display, for at least three inches in each direction.
5. Such markings or placards shall be displayed at the front, rear, and on each side of the motor vehicle or trailer, or other cargocarrying body, while it contains explosives or other dangerous articles of such type and in such quantity as specified in section 1.6A(I). The front marking or placard may be displayed on the front of either the truck, truck body, truck tractor or the trailer.

- B. Each motor vehicle used for transporting explosive materials shall be equipped with two fire extinguishers, having a combined rating of at least 2- A:1 Q-B:C, spare electric fuses, unless equipped with circuit breakers, and three reflective warning triangles.
  - 1. Only extinguishers listed or approved by a nationally recognized fire equipment testing laboratory, shall be deemed suitable for use on explosive materials carrying vehicles.
  - 2. Extinguishers shall be filled and ready for immediate use and located near the driver's seat. Extinguishers shall be examined periodically by a competent person.
- C. A motor vehicle used for transporting explosives shall be inspected prior to each use to determine that it is in proper condition for safe transportation of explosives.
  - 1. The fire extinguishers shall be filled and in working order.
  - 2. All electrical wiring shall be completely protected and securely fastened to prevent short-circuiting.
  - 3. Chassis, motor, pan, and underside of body shall be reasonably clean and free of excess oil and grease.
  - 4. Fuel tank and feed line shall be secure and have no leaks.
  - 5. Brakes, lights, horn, windshield wipers, and steering apparatus shall function properly.
  - 6. Tires shall be checked for proper inflation and defects.

7. The vehicle shall be in proper condition in every other respect and acceptable for handling explosive.
- D. Vehicles transporting explosive materials should only be driven by or be in the direct charge of a Bureau certified blaster. The driver should comply to traffic regulations, state laws, including, when operating a placarded vehicle, having the required Commercial Drivers License with the applicable "hazardous" endorsement, and the provisions of this handbook.
- E. Except under emergency conditions, no vehicle transporting explosives should be parked before reaching its destination, even though attended, on any public street adjacent to or in proximity to any bridge, tunnel, dwelling, building, or place where people work, congregate or assemble.
- F. Every motor vehicle transporting any quantity of explosive should, at all times, be attended by a certified blaster. This attendant should have been made aware of the class of the explosive material in the vehicle, of its inherent dangers and should have been instructed in the measures and procedures to be followed in order to protect the public from those dangers. He/she should have been made familiar with the vehicle he/she is assigned to attend and should be trained, supplied with the necessary means, and authorized to move the vehicle when required.
1. For the purpose of this section, a motor vehicle shall be deemed "attended" only when the attendant is physically on or in the vehicle or has the vehicle within his/her field of vision and can reach it quickly and without any kind of interference; "attended" also means that the attendant is awake, alert and not engaged in other duties or activities which may divert his/her attention from the vehicle.

2. An explosive-laden vehicle may be left unattended if parked in an area where such parking is permitted, such as an area complying with the requirements of NFPA No. 498, Standard for Explosives Motor Vehicle Terminals.
- G. Explosives should be separated from a vehicle's iron or steel components by a non-sparking liner.
- H. Explosives and Oxidizers should be transported in a closed cargo space or shall be covered with a fire and water-resistant tarp.
- I. No spark-producing metal, spark-producing metal tools, oils, matches, firearms, electric storage batteries, flammable substances, acids, oxidizing materials, or corrosive compounds shall be carried in the body of any motor truck and/or vehicle transporting explosive materials, unless that loading of such hazardous materials complies with Department of Transportation regulations.
- J. Vehicles transporting explosive materials shall avoid congested areas and heavy traffic. Where routes through congested areas have been designated by local authorities such routes shall be followed.
- K. A placarded vehicle must stop before crossing a railroad. Stop 15 to 50 feet before the nearest rail. Communicate your intentions to stop by flashing the vehicle's brake lights, and do not stop abruptly. Proceed only when it has been determined that no train is coming and do not shift gears while crossing the tracks.
- L. Delivery should only be made to authorized persons and into authorized magazines or approved temporary storage and handling areas.

## 20.8 Explosive Storage.

**A. Storage Regulations.** The storage of explosives shall, at all times, comply with the requirements of this handbook, 29 CFR 1910.109, 29 CFR 1926.904 and Department of the Treasury Regulations contained in 27 CFR 55.

### **B. General Provisions.**

1. All explosive materials shall be kept in storage magazines at all times unless they are being used or being transported in original containers. Before mixing the liquid and solid portions of binary (two component) systems, the flammable, liquid component shall not be stored in the explosive magazine. Both components shall be stored in separate, locked facilities or cabinets. The solid component may be stored in the explosive magazine. Once mixed, binary explosives are required to be stored in the explosives magazine.
2. Detonators are not to be stored in the same magazine with other explosives or blasting agents, except that they may be stored with electric squibs, safety fuse, igniters, igniter cord and delay devices, provided the proper type magazine is used.
3. Smoking, matches, open flames, spark-producing devices and firearms (except firearms carried by authorized guards) shall not be permitted inside of or within 50 feet of magazines and they shall be so posted.
4. Storage facilities shall be kept clean, dry, free of grit, paper, empty containers, packages, and rubbish. Tools used for maintenance and cleaning shall have no spark-producing parts.

5. Any dynamite cases showing stains from leakage inside the case should be reported at once, and both the cases and deteriorated contents destroyed in an approved manner. (See Section 1.8C)
  - a. Magazine floors that have become stained with nitroglycerin from leaky dynamite should be thoroughly scrubbed with a stiff broom or hard non-metal brush using the following solution:
    - 1/2 quarts water
    - 3 1/2 quarts denatured alcohol
    - 1 quart acetone
    - 1 pound sodium sulfide (60 percent commercial)
  - b. It is preferable to dissolve the sodium sulfide in water before adding the alcohol and acetone. Plenty of liquid should be applied to the floor to insure complete decomposition of the nitroglycerin. Standing pools of nitroglycerin should be absorbed with sawdust before applying the neutralizing solution. The absorbed mixture should be destroyed by burning in the manner described for destroying dynamite. **Never add the neutralizing solution to standing pools of nitroglycerin.** Prepare the solution only as needed since its effectiveness decreases in storage.
6. Any explosive material that has deteriorated or is leaking liquid should be destroyed in accordance with instructions from the manufacturer.
7. Prior to any repair to the interior of a storage magazine, all explosive material shall be removed and the interior cleaned.



8. Areas surrounding storage facilities should be kept clear of rubbish, brush, dry grass, or trees for not less than 25 feet in all directions.
9. Any blaster storing explosive material that has been recovered from blasting misfires should place the explosives in a separate magazine from other explosives until a proper method of disposal can be accomplished. Caps and electric blasting caps recovered from blasting misfires shall not be reused. Such explosive material should be disposed of according to the manufacturer's instructions.
10. Any blaster storing explosive material should open and inspect the facilities at intervals not greater than seven days to determine whether the explosives therein have deteriorated, whether there has been unauthorized entry or attempted entry into the storage facilities, and whether there has been unauthorized removal of contents.
11. Any person having knowledge of the theft or loss of any explosive material from his/her stock shall, within 24 hours of discovery, report the theft or loss to the Bureau of Alcohol Tobacco and Firearms by telephoning 800-800-3855 (nationwide toll free number) and by completing and filing ATF Form 5400.5. Theft or loss of any explosive materials shall also be reported to appropriate local authorities.
12. A storage magazine should be in the charge of a certified (card carrying) blaster at all times who shall be held responsible for the enforcement of all safety precautions.

13. Packages of explosives should be laid flat with top side up. Corresponding grades and brands shall be stored together in such a manner that brands and grade marks show. All stocks should be stored and marked so as to be easily checked and inventoried and so the explosive's age is easily recognized. Packages should be stacked in a stable manner, not over six feet high. To prevent interference with ventilation, no materials should be stored within two inches of walls, except in Type 5 bins, or within two inches of ceilings. When any kind of explosive is removed from a magazine for use, the oldest of that type should be taken first.
  
14. Any agency using explosives shall keep a record of all transactions or operations involving explosives for five years. An accumulation of invoices, sales slips, delivery tickets, receipts, or similar papers representing individual transactions satisfy part of this record. Magazine daily summaries, yearly inventories, and blasting logs (see sections 1.78(15), 1.78(16) and 1.81(8)) are also needed.
  
15. A "Daily Summary of Magazine Transactions" should be kept for each magazine. See Illustration 6 for the recommended form. If other forms are used, all the information included on Illustration 6 should be included. The form is to be maintained each time materials are removed from, returned to, or received into a magazine. These records may be kept at a centralized agency office in lieu of the on-site magazine. Any discrepancy which might indicate a theft or loss is to be reported in accordance with Section 1.78(11). The blaster in charge of a magazine should review the daily transaction sheets on a weekly basis for accuracy and discrepancies.

16. At least one special inventory shall be taken for each magazine during each calendar year. Materials within each magazine will be counted and evaluated for deterioration. Discrepancies between actual count and records which indicate missing explosive materials will be reported as per Section 1.78(11 ).
17. Magazines shall be located in accordance with the "American Table of Distances for Storage of Explosives," see Illustration 4.
18. Metal tools are not to be stored in any magazine.
19. Containers of explosive materials are not to be unpacked or repacked inside of or within 50 feet of a magazine or close to other explosive materials. Containers must be closed while being stored. Opened packages of explosives shall be securely closed before being returned to a magazine.
20. Tools for opening or closing containers of explosive materials are to be of nonsparking materials except that metal slitters may be used for opening fiberboard containers. A wooden wedge and a fiber, rubber, or wooden mallet shall be used for opening and closing wooden containers.
21. Access routes to explosive storage sites should be marked with signs indicating "Danger - Never Fight Explosives Fires." (The Institute of Makers of Explosives maintains a list of suppliers of such signs.)
22. Property upon which magazines are located should be posted with signs reading "Explosives - Keep Off."

23. The Department of Transportation placard indicating "BLASTING AGENTS" (Sec. 49 CFR, Part 172.524) shall be displayed on all Type 5 magazines in which blasting agents are stored. Do not place any signs on any other magazine types.
24. Local fire departments, law enforcement departments, and emergency planning committees should be notified of explosive magazine locations and of type and quantity of materials stored within them. No one should be allowed to fight an explosives fire. Such fires should, instead, be safely guarded to maintain at least 2500 feet distance between them and any persons. All emergency force personnel should be immediately moved beyond this distance limit as soon as it is evident a fire will not be extinguished before it reaches within 50 feet of a magazine.
25. Bureau organizations shall not store explosives for more than one year past the date of purchase.
26. A copy of this entire handbook section, "1.7 Explosive Storage," along with Illustration 4, "American Table of Distances for Storage of Explosives Materials," shall be maintained for ready reference within each Type 1, Type 2 (except detonator boxes for 100 or less caps) or Type 4 magazine.

## **20.9 Use of Explosive Materials for Blasting.**

- A. Instructions for Blasting.** The use of explosives for blasting shall comply with the requirements of this supplement, 29 CFR 1910.109(e), 29 CFR 1926 Subpart U, and the explosive material manufacturer's instructions. Whenever there appears to be difference in instructions concerning the use of explosive material for blasting, the more stringent instructions will apply.

**B. General Provisions.**

1. No explosives should be abandoned.
2. While explosive materials are being handled or used, smoking shall not be permitted, and no one near the explosive materials shall possess matches, other flame-producing devices, open light, or other fire or flame.
3. Original containers or Class II magazines (defined in 29 CFR 1910.1 09(c)(4)) shall be used for taking detonators and other explosives from storage magazines to the blasting area.
4. When blasting is done in congested areas or in close proximity to a structure, railway, or highway, or any other installation that could be damaged, the blast should be covered before firing with a mat constructed so that it is capable of preventing fragments from being thrown.
5. Every reasonable precaution including, but not limited to, visual and audible warning signals, flags, barricades, warning signs, and informational signs should be used to ensure employee and public safety. Flagmen should be safely stationed on roads which pass through the danger zone so as to stop traffic during blasting operations.
6. Surface blasting operations, except during unusual conditions, shall be conducted during daylight hours.
7. Whenever blasting is being conducted in the vicinity of gas, electric, water, fire alarm, telephone, telegraph, and steam utilities, the blaster should notify the appropriate representatives of such utilities at least 24 hours in advance of blasting, specifying the location and intended time of such blasting.

8. Due precautions shall be taken to prevent accidental discharge of electric blasting caps from current induced by radar, radio transmitters, lightning, adjacent powerlines, dust storms, or other sources of extraneous electricity. See Section 1.8F for electric blasting precautions.
9. All blasting operations shall be suspended and all persons shall be removed from the blasting area during the approach and progress of an electric storm.

**C. Packaging and Deteriorated Explosives.**

1. Empty boxes and paper and fiber packing materials which have previously contained high explosives should not be used again for any purpose but should be destroyed by burning at an approved isolated location out of doors. No person shall be nearer than 100 feet after the burning has started.
2. Explosive materials that are obviously deteriorated or damaged should not be used and should be destroyed in accordance with instructions from the manufacturer.

**D. Drilling Boreholes and Loading Explosive Materials.**

1. Drilling should not be started until all remaining butts of old holes are examined with a wooden stick for unexploded charges, and if they are found, they shall be refired before work proceeds.
2. All drill holes should be sufficiently large to freely admit the insertion of the explosive materials.

3. No drill holes which have contained explosives should be deepened.
4. Holes should be checked prior to loading to determine depth and conditions. Where a hole has been loaded but the explosives have failed to detonate, there should be no drilling within 50 feet of the hole.
5. A borehole should never be sprung when it is adjacent to or near a loaded hole. Holes which have been sprung or recently drilled should be allowed to cool before explosives are loaded.
6. Machines and tools not used for loading explosives into boreholes should be removed from the immediate location of holes before explosives are delivered. Equipment should not be operated within 50 feet of loaded holes.
7. Tamping should be done only with wooden tamping poles without exposed metal parts, but non-sparking metal connectors may be used for jointed poles. Violent tamping should be avoided. A primed cartridge and any cartridge adjacent to it should not be tamped.
8. No holes should be loaded except those to be fired in the next round of blasting. After loading, all remaining explosives should be immediately returned to an authorized magazine.
9. When loading blasting agents pneumatically, the requirements of 29 CFR 1910.109 and NFPA 495, Section 7-2.4 shall be followed.
10. Blast holes should be stemmed to the collar or to a point which will confine the charge. Explosives should never extend to less than eight inches from the collar

of the hole. Preferably, more space should be left for stemming.

11. No loaded holes should be left unattended or unprotected.

#### **E. Initiation of Explosive Charges.**

1. Only electric blasting caps shall be used for blasting operations in congested districts, or on highways, or adjacent to highways open to traffic, except where sources of extraneous electricity make such use dangerous.
2. Safety fuse and caps shall be used only where sources of extraneous electricity make the use of electric blasting caps dangerous.
3. Consideration shall be given to the length and burning rate of safety fuse. Sufficient time, with a margin of safety, shall always be provided for a blaster to reach a place of safety. Each day, before using safety fuse, a three foot or longer length should be test burned to verify its burning speed. Under no circumstances should less than three feet of fuse be used to initiate explosives.
4. At least two men shall be present when more than one fuse is to be lit by hand lighting methods.
5. No one shall be permitted to carry detonators on his/her person.
6. When fuse is used, blasting caps shall be securely attached with standard ring type cap crimpers.
7. Primers for use in surface blasting shall be made up only as required for each round of blasting and shall be made up **at** the hole to be charged.



8. No blasting cap shall be inserted in the explosive materials without first making a hole in the cartridge for the cap with a wooden or nonsparking metal punch of proper size or a standard cap crimper.
9. Explosive materials shall not be extracted from a hole that has once been charged or has misfired unless it is impossible to detonate the unexploded charge by insertion of a fresh and additional primer.
10. If there are any misfires while using cap and fuse, or other nonelectric detonation, all persons shall remain away from the charge for at least one hour. If electric blasting caps have caused the misfire, this waiting period may be reduced to 30 minutes. Misfires should be handled under the direction of the person in charge of the blasting and all wires and/or fuses should be carefully traced and a search made for unexploded charges.
11. When using slurry explosives, which include water gels and emulsions, after storing them in cold weather (approximately 40 degrees F and lower), consult the manufacturer's data sheet, or consult with the supplier, to determine the proper priming procedure which might be needed due to lowered sensitivity.

**F. Miscellaneous Electric Blasting Procedures.**

1. Electric blasting caps shall not be used where sources of extraneous electricity make their use dangerous. Before introducing electric blasting caps to any site, a thorough extraneous current survey shall be conducted and all dangerous currents shall be eliminated. Some examples of extraneous currents are stray ground

current, inductive and capacitive coupling from AC powerlines, and radio frequency (RF) energy. Illustrations 1, 2 and 3 are intended to provide a basis for assessing the hazards associated with initiation of commercial blasting caps by **RF** energy by indicating safe distance from commercial **RF** sources.

2. Signs warning against the use of mobile radio transmitters shall be posted in both directions on all roads within 1000 feet of electric blasting operations.
3. In any single blast using electric blasting caps, all caps shall be of the same style or function and of the same manufacturer.
4. Connecting wires and lead wires shall be insulated single solid wires. Aluminum wires or stranded wires shall not be used. The cap circuit, connecting wires, and lead lines shall be sized and installed to be compatible with the power source and to ensure that an adequate quantity of current is delivered to reliably fire each cap.
5. Blasters, when testing electric blasting caps or cap circuits, shall use only "BLASTERS" ohmmeters or galvanometers designed, constructed and approved by a nationally recognized testing laboratory to not emit sufficient current to a fire cap. Only such approved meters are allowed to be on the blast site. These meters should be handled as recommended by the manufacturer. Batteries should not be replaced in the presence of electric blasting caps or blasting circuits.

6. In electric firing, connections should be made starting at the charges and working back toward the source of firing current, checking for proper resistance at each stage of progress. That is, check each electric blasting cap, with an approved "BLASTERS" ohmmeter, before priming the cartridge and after charging the borehole, check the entire cap circuit after tying in the connecting wire, and check the lead line before and after tying it into the circuit. Keep all cap leg wires shortcircuited (shunted) until checking cap resistance, and re-shunt until tying in the cap circuit. Likewise, keep the connecting wire and lead line shunted except for testing and connecting. Note that the lead wire should remain shunted on both ends until tying in, and that its power source end should remain shunted while tying into the connecting wire. If at any time during wiring and testing, any cap or circuit indicates incorrect resistance, the problem should be located and corrected prior to proceeding. If a cap shows an open or short circuit, it should not be used and, if the hole is already loaded, an additional primer should be placed in the borehole on top of the powder column before stemming is added.
  
7. Only the blaster in charge should connect the lead wires to the blasting machine in electric firing. He/she should be in direct charge and control of the machine at all times. The blast should be fired only after the blaster in charge has assured that all personnel and equipment are in a safe place. After firing the blast, the lead wires should be immediately disconnected from the machine and shunted.

**G. Warning Required.** Before a blast is fired, a loud warning signal shall be given by the person in charge, once that person has made certain that all surplus explosives are in a day box and all persons and vehicles are at a safe distance and under sufficient cover.

**H. Inspection After Blasting.** No person should be allowed to reenter the blast area after firing until all smoke and fumes have cleared away. The blast area should not be approached by others until the blaster in charge has examined it for burning explosives or misfired holes and has given an all-clear signal.

**I. Bureau Blasting.** The Bureau of Indian Affairs has long used several requirements that are considered more stringent than published codes and standards. Any deviation from the following requirements should have the Division of Safety and Risk Management's written approval, prior to the beginning of explosive operations.

1. Straight nitroglycerine dynamite should not be used.
2. Black powder should not be used for blasting.
3. Dynamite should be destroyed by burning, when in accordance with the manufacturer's instructions.
4. Explosives and explosive material with a manufacturer's date older than one year should not be accepted from the supplier or vendor.
5. When priming explosive cartridges with detonating cord, fifty grain cord or larger should be used at the cartridge contact. When using detonating cord to ignite manufactured nonelectric detonation

systems, for example, shock tube or detonating cord delay caps, manufacturer's recommendations concerning detonating cord size should be followed.

6. Electric blasting caps should be wired in series only.
7. Noncommercial or military explosives should not be used.
8. A log or record of all shots fired should be maintained for five years after the end of the year in which they were fired. The sample blasting log in Illustration 5 may be used.
9. It is encouraged that two component explosive systems be used in explosive operations which are practical for their use. The following *safety* features will be realized when using two component systems:
  - a. Improved *safety* in storage, transportation and use.
  - b. Material remains nonexplosive until mixed.
  - c. Class A explosive magazine not required, unless stored after mixing.
  - d. There are no transportation restrictions until after mixing.
10. It is encouraged that agencies using explosives utilize the materials and services offered by the Institute of Makers of Explosives (IME), 1120 19th Street, NW, Suite 310, Washington, D.C. 20036. (Telephone: (202) 429-9280).

Illustration 1  
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**Table 1**  
Recommended Distances for Commercial  
AM Broadcast Transmitters  
0.535 to 1.605 MHz (Figure 4)

Transmitter Power <sup>(1)</sup> (Watts)	Minimum Distance (Feet)
Up to 4,000	800
5,000	900
10,000	1,300
25,000	2,000
50,000 <sup>(2)</sup>	2,900
100,000	4,100
500,000	9,100

<sup>(1)</sup> Power delivered to antenna.

<sup>(2)</sup> 50,000 watts is the present maximum power of U.S. broadcast transmitters in this frequency range.

**Table 2**  
Recommended Distances for Transmitters up to  
50 MHz (Excluding AM Broadcast) Calculated  
for a Specific Loop Pickup Configuration<sup>(1) (2)</sup>  
(Figure 5)

Transmitter Power <sup>(3)</sup> (Watts)	Minimum Distance (Feet)
100	800
500	1,700
1,000	2,500
5,000	5,500
50,000	17,000
500,000 <sup>(4)</sup>	55,000

<sup>(1)</sup> Based on the configuration shown in Fig. 2b, using 20.8 MHz, which is the most sensitive frequency.

<sup>(2)</sup> This table should be applied to International Broadcast Transmitters in the 10-25 MHz range.

<sup>(3)</sup> Power delivered to antenna.

<sup>(4)</sup> Present maximum for International Broadcast.

Table taken from the Institute of Makers of Explosives, Safety  
Library Publication No. 20, December, 1988

Illustration 2  
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**Table 3**  
Recommended Distances of Mobile Transmitters  
Including Amateur and Citizens' Band

Transmitter <sup>(1)</sup> Power (Watts)	MINIMUM DISTANCE (Feet)				
	HF 1.8 to 3.4 MHz Industrial	HF 28 to 29.7 MHz Amateur	VHF 25 to 26 MHz Public Use 42 to 44 MHz Public Use 50 to 54 MHz Amateur	VHF 144 to 148 MHz Amateur 150.8 to 151.8 MHz Public Use	UHF 433 to 435 MHz Public Use Cellular Automobile Telephones Above 800 MHz
5	30	70	60	20	10
10	40	100	80	30	20
50	80	210	180	70	40
100	120	320	280	100	60
180 <sup>(2)</sup>	170	430	350	130	80
250	200	500	410	160	90
500 <sup>(3)</sup>	280	710	580	220	120
600 <sup>(4)</sup>	350	780	640	240	140
1,000 <sup>(5)</sup>	450	1,010	820	310	160
10,000 <sup>(6)</sup>	1,240	1,300	2,800	930	560

**Citizens Band, Class D Transmitters, 26.96-27.41 MHz**

Type	Recommended Minimum Distance	
	Hand-Held	Vehicle-Mounted
Double Sideband - 4 watts maximum transmitter power	5 ft.	65 ft.
Single Sideband - 12 watts peak envelope power	20 ft.	110 ft.

(1) Power delivered to antenna.

(2) Maximum power for two-way mobile units in land (110 ft. or 101.6 mm) range and for two-way mobile and base station units in land (110 ft. or 101.6 mm) range.

(3) Maximum power for mobile VHF two-way mobile and base station units in 15 to 44 MHz range.

(4) Maximum power for two-way land station units in VHF (150.8 to 151.8 MHz) range.

(5) Maximum power for amateur radio mobile units.

(6) Maximum power for some base stations in 42 to 44 MHz band and 1.8 to 3.4 MHz band.

Table taken from the Institute of Makers of Explosives, Safety  
Library Publication No. 20, December, 1988

## Illustration 3

Page 1 of 1

**Table 4**  
Recommended Distances for VHF TV  
and FM Broadcasting Transmitters (Figure 6)

Effective Radiated Power (Watts)	Minimum Distance (Feet)		
	Channels 2 to 6	FM Radio	Channels 7 to 13
Up to 1,000	1,000	800	600
10,000	1,800	1,400	1,000
100,000 <sup>(1)</sup>	3,200	2,600	1,900
316,000 <sup>(2)</sup>	4,300	3,400	2,500
1,000,000	5,800	4,600	3,300
10,000,000	10,200	8,100	5,900

<sup>(1)</sup> Present maximum power channels 2 to 6 and FM—100,000 watts.<sup>(2)</sup> Present maximum power channels 7 to 13—316,000 watts.

**Table 5**  
Recommended Distances from  
UHF TV Transmitters (Figure 7)

Effective Radiated Power (Watts)	Minimum Distance (Feet)
Up to 10,000	600
1,000,000	2,000
5,000,000 <sup>(1)</sup>	3,000
100,000,000	6,000

<sup>(1)</sup> Present maximum power channels 14 to 83—5,000,000 watts.

Table taken from the Institute of Makers of Explosives, Safety  
Library Publication No. 20, December, 1968



Illustration 4  
Page 1 of 2

"AMERICAN TABLE OF DISTANCES FOR STORAGE OF EXPLOSIVES MATERIALS"											
QUANTITY OF EXPLOSIVE MATERIAL (Pounds)		DISTANCES IN FEET									
		Initiated Buildings (B)		Public Highway (C) Class A & B		Passenger Railways (D) Public Highway with Traffic Volume 10,000 or more (E) 1,000 Vehicles/Day (F) 100		Separation of Buildings (G)			
		Radius (ft.)	Radius (ft.)	Radius (ft.)	Radius (ft.)	Radius (ft.)	Radius (ft.)	Radius (ft.)	Radius (ft.)	Radius (ft.)	Radius (ft.)
2	5	70	140	30	60	51	102	6	12	12	24
5	10	80	160	35	70	64	128	8	16	16	32
10	20	110	220	45	90	81	162	10	20	20	40
20	30	125	250	50	100	93	186	11	22	22	44
30	40	140	280	55	110	103	206	12	24	24	48
40	50	150	300	60	120	110	220	14	28	28	56
50	75	170	340	70	140	127	254	15	30	30	60
75	100	190	380	75	150	139	278	16	32	32	64
100	125	200	400	80	160	150	300	18	36	36	72
125	150	215	430	85	170	159	318	19	38	38	76
150	200	235	470	95	190	175	350	21	42	42	84
200	250	255	510	105	210	193	386	23	46	46	92
250	300	270	540	110	220	201	402	24	48	48	96
300	400	295	590	120	240	221	442	27	54	54	108
400	500	320	640	130	260	238	476	29	58	58	116
500	600	340	680	145	270	253	506	31	62	62	124
600	700	355	710	145	290	266	532	32	64	64	128
700	800	375	750	150	300	278	556	33	66	66	132
800	900	390	780	155	310	285	570	34	68	68	136
900	1,000	400	800	160	320	290	584	35	70	70	140
1,000	1,200	425	850	165	330	303	606	36	72	72	144
1,200	1,400	450	900	170	340	316	630	37	74	74	148
1,400	1,600	470	940	175	350	321	644	38	76	76	152
1,600	1,800	490	980	180	360	336	672	40	80	80	160
1,800	2,000	505	1,010	185	370	340	686	41	82	82	164
2,000	2,200	515	1,030	190	380	345	698	42	84	84	168
2,200	2,400	530	1,060	195	390	350	710	43	86	86	172
2,400	2,600	540	1,080	195	400	352	716	44	88	88	176
2,600	2,800	545	1,090	200	410	354	720	45	90	90	180
2,800	3,000	555	1,110	205	420	356	726	46	92	92	184
3,000	3,200	565	1,130	210	430	358	732	47	94	94	188
3,200	3,400	570	1,140	215	440	360	738	48	96	96	192
3,400	3,600	575	1,150	220	450	362	744	49	98	98	196
3,600	3,800	580	1,160	225	460	364	750	50	100	100	200
3,800	4,000	585	1,170	230	470	366	756	51	102	102	204
4,000	4,200	590	1,180	235	480	368	762	52	104	104	208
4,200	4,400	595	1,190	240	490	370	768	53	106	106	212
4,400	4,600	600	1,200	245	500	372	774	54	108	108	216
4,600	4,800	605	1,210	250	510	374	780	55	110	110	220
4,800	5,000	610	1,220	255	520	376	786	56	112	112	224
5,000	5,200	615	1,230	260	530	378	792	57	114	114	228
5,200	5,400	620	1,240	265	540	380	798	58	116	116	232
5,400	5,600	625	1,250	270	550	382	804	59	118	118	236
5,600	5,800	630	1,260	275	560	384	810	60	120	120	240
5,800	6,000	635	1,270	280	570	386	816	61	122	122	244
6,000	6,200	640	1,280	285	580	388	822	62	124	124	248
6,200	6,400	645	1,290	290	590	390	828	63	126	126	252
6,400	6,600	650	1,300	295	600	392	834	64	128	128	256
6,600	6,800	655	1,310	300	610	394	840	65	130	130	260
6,800	7,000	660	1,320	305	620	396	846	66	132	132	264
7,000	7,200	665	1,330	310	630	398	852	67	134	134	268
7,200	7,400	670	1,340	315	640	400	858	68	136	136	272
7,400	7,600	675	1,350	320	650	402	864	69	138	138	276
7,600	7,800	680	1,360	325	660	404	870	70	140	140	280
7,800	8,000	685	1,370	330	670	406	876	71	142	142	284
8,000	8,200	690	1,380	335	680	408	882	72	144	144	288
8,200	8,400	695	1,390	340	690	410	888	73	146	146	292
8,400	8,600	700	1,400	345	700	412	894	74	148	148	296
8,600	8,800	705	1,410	350	710	414	900	75	150	150	300
8,800	9,000	710	1,420	355	720	416	906	76	152	152	304
9,000	9,200	715	1,430	360	730	418	912	77	154	154	308
9,200	9,400	720	1,440	365	740	420	918	78	156	156	312
9,400	9,600	725	1,450	370	750	422	924	79	158	158	316
9,600	9,800	730	1,460	375	760	424	930	80	160	160	320
9,800	10,000	735	1,470	380	770	426	936	81	162	162	324
10,000	10,200	740	1,480	385	780	428	942	82	164	164	328
10,200	10,400	745	1,490	390	790	430	948	83	166	166	332
10,400	10,600	750	1,500	395	800	432	954	84	168	168	336
10,600	10,800	755	1,510	400	810	434	960	85	170	170	340
10,800	11,000	760	1,520	405	820	436	966	86	172	172	344
11,000	11,200	765	1,530	410	830	438	972	87	174	174	348
11,200	11,400	770	1,540	415	840	440	978	88	176	176	352
11,400	11,600	775	1,550	420	850	442	984	89	178	178	356
11,600	11,800	780	1,560	425	860	444	990	90	180	180	360
11,800	12,000	785	1,570	430	870	446	996	91	182	182	364
12,000	12,200	790	1,580	435	880	448	1,002	92	184	184	368
12,200	12,400	795	1,590	440	890	450	1,008	93	186	186	372
12,400	12,600	800	1,600	445	900	452	1,014	94	188	188	376
12,600	12,800	805	1,610	450	910	454	1,020	95	190	190	380
12,800	13,000	810	1,620	455	920	456	1,026	96	192	192	384
13,000	13,200	815	1,630	460	930	458	1,032	97	194	194	388
13,200	13,400	820	1,640	465	940	460	1,038	98	196	196	392
13,400	13,600	825	1,650	470	950	462	1,044	99	198	198	396
13,600	13,800	830	1,660	475	960	464	1,050	100	200	200	400
13,800	14,000	835	1,670	480	970	466	1,056	101	202	202	404
14,000	14,200	840	1,680	485	980	468	1,062	102	204	204	408
14,200	14,400	845	1,690	490	990	470	1,068	103	206	206	412
14,400	14,600	850	1,700	495	1,000	472	1,074	104	208	208	416
14,600	14,800	855	1,710	500	1,010	474	1,080	105	210	210	420
14,800	15,000	860	1,720	505	1,020	476	1,086	106	212	212	424
15,000	15,200	865	1,730	510	1,030	478	1,092	107	214	214	428
15,200	15,400	870	1,740	515	1,040	480	1,098	108	216	216	432
15,400	15,600	875	1,750	520	1,050	482	1,104	109	218	218	436
15,600	15,800	880	1,760	525	1,060	484	1,110	110	220	220	440
15,800	16,000	885	1,770	530	1,070	486	1,116	111	222	222	444
16,000	16,200	890	1,780	535	1,080	488	1,122	112	224	224	448
16,200	16,400	895	1,790	540	1,090	490	1,128	113	226	226	452
16,400	16,600	900	1,800	545	1,100	492	1,134	114	228	228	456
16,600	16,800	905	1,810	550	1,110	494	1,140	115	230	230	460
16,800	17,000	910	1,820	555	1,120	496	1,146	116	232	232	464
17,000	17,200	915	1,830	560	1,130	498	1,152	117	234	234	468
17,200	17,400	920	1,840	565	1,140	500	1,158	118	236	236	472
17,400	17,600	925	1,850	570	1,150	502	1,164	119	238	238	476
17,600	17,800	930	1,860	575	1,160	504	1,170	120	240	240	480
17,800	18,000	935	1,870	580	1,170	506	1,176	121	242	242	484
18,000	18,200	940	1,880	585	1,180	508	1,182	122	244	244	488
18,200	18,400	945	1,890	590	1,190	510	1,188	123	246	246	492
18,400	18,600	950	1,900	595	1,200	512	1,194	124	248	248	496
18,600	18,800	955	1,910	600	1,210	514	1,200	125	250	250	500
18,800	19,000	960	1,920	605	1,220	516	1,206	126	252	252	504

Illustration 4  
Page 2 of 2

EXPLANATORY NOTES ESSENTIAL TO THE APPLICATION  
OF THE AMERICAN TABLE OF DISTANCES FOR  
STORAGE OF EXPLOSIVE MATERIALS

NOTE 1—"Explosive materials" means explosives, blasting agents and detonators.

NOTE 2—"Explosives" means any chemical compound, mixture, or device, the primary or common purpose of which is to function by explosion. A list of explosives determined to be within the coverage of "18 U.S.C. Chapter 40, Importation, Manufacture, Distribution and Storage of Explosive Materials" is issued at least annually by the Director of the Bureau of Alcohol, Tobacco and Firearms of the Department of the Treasury. For quantity and distance purposes, detonating cord of 50 grains per foot should be calculated as equivalent to 6 lbs. of high explosives per 1,000 feet. Heavier or lighter core loads should be rated proportionately.

NOTE 3—"Blasting agents" means any material or mixture, consisting of fuel and oxidizer, intended for blasting, not otherwise defined as an explosive. Provided, That the finished product, as mixed for use or shipment, cannot be detonated by means of a No. 8 test blasting cap when unconfined.

NOTE 4—"Detonator" means any device containing any initiating or primary explosive that is used for initiating detonation. A detonator may not contain more than 10 grams of total explosives by weight, excluding ignition or delay charges. The term includes, but is not limited to, electric blasting caps of instantaneous and delay types, blasting caps for use with safety fuses, detonating cord delay connectors, and nonelectric instantaneous and delay blasting caps which use detonating cord, shock tube, or any other replacement for electric leg wires. All types of detonators in strengths through No. 8 cap should be rated at 1 lb. of explosives per 1,000 caps. For strengths higher than No. 8 cap, consult the manufacturer.

NOTE 5—"Magazine" means any building, structure, or container, other than an explosives manufacturing building, approved for the storage of explosive materials.

NOTE 6—"Natural Barricade" means natural features of the ground, such as hills, or timber of sufficient density that the surrounding exposures which require protection cannot be seen from the magazine when the trees are bare of leaves.

NOTE 7—"Artificial Barricade" means an artificial mound or revetted wall of earth of a minimum thickness of three feet.

NOTE 8—"Barricaded" means the effective screening of a building containing explosive materials from the magazine or other building, railway, or highway by a natural or an artificial barrier. A straight line from the top of any side-wall of the building containing explosive materials to the eave line of any magazine or other building or to a point twelve feet above the center of a railway or highway shall pass through such barrier.

NOTE 9—"Inhabited Building" means a building regularly occupied in whole or part as a habitation for human beings, or any church, schoolhouse, railroad station, store, or other structure where people are accustomed to assemble, except any building or structure occupied in connection with the manufacture, transportation, storage or use of explosive materials.

NOTE 10—"Railway" means any steam, electric, or other railroad or railway which carries passengers for hire.

NOTE 11—"Highway" means any public street, public alley, or public road. "Public Highways Class A to D" are highways with average traffic volume of 3,000 or less vehicles per day as specified in "American Civil Engineering Practice" (Abbott, Vol. 1, Table 4B, Sec. 3-74, 1956 Edition, John Wiley and Sons).

NOTE 12—When two or more storage magazines are located on the same property, each magazine must comply with the minimum distances specified from inhabited buildings, railways, and highways, and, in addition, they should be separated from each other by not less than the distances shown for "Separation of Magazines," except that the quantity of explosive materials contained in detonator magazines shall govern in regard to the spacing of said detonator magazines from magazines containing other explosive materials. If any two or more magazines are separated from each other by less than the specified "Separation of Magazines" distances, then such two or more magazines, as a group, must be considered as one magazine, and the total quantity of explosive materials stored in such group must be treated as if stored in a single magazine located on the site of any magazine of the group, and must comply with the minimum of distances specified from other magazines, inhabited buildings, railways, and highways.

NOTE 13—Storage in excess of 300,000 lbs. of explosive materials, in one magazine is generally not required for commercial enterprises.

NOTE 14—This Table applies only to the manufacture and permanent storage of commercial explosive materials. It is not applicable to transportation of explosives or any handling or temporary storage necessary or incidental thereto. It is not intended to apply to bombs, projectiles, or other heavily encased explosives.

Table and notes from the Institute of Makers of  
Explosives Publication entitled "The American Table  
of Distances," Safety Library, Publication No. 2,  
February, 1986.

## BLASTING LOG

Date \_\_\_\_\_

Blast Location \_\_\_\_\_  
City \_\_\_\_\_ County \_\_\_\_\_

Street or Highway \_\_\_\_\_

Job # \_\_\_\_\_  
Scale \_\_\_\_\_

Station to \_\_\_\_\_ to Station \_\_\_\_\_

Centerline (Yes) Offset ft. lt. \_\_\_\_\_ ft. rt. \_\_\_\_\_  
(No) \_\_\_\_\_

Elevation \_\_\_\_\_

Type of Rock \_\_\_\_\_

Height of Face \_\_\_\_\_

Distance to Nearest Structure \_\_\_\_\_

Hole Diameter \_\_\_\_\_

Overburden (ft.) \_\_\_\_\_ Type \_\_\_\_\_

Feet of Stemming \_\_\_\_\_ Type \_\_\_\_\_

Type of Firing Device \_\_\_\_\_

Explosive Type \_\_\_\_\_ Size \_\_\_\_\_

No. of Series \_\_\_\_\_

No. of Caps each Series \_\_\_\_\_

Protective Measures (cover, mats, etc.) \_\_\_\_\_

Weather ☐ Clear ☐ Overcast ☐ Partly Cloudy \_\_\_\_\_

Temperature Inversion ☐ Yes ☐ No \_\_\_\_\_

Direction of Wind and/or Windshaft \_\_\_\_\_

Distance of Throw \_\_\_\_\_

Seismic Monitoring ☐ Yes ☐ No By \_\_\_\_\_

Time of Blast \_\_\_\_\_ AM \_\_\_\_\_ PM

Blaster \_\_\_\_\_  
Signature \_\_\_\_\_

Superintendent \_\_\_\_\_  
Signature \_\_\_\_\_

Remarks \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Identify job location by station and measured distance to known structure or object.

SHOW

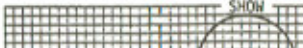
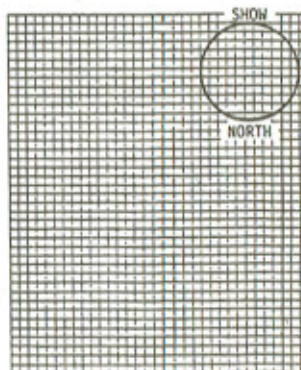
[illegible]

Illustration 6  
Page 1 of 1

**DAILY SUMMARY OF MAGAZINE TRANSACTIONS**

DO NOT REMOVE OR RETURN ANY EXPLOSIVES WITHOUT COMPLETING THIS LOG

Agency \_\_\_\_\_

Location of Storage \_\_\_\_\_ Explosives Magazine \_\_\_\_\_ Detonator Magazine \_\_\_\_\_

Permanent \_\_\_\_\_ Jobsite \_\_\_\_\_ Date \_\_\_\_\_ through \_\_\_\_\_

**TYPE OF MATERIALS REMOVED**

Brand, Type & Size**	Quantity*	Date Removed	Total Remaining	Signature

**TYPE OF MATERIALS RETURNED OR RECEIVED**

Brand, Type & Size**	Quantity*	Date Returned	Total Remaining	Signature

\*If acquisitions are recorded by weight, then dispersements must also be recorded by weight. If acquisitions are reduced by physical count, then dispersements must also be recorded by physical count.

\*\*Include manufacturer's marks of identification (date and shift code)

Inventory Reviewed By \_\_\_\_\_ Date \_\_\_\_\_ Title \_\_\_\_\_

Inventory Reviewed By \_\_\_\_\_ Date \_\_\_\_\_ Title \_\_\_\_\_

Inventory Reviewed By \_\_\_\_\_ Date \_\_\_\_\_ Title \_\_\_\_\_

Illustration 7  
Page 1 of 1



For free blasting cap safety education materials designed for display and distribution by users of explosives and related supplies, write to: I.M.E., 1120 19th Street, N.W., Suite 310, Washington, D. C. 20036.

Safety and Health for Field Operations



***TOPIC 21***  
**STUDENT SAFETY**



#### 21.1 References.

- A. 29 CFR 1960, Basic Program Elements for Federal Employees
- B. 485 OM, Safety and Health Handbook
- C. 25 IAM, Safety and Risk Management

#### 21.2 Procedures.

- A. Purpose.** The purpose of this Handbook (Student Safety) is to provide the impetus needed by all school supervisors to develop an adequate and continuous Accident Prevention Program.
- B. Policy.** It is the policy of the Bureau of Indian Affairs to provide a safe working, living, and recreational environment for all students, employees, and the visiting public. Regional Directors and Education Line Officers have the responsibility for assuring the overall success of the program. Safety Officers, School Administrators, and all Supervisors within the School System are responsible for implementing the program. It is also the policy of the Bureau of Indian Affairs to adopt the Occupational Safety and Health Administration (OSHA) Standards to apply to all student environments.

#### C. Objectives.

1. To establish a Safety Program which will help to promote good safety attitudes for Indian Students while at school, play, home, and on scheduled activities.
2. To provide a safe and healthful place for students to study, play, and live free from hazards which may cause them personal injury.

3. To provide students with knowledge of the hazards which may lead to personal injury.
4. To establish First Aid Courses for all students in grades four through ten in our schools to be conducted by Certified Instructors from among the teachers and dormitory personnel.

21.3 **Responsibilities.** The Regional Director and the Education Line Officer are ultimately responsible for the success of the agency's School Safety Program. It will be carried out through the combined efforts of all School Administrators, supervisors, and others within the Bureau of Indian Affairs.

**A. Education Line Officer.** The Education Line Officer is responsible for implementing the program and will make certain all Principals and supervisors vigorously support these accident prevention efforts in the school, dormitories, kitchen, dining hall, playground, and on scheduled activity trips.

**B. Principals.** Principals will be responsible for:

1. Appointing a Collateral Duty Safety Officer.
2. Implementing a well-rounded Student Safety Program to include all areas of activity. The students will become personally involved through participation in the accident prevention effort and on the Student Safety Council.
3. Seeing that a Safety Committee is organized in their school, and that a Student Safety Council is organized in grades four through twelve. A representative of this Student Council is to be included in the regular monthly meeting of the School Safety Committee.



4. Establishing procedures outlining the steps to be taken in the event a student sustains an injury while under the jurisdiction of the Bureau of Indian Affairs.
5. Making certain that all accidents are reported within 6 days in accordance with 485 OM, Safety and Health Handbook.
6. Seeing that a report of each student safety council meeting is sent to the Education Line Officer and Regional Safety Manager.
7. Establishing a system to disseminate all Safety materials to school employees and students.
8. Establishing inspection procedures for all playgrounds, classrooms, dormitories, and dining facilities, with supervisory personnel available. Regular quarterly inspections will be made of the above four areas and all discrepancies documented. A properly completed work order request is to be submitted to the Branch of Facilities Management, and a method of follow-up established. A copy of the work order should also be sent to the Regional Safety Manager.

**C. Supervisors.** The supervisor is responsible not only for employee and student health and safety but also all government-owned equipment and materials in his/her charge. This responsibility includes prevention of waste and destruction of government property and materials. Supervisors must seek and provide proper safety instructions for their employees and students, making certain that they are aware of all potential hazards.

- O. **Employees.** Employees have the responsibility of becoming aware of and complying with all established safety rules and regulations pertaining to their employment by the Bureau of Indian Affairs, and for setting a good example for the students. Rules and regulations are set forth in 29 CFR Part 1960, 485 OM and 25 IAM.
- E. **Students.** Students will be expected to comply with local rules and regulations pertaining to their attendance at all Bureau of Indian Affairs schools. They should be encouraged to serve on committees having to do with making their schools a safe place to attend. Older students should encourage the younger students to observe all safety rules in connection with each athletic event, playground activity, dormitory living, sanctioned outdoor activities, field trips, school, and dining hall activities.
- F. **Safety Officer.** Each Agency or School Safety Officer will provide guidance in the establishment of Safety Programs within the schools of their respective Regions/Agencies. The Safety Officer will develop safety materials to be used in the overall effort to prevent accidents to employees, students and visitors. The Safety Officer will make periodic spot inspections of various buildings and activities, and at the request of the Principal, participate in the school's various safety programs, provide safety films, safety literature and pertinent posters.
- G. **Safety Councils.** In common usage, the terms "Safety Council", "Accident Prevention Council", and "Safety Committee", will be interchangeable with the same meaning.  
All of these terms describe the same principle Le., active participation by School Administrators, supervisors, and safety officers for the accomplishment of a common goal, creating and maintaining an interest in accident prevention.

1. **Primary Goals of Safety Councils:**
  - a. Inform the Education Line Officer and the School Administrator by presenting clear outlines of objectives and problem;
  - b. Familiarize employees and students with safety;
  - c. Present various viewpoints for discussion; and
  - d. Promote interest and cooperation in accident prevention among employees and students.
2. **Organization.** Each Principal should organize a Safety Council in his/her own school. The success of the Safety Council, as well as the entire safety program, depends largely on the degree of staff support given to the aim, goals, and policies set forth by this handbook. The Safety Councils at the various levels should be chaired by the person with the highest authority or his/her deputy. In addition to adding emphasis to the Safety Council, his/her participation will add prestige to the entire Accident Prevention Program. One or more students must be selected to serve on the Council.

The frequency of Safety Council meetings will vary depending on the size of the organization. They should be held on a monthly schedule at schools. Meetings must be held often enough to maintain interest in the Safety Council but not so often as to have to hunt for items to add or make up the agenda. An agenda must be published to allow all members sufficient time to be prepared to contribute to

the Council meeting. Items discussed at the Safety Council meetings must be documented. The agenda of the Safety Council should include:

- a. Review and follow-up action on items carried over from the previous meeting.
  - b. Major discrepancies and unresolved items from safety inspections.
  - c. Accident trends identified by safety inspections.
  - d. Determination of courses of action required to resolve problem areas.
  - e. Discussion and disposition of reported hazards.
  - f. Introduction and explanation of new accident prevention policies and directives.
  - g. Presentation by selected guest Speakers.
  - h. Previews of pertinent safety training film.
  - L Discussion and planning for attendance at various Safety Oriented Training Courses, Le., Volunteer Fire Fighters School.
  - j. Additional agenda items should be requested from the employees and students.
3. **Student Safety Committees.** Each school will organize a Student Safety Committee with representation from grades four through twelve. A member of the faculty will be appointed to serve as Faculty Advisor to the committee. Post Secondary Schools will organize Safety Committees composed of members of the Student Body and a Faculty Advisor.

4. **Safety Council Meetings.** The Chairman of the Safety Council at each level must keep control of the meeting and not allow it to become a grievance session. Each meeting should fall into one of four categories:
  - a. **Opinions requested.** Purpose: To get an expression of opinion.  
(This can include persons from outside the Council Membership.)
  - b. **Informational.** Purpose: To develop ideas and ensure the Council will pursue realistic goals.
  - c. **Development.** Purpose: To have the group develop a procedure to follow, Le., planning a seasonal type safety program.
  - d. **Reconciliation.** Purpose: To reconcile conflicting interests. The Chairman must insure that the discussion be kept impersonal and conducted in a business like manner. Decisions made by a majority vote should get the support of the entire group. The Chairman should point out the advantages of the solution to the dissenters and point out that compromise is frequently necessary. The discussion should be reviewed and clarified to ensure that all members are aware of the conclusions. (Written reports of all meetings are required.)
5. **Minutes.** Although records of activities should be maintained and actions that are taken recorded in writing, the paper work should be kept to a minimum. A copy of the minutes should be sent to each Council member, as these minutes reflect the item discussed and will serve as a reminder to those members who have received assignments requiring

action. A complete file of the minutes should be kept by the highest authority responsible and in the Safety Officer's office for reference use and to keep a record of the unfinished item. It is recommended that minutes of Safety Council meetings be forwarded to the Deputy Regional Director. The Regional Safety Manager may be requested to obtain accident prevention information for dissemination to other schools.

H. Responsibility for Student Accident Reporting. Each Administrator will inform his/her staff of the procedures to follow in the event of an injury to a student including accident reporting.

1. Reportable Student Accidents. The individual who has the responsibility for the student at the time of a personal injury will see that the student receives proper First Aid treatment. If the injury requires more than First Aid, the student should be transported to the nearest Hospital or Outpatient Clinic.
2. Automated Reports of Student Accidents. All accidents/incidents will be reported on the Department's accident reporting system, the Safety Management Information System (SMIS) ([www.smis.doLgov](http://www.smis.doLgov)). Each supervisor is responsible for reporting the accident via SMIS. The Safety Officer at the Agency or the school involved will be notified of all accidents and near accidents.
3. Report of Unsafe or Unhealthful Living/School/Working Conditions. Any student, employee or supervisor has the right to report any unsafe or unhealthful condition. The condition should be reported in writing, to the Safety Officer. The report may be made on either the Bureau Form

5-2513, Notice of Unsafe or Unhealthful Working Condition, or the Department of Labor Form OSHA-7. (See 29 CFR 1960.31)

**I. Responsibility for First Aid.**

1. **First Aid Certification.** Administrators are responsible for providing information about where courses are being taught. All employees are encouraged to complete at least a Standard First Aid course.
2. **First Aid Supplies.** All school and dormitory personnel will be made aware of the location of First Aid supplies and equipment in case of injury or illness. Standard 24 unit First Aid kits are required for the following:
  - a. School Buses
  - b. Teachers conducting field trips
  - c. Driver Training Automobiles

**J. Safety in Physical Education.** The school Principal shall be responsible for making certain that the Instructors and students involved in the Physical Education program are aware of all safety requirements pertaining to the need for a safe environment and the proper use of athletic equipment. All instructors are responsible for insuring that all participants follow safe practices while engaged in Physical Education activities. They are also responsible for maintaining all equipment in a safe condition.

1. **Physical Conditions.** All students will have a current medical examination before being allowed to participate in any of the strenuous activities. Students will not be permitted to do more than they are physically capable of doing without harming themselves.

**2. Equipment.**

- a. All physical education equipment will be installed according to the standard specifications under the supervision of the school Principal, Athletic Director, and the Safety Officer.
- b. All equipment will be maintained in a safe condition. Broken or unsafe equipment will be taken out of service until it is repaired or replaced.
- c. Responsibility for the continuous inspection of physical education facilities shall rest with the school administrator. Safety Officers will also make periodic inspections along with Facilities Management personnel. Proper work orders will be submitted to correct any unsafe condition.

**3. Safety Instructions.** All students will be given safety instructions prior to the beginning of each different activity and as it may pertain to the use of the various supplies and equipment in connection with a particular activity.**4. Eye Protection.** All students who must wear glasses will be provided with cover goggles.**5. Clothing.** All students participating in Physical Education activities will wear the proper attire for the activity they are engaged in. All students utilizing the gymnasium for games and other activities must wear proper footwear. Students will not be allowed to participate without shoes.



#### 21.4 Student Environment (Safety Practices).

- A. Classroom.** All classrooms must be free of any hazardous conditions which might possibly lead to personal injury to teachers, students, and the visiting public, i.e., poor housekeeping. Safety rules should be established and posted. All students are to be encouraged to become familiar with the rules.
- B. Dormitory.** Each dormitory employee must be familiar with the entire safety program and know what his/her responsibility is in regard to keeping the students' living quarters free from any hazard which may cause an accident to the student or the visiting public. Safety rules must be established and posted so that the students may refer to them. Under no circumstances should "horseplay" be tolerated.
- C. Playground.** Students utilizing play areas must have adequate supervision at all times. All playground equipment will be inspected frequently. All unsafe equipment and facilities must be reported promptly by a work order request. A copy shall be provided to the Agency Safety Officer. Keep copies of all inspections on file. If serious hazards are identified, place a "DO NOT USE" tag on them.
- D. Activities.** There are many varied activities involving the students, both on campus and away from the campus, which the Principal and Supervisors prepare for. Each trip off campus presents problems that must be given consideration such as school bus driver, bus operation, distance, and where the students and supervisors are to be domiciled. An emergency plan should be developed for activity trips away from the campus. This should contain the student's name, parents, and the nearest hospital which would be available from any point on the

trip, emergency telephone numbers, including the Principal, Agency Education Line Officer, and other pertinent information. Each chaperone accompanying off campus trips should be trained in First Aid, including all Bus Drivers. **All Bus Drivers must have a Commercial Drivers License (CDL).**

- E. Gymnasium and Athletics.** Participation in recreational activities is responsible for many preventable injuries to students. Practically all sports, for example, involve some type of hazard since most activities center around the principles of attack and retreat. In general, recreational activity accidents will be effectively reduced by using proven administrative control, improving leadership and supervision, and providing and maintaining adequate equipment and facilities. Horseplay is a common cause of recreational injuries. Supervisors are expected to take all precautions to prevent this hazardous practice.
- F. Dining Hall and Kitchen.** Students working in the cafeteria will not operate any machinery, except in High School and Post Secondary Schools.
1. Any cracked or chipped glasses will be discarded. A 4' wooden or fiber glass step ladder will be provided in each food storage room.
  2. Dining hall managers will ensure proper placement of food containers on storage shelves according to size and weight of containers. Heavy food containers will be opened and the contents stored as a single item rather than bulk. Serious back injuries have occurred from improper handling of food containers.

3. Detergents and other chemicals will not be kept in an area where food is stored. Protective clothing will be required when using chemicals. Under no circumstances will the students be asked to use detergents and other chemicals without rubber gloves and eye protection. **Note: All cleaning powders and liquids shall be kept locked, not accessible to students.**
4. When washing the dining room floors, a section at a time will be washed. There will be a warning sign posted, "Warning - Wet Floor - Very Slippery, Stay Off."

**G. Industrial Arts Shop.** All equipment used in industrial art classes will meet OSHA Safety Standards. Teachers will be familiar with the care, operation, and safety features of all equipment being used for instructional purposes.

**1. Power Tools.**

- a. Prior to purchase of any power equipment to be used in the schools, the Safety Officer will be consulted and give final approval.
- b. Students will not be allowed to use any power equipment until they have been instructed in its proper use by the teacher and only under strict supervision of the teacher.
- c. Safety signs and operational instructions will be posted near all power equipment used in industrial arts shops.

2. **Hand Tools.** Hand tools will be stored so that they are available to students only with the teacher's permission and under his/her supervision.

- a. Supplies will be stored so that students will not have access to them without their teacher's permission and supervision.
  - b. All hand tools must be maintained in good condition. Unsafe tools will not be used.
3. **Equipment Operation Test.** Students will not be allowed to use any power machines or equipment until they have satisfactorily passed an approved Equipment Operation Test developed by the instructor.
- a. All students who attend Secondary or Post Secondary schools and are enrolled in agriculture, art, homemaking, industrial arts, and vocational courses will be given an Equipment Operation Test.
  - b. A copy of the test for each student will be kept and placed on file with the instructor. In case of a serious reportable accident, a copy of the student's test will be forwarded to the Safety Officer.
4. **Shop Safety.** Shop waste, sawdust shavings, and scrap wood will be properly disposed of from shop areas at least daily and more often if necessary to prevent hazardous accumulations.
- a. **Gasoline will not be used for cleaning purposes and is not allowed in school buildings.**
  - b. All portable electric tools shall be tested quarterly for electrical shorts and continuity of the equipment grounding conductor.

- c. The operation of heat producing equipment such as welding, brazing and soldering equipment and heat treating and metal melting furnaces for instructional purposes is restricted to Secondary School students. Such use will be only with the permission of the teacher and under proper supervision.
- d. Each shop will be equipped with fire extinguishing equipment as required by the NFPA Life Safety Code.
- e. All manual and power operated equipment will be arranged to allow a safe area of operation around each machine.
- f. Safety lines painted on floors will be used to designate the area needed for the safe operation for each piece of equipment.
- g. Protective equipment will be provided for all students engaged in activities where personal injury is possible. This equipment will include goggles, face shields, welding helmets, gloves, aprons, respirators, and foot shields. Appropriate protective equipment will be worn by everyone using power tools.

**5. Ceramic Equipment.**

- a. A sign which reads, "KILN FIRING" shall be posted near kilns during firing.
- b. All kilns will be operated according to the directions of the manufacturer.
- c. All kilns will be operated only by the teacher in charge.

**6. Ceramic Supplies.**

- a. Pupils shall be instructed and supervised in dipping, brushing and pouring of glazes and shall be cautioned to wash hands after glazing.
- b. An approved respirator shall be used by all students and teachers when using spray guns for glazing. All glazing activity shall be done in a well ventilated glazing booth.
- c. Lead content glazes will not be used in the elementary grades without the approval of the supervisor in charge.
- d. Only approved ceramic materials and supplies shall be used.

**7. Arts and Crafts.** The personnel in charge of arts and crafts activities will be responsible for instructing and supervising participants in the use of all tools, materials, equipment, and supplies and will take full precautions to prevent injuries to participants or to observers of such activities.

**H. School Supplies Storage Area.** Only supplies that will be used during a current week will be stored in the classroom. Supplies shall be stored in a non-heated room or building protected by a fire or smoke detection system.

**I. Reserve Officer Training Corps Program (R.O.T.C.).** The safe and healthful conduct of R.O.T.C. programs in B.I.A. schools will be the responsibility of the School Administrator. There shall be one person designated as the Range Safety Officer who will be responsible for all weapons and ammunition, and for the small arms target range.

1. Security of the R.O.T.C. Safe. The R.O.T.C. safe will be attached as a permanent fixture of the building. It will be located and safeguarded in accordance with Military Security practices.
2. Ammunition Storage. Ammunition will be stored in the R.O.T.C. safe provided by the U.S. Army. It shall be removed from the safe and transported to the range by the Range Safety Officer.
3. Armory. The Armory will contain all of the weapons issued to a school.
  - a. The Armory and arms racks will be secured in accordance with Military Security practices.
  - b. The arms racks will be located and designed to provide for the safe removal of the weapons.
  - c. All small arms will be rendered temporarily unusable for firing by removal of component parts specified in applicable Military regulations except during periods of instruction that require the small arms to be functional. Parts which are removed will be stored in a safe place.
4. Control of Ranges. The control of each firing range is the responsibility of the Range Safety Officer. The Range Safety Officer will be in charge of all firing. The Range Safety Officer will be present on the range during firing. The Range Safety Officer will make a safety inspection of the range before each firing. Weapons will be inspected for obstructions, live rounds, and general serviceability before and after each firing. Weapons not in use on the firing line will be placed in racks with the actions open or cased.

- a. **Control of Students Firing on the Range.**  
The Range Safety Officer is responsible for the control of the students firing on the range. Students will not be allowed to fire on the range until he or she has satisfactorily completed a preliminary rifle marksmanship course. Each student firing on the range must satisfactorily complete a written test on range safety. One copy of the student's completed test will be kept on file with the student's school record. The Range Safety Officer will give frequent reminders of Safety to new and/or infrequent users of the range prior to their firing. **No one is allowed forward of the firing line without authority of the Range Safety Officer.**
  
- b. **Target Area.** No one will be allowed in the target area without the permission of the Range Safety Officer. Only prescribed National Rifle Association small bore targets or their equivalent will be used on the range. The sand pit in the target area should be mined at least once a month during periods of continued use.
  
- c. **Protective Equipment.** Approved hearing protection and all other recommended protective equipment shall be worn at all times while in the range area.
  
- d. **Firing Line Procedures.** Range Safety Rules shall be posted in the range for all to see. Also, the maximum caliber weapon of the range will be posted. (See Illustration 1)



5. **Drill Field.** During periods of instruction on the drill field, R.OTC. instructor personnel shall be present to supervise movement of the cadets to and from the drill field and to supervise the instructional activities.
- J. **Special Events.** The Principal of each Bureau of Indian Affairs school will be responsible for all established safety regulations related to special events and for insuring that a safe environment is provided.
  1. **Fire Regulations.** The administrator of a school planning a special event will notify the Agency or School Safety Officer, at least ten days prior to the event. All electrical devices and equipment used on school property will bear the label of the Underwriters' Laboratory.
    - a. **Booths and Stands.** All booths, stands, and platforms used for display or dispensing will be substantially constructed. Booths and stands will not obstruct any exit or passageway nor block any door.
    - b. **Paper Drives and Storage.** Paper from paper drives shall not be stored within ten feet of buildings, in ways of egress, on sidewalks, roads, etc. All regulations of the local fire department shall be complied with.
    - c. **Use of Propane or Butane.** The use of propane or butane is prohibited except by vendors, workmen, and artisans.
    - d. **Inflation of Balloons.** No person shall inflate any toy balloon or other similar rubber toy device with any poisonous, explosive, or flammable gas, or sell or furnish any such balloon or device so inflated.

- e. Bonfires. No bonfires or similar open fires shall be permitted on Bureau of Indian Affairs premises, or at any Bureau of Indian Affairs sponsored function, except functions sponsored and supervised by qualified school personnel with clearance approval, and standby protection from the local fire department.
- f. Braziers and Barbecues. At any special event, portable braziers and barbecues using solid fuel (Charcoal Briquettes) may be used outside school buildings. Braziers and barbecues will not be used inside of buildings.
- g. Firearms. Use of firearms or any other type of fireworks involving the use of flammable, or explosive liquids or powders is prohibited, with the exception of firearms in which blanks are used by authorized personnel for athletic events and practice sessions, or R.OTC. and range activities.
- h. Parade Floats. All float decorations shall be either treated with flame-retardant chemicals or made of non-combustible materials. This applies to all material one-eighth (1/8) inch in thickness or less. Smoking or the use of open flame gas lamps, flares, fuses, candles, or lighted matches is prohibited on floats. The Agency Safety Officer will be notified for a final inspection of all floats and similar displays. Enough time shall be allowed to make any corrections, if necessary (at least two days before use).

2. **Food Preparation and Serving.** Food prepared for special events must conform to the health requirements and standards established by the Bureau of Indian Affairs and the Indian Health Service.
3. **Notification of Law Enforcement Agencies.** The Bureau of Indian Affairs Law Enforcement Services and the Tribal or Local Police should be given notice of all special events so they can make any necessary arrangements for patrolling, traffic control, etc. Some of the laws to consider during special events include:
  - a. Malicious mischief: Throwing of rocks or bottles, breaking of any material.
  - b. Disturbances of Peace: Trouble at the door, boisterous yelling, pushing, shoving.
  - c. Trespassing.

**K. Training Equipment.** All training equipment used in school activities shall be operated by personnel specifically trained in the use of the particular piece of equipment. Student operators may operate equipment only while under the supervision of a trained operator.

1. **Visual Aids.** Audio-Visual equipment will be placed so that it does not block aisles or exits, or constitute a tripping hazard.
  - a. Adequate ventilation will be maintained at all times during the use of audiovisual equipment.
  - b. The teacher will remain with the class during the time audio-visual equipment is in use.

- c. At the Junior High level, at least two boys must work together when lifting a projector.
    - d. Elementary school children will not be permitted to lift projection equipment.
  - 2. **Motion Picture Projectors.** All operation of motion picture projectors in BIA schools, shall be performed by operators who have been trained by the individual responsible for the audio-visual section. Elementary students should not be permitted to operate motion picture projectors.
    - a. **Safe Use of Projection Booths.** Installation of permanent equipment in a projection booth will be under the supervision of the individual responsible for audio-visual equipment. Only projectionists or duly authorized persons will be permitted in projection room during the time the projection machine is being operated. Smoking will not be permitted in any projection room or any room where films are handled or stored, and "No Smoking" signs shall be conspicuously posted in such rooms. Fire extinguishers shall be provided in or near each motion picture projection or rewind room, as required by the NFPA Life Safety Code.
- 3. **Public Address System.** The installation or repair of public address equipment in a Bureau of Indian Affairs school will be performed by qualified Facilities Management personnel.
  - a. Students will not be permitted to repair permanently installed public address equipment.

- b. Public address equipment will not be operated outdoors in a heavy fog or rain, or while the equipment or operator is standing on damp grounds.
  - c. Audio-visual equipment and public address system in need of repair will be removed from service until the defect has been eliminated.
  - d. Audio-visual equipment will be inspected and repaired only by authorized repairman. Exceptions: fuses, projection lamps, threading lamps, exciter lamps, etc., may be replaced by authorized projection personnel.
- L. **Water Safety.** Instruction for all water activities shall be supervised by personnel having a valid Water Safety Instructors' Card issued by the American Red Cross.
- 1. One or more qualified lifeguards must be present during the entire period of any activities related to water (this requirement specifically includes swimming sports and events).
  - 2. Fatigued, chilled, injured, or unruly swimmers will be ordered out of the water if such condition, in the opinion of the personnel in charge, constitutes a hazard to the safety of those involved. All swimmers shall follow the swimming pool regulations. (See Illustration 2)
- M. **Areas Not Covered Herein.** It shall be the responsibility of the School Administrator, Supervisors, Dormitory Managers, Teachers, and other school personnel to secure additional information on safety, from the Agency Safety Officer, relevant to activities not specified in this program.

1. **Fire Prevention.** Fire protection, prevention, and control must be an integral part of every accident prevention plan. Flammable liquids and paints will be kept in closed containers and in a metal cabinet outside of the building. (See OSHA 29 CFR 1910.106(d)(3)). Good housekeeping must be practiced at all times in the school, dormitories, kitchens, and dining halls, gymnasiums, playgrounds and any other area being utilized by the students. A regular program shall be established requiring the Student Safety Council to organize a monthly clean-up of the entire campus.
2. **Protection.** Each school that does not have the protection of a regular city or county fire department shall have an active volunteer fire department composed of members of the faculty, Facilities Management and other representative branches. During the regular in-house inspection, particular attention will be paid to the condition of all fire exit doors, lights, fire extinguishers, and fire hoses including fire houses. Under no circumstances will a fire exit be blocked, locked or chained so the door is inoperable while the building is occupied.
3. **Training.** All volunteer firemen should attend a Volunteer Firemen's School at least every other year. This will include male and female members. The volunteers will become involved in the training of other employees and older students in the proper use of fire extinguishers, and become involved in regular practices and in-house fire inspections in an effort to eliminate all potential fire hazards. The firemen must respond to all fire alarms. If it is a false alarm, follow procedures that would be in order if there was an actual fire. Have all the students removed from the building and

go through the building to make certain there is no fire or anyone left in the building.

4. **Fire Extinguishers.** Fire fighting equipment will not be covered or concealed from view. School personnel should be on the alert for unauthorized use of fire extinguishers.

#### **21.5 Fire Drills for Primary and Secondary Schools.**

- A. Frequency of Drill.** Fire drills will be held at least four times during each school term in all schools, including all the various buildings, Le.:  
Dormitories, Schools, Dining Room, and Gymnasium.  
The alarm system of each school shall be tested once each month. A different alarm box shall be used for each test in order to assure that all boxes are in working order. Principals should number the alarm boxes in the various buildings and report the tests by number. An actual drill in any week constitutes the test for the week. A report of these tests is to be included in the monthly report to the School Superintendent's Office where it is to be filed and the submission of these reports is to be monitored.
  2. A record shall be kept in the Principal's office of the date and hour of each drill. Evacuation times will be monitored. Methods will be implemented to ensure that all students and personnel are accounted for.
- B. Procedures Upon the Sounding of a Fire Alarm.**
1. All students, school personnel, and visitors, shall leave the building immediately.
  2. Speed should be secondary to control and order. There shall be no talking, running, pushing, or taking steps two at a time.

3. The first person to reach any exit door shall open it.
4. Students will not stop to take books, wraps, or other personal belongings with them except valuables that are handy in purses.
5. The teacher will pick up the class attendance record and proceed with the group.
6. The teacher or other adult supervisor shall be the last one to leave the room and will check to be sure that everyone is out, turn off the light switch, and then close the door.
7. Students will proceed to their assigned areas on campus, away from the buildings.
8. Students in lavatories, or otherwise away from their assigned rooms, will join the nearest line making the exit and proceed to a prearranged location, report to the teacher in charge and receive permission to join their own class, then report to their own teacher and take their proper place.
9. All groups will proceed at least 100 feet from the building.
10. Students will stay clear of any driveway or entrances that may be used by the fire department.
11. Egress from room on the upper floors shall be so distributed that each stairway accommodates a proportionate number of student traffic.

**C. Variations in Fire Drills.** The method of giving the alarm shall alternate between the automatic and emergency system. The manner in which the drills are conducted shall be varied. Drills shall



be executed at different hours of the day or evening without advance notice. They should be executed at such irregular times as would tend to destroy the possible distinction between drills and an actual fire.

1. Blocked exit drills shall be given in which a customary exit or means of egress is unavailable. The usual procedure is that the administrator or custodian places a sign reading "Exit Blocked" at the head of the stair or in front of an exit which indicates to the students the non-availability of that particular exit or stairway.
2. In each classroom, cards of instruction shall be posted conspicuously describing the procedure for drills and the exit routes.
3. Gymnasium and auditorium drills shall be given according to a pre-arranged plan.

**D. Administrator's Duties.** The administrator is responsible for the supervision of the fire drill and shall make definite assignments to make certain that all rooms, auditoriums, and lavatories are evacuated.

1. The administrator or clerk shall take whatever steps are possible to protect the school's vital records.
2. In case of a fire alarm, other than planned drills, the administrator or designated assistant, shall contact the local fire department or other designated Emergency numbers. When investigation shows there is no fire, he shall notify the local fire department that the alarm was false.

**E. Custodian's Duties.** The custodian staff's principal duty shall be to report to pre-arranged stations where they will operate all emergency facilities and systems such as gas or oil cut-offs, air distribution systems, stand pipes, sprinklers, extinguisher, etc., as may be required. Secondary duties will include assistance in evacuation of students and personnel.

**F. Clerical and Secretarial Duties.** The clerk should be instructed in the duty of telephoning the local fire department for help or turning in the alarm at another fire alarm box.

1. He/she shall acquaint themselves with the location of the alarm boxes and with the telephone numbers of fire departments in the same area.
2. He/she shall also acquaint themselves with the location of another telephone in the event that service to the school is interrupted.

**G. Teachers and Dormitory Aides' Duties.** All employees should know the location of the fire alarm pull station for the building to which they are assigned.

1. The teacher, or dormitory attendant, shall supervise the exit of the group and make certain that the exit is performed in an orderly manner. They will also have other assigned duties such as checking rooms and lavatories to determine if they have been evacuated.
2. In "blocked exit" drills the teacher shall know the alternate route and shall guide or instruct the class as to what course to take. The supervisor's position shall be such that maximum control shall be maintained.

3. The teacher or dormitory attendant shall pick up attendance records or register and proceed with the class.
4. Those in charge shall see that the class goes to its assigned position on the grounds after which the roll shall be called to make certain that all students are present. The teacher or dormitory personnel must remain with those they are responsible for.

#### **21.6 Building Evacuation Instructions for Post Secondary Schools.**

**A. Frequency of Drills.** Fire drills shall be conducted twice during the first month of the school year to refresh memories of the returning students and to instruct new students in the proper and safe ways to evacuate dormitories and school buildings. A record shall be kept indicating the evacuation procedure training and the dates accomplished. Consideration shall be given to the type of building in which students are housed and the maturity of the students occupying the building.

1. Upon enrollment at the school, all new students will be thoroughly orientated in the fire exits of each building in which they are housed. Fire evacuation routes shall be posted in all dormitories and new students will be familiarized with these routes upon assignment to evacuation routes. A report of any such drills must be submitted to the Safety Officer.

**B. Responsibility.** It shall be the responsibility of the staff member in charge of each dormitory to see that evacuation routes are posted in his/her dormitories and that all students are thoroughly familiar with the evacuation routes. It shall also be the responsibility of the dormitory staff member in charge to see that all telephone numbers needed

in case of fire are posted in conspicuous places throughout the dormitories. It shall be the responsibility of the staff member in charge of each classroom building, gym, and dining facility to see that evacuation routes are posted where needed and all students are familiar with fire exits in the buildings. Telephone numbers needed in case of fire shall be posted in conspicuous places throughout the buildings. All staff members and students shall be knowledgeable of the procedures in notifying the fire department and evacuating the building involved, in case of fire.

#### **21.7 Inspections and Evaluations.**

**A. Hazards.** In order to identify, remove and/or eliminate hazard producing situations within the schools, supervisors will:

1. Tour their area of responsibility to detect safety deficiencies on a daily basis.
2. Inspect the immediate area, hallways, classrooms, closets, stairways, dormitories, gymnasium, and other areas on campus, where students congregate.
3. Take corrective action, if possible, to remove the hazard, guard the hazard or protect the students.
4. Report unsafe conditions to his/her supervisor if immediate correction cannot be made.
5. Contact Facilities Management if the condition is serious and complete a work order request so that necessary measures to eliminate the hazard can be taken.
6. Provide a copy of the work order request to the Safety Officer.

7. Make certain that all equipment meets the OSHA Safety Standards.
8. Pay particular attention to good housekeeping practices.

**B. Hazard Communication Program.**

1. OSHA requires every workplace utilizing chemicals to develop and maintain a written Hazard Communication Program (29 CFR 1910.1200). Chemical hazards are present everywhere, from the office environment to the paint shop. OSHA requires that employers train employees on the Hazard Communication Program, including Material Safety Data Sheets.
2. OSHA requires every workplace utilizing chemicals have a Material Safety Data Sheet (MSDS) for each chemical regardless of use. Material Safety Data Sheets must be available in the event of accidental misuse. Material Safety Data Sheets will be located at or near the chemical usage area. Emergency safety and health information is a component of the MSDS. Material Safety Data Sheets are available from the vendor or the manufacturer of the product.

**C. Frequency of Inspections.** Safety inspections should be an on-going integral part of each supervisor's daily responsibilities. These inspections become an unending search for unsafe acts and conditions eventually resulting in the elimination of accidents to employees, students, and the visiting public. Deficiencies must be recorded, and proper work request submitted to Facilities Management identifying the hazard, its location, and other required information needed for planning purposes. A follow-up system to assure appropriate action should be developed.

- D. Spot Inspections.** These will be conducted by the Safety Officer and will be an evaluation of the entire accident prevention effort. The objectives of self-inspections are to uncover hazards, determine causes, and recommend corrective actions. These impromptu visits will uncover hazards of a transitory nature and those not evident during scheduled inspections because of efforts made to temporarily eliminate them when inspections are announced. A suitable checklist prepared and used as an inspection guide will prove invaluable to supervisors.
- E. Inspection Report.** Each inspection of an activity will be recorded and copies forwarded to the Agency Superintendent, Superintendent of Schools, Regional Safety Manager, and proper work order submitted to Facilities Management. Copies of these findings will be filed in the office of the Principal and Superintendent of Schools.
- F. Safety Evaluations.** Special visits by the Regional Safety Manager will be made to the schools and Superintendent of Schools office to evaluate the degree of compliance with the overall Accident Prevention Program and to make a recommendation for improvement. An evaluation may also be made at the request of the Principal, Supervisor, or other personnel who believe hazards exist. When possible, representatives of the Regional Education office will accompany the Regional Safety Manager. Reports will be made to the Regional Director.

## 21.8 Pupil Transportation.

### A. School Bus Operation.

1. Vehicles purchased for the purpose of transporting students on school sponsored activities shall meet applicable U.S. Department of Transportation Federal Motor Vehicle Safety Standards (FMVSS).

2. All vehicles with a rated seating capacity of 10 or more occupants used on activity trips shall meet Federal Standards for School Buses.
3. A vehicle other than a school bus that is used to transport students to school sponsored activities and meets the following criteria:
  - a. May not accommodate more than 9 students including the driver.
  - b. All occupants must have seat belts available and are required to wear them while the vehicle is in motion.
  - c. The cargo securement system is designed to ensure that no object is likely to become a flying missile in a crash situation, Le., a cargo net or other adequate securement tie-down shall be carried in the trunk or in an external cargo carrier.
  - d. Acceptable vehicles include four to six passenger mini-compact cars, intermediate or full-size sedans, six to nine passenger station wagons, and six to nine passenger suburbans.  
  
Unacceptable vehicles are vans and/or mini-vans. Vans and mini-vans will not be used to transport school age children at any time.
  - e.

#### **B. School Bus Inspections.**

1. School Administrators will ensure school buses are inspected annually by GSA.
  - a. Regional and Agency safety staff will inspect school buses periodically.

#### **C. Driver Licensing Requirements.**

1. All School Bus Drivers will have a Commercial Drivers' License (CDL).

**Illustration 1****RANGE SAFETY RULES**

1. Firing on the range will take place only when the Range Safety Officer is present.
2. There will be no more than - people on the range at anyone time.
3. All rifles on the range will have the bolt in open position at all times, except when firing is in progress.
4. All rifles will be pointed toward the target end of the range at all times.
5. No one will be allowed past the firing line without permission of the Range Safety Officer.
6. Ammunition will be issued only by the Range Safety Officer.
7. When firing is in progress, no one will be allowed to enter or leave the range.
8. No talking is permitted while firing is in progress.
9. No students or employees are permitted on the range except during firing times assigned by the Range Safety Officer.
10. During firing time, everyone will stay at the firing line until all firing is completed.
11. After all firing is completed for the assigned period, the range shall be cleaned to the satisfaction of the Range Safety Officer, all brass shall be picked and stored when assigned.
2. Whenever an unsafe condition is observed  
- CEASE FIRING!



**Illustration 2**

**SWIMMING POOL REGULATIONS**

1. Swimming pools will include and maintain first aid and safety equipment in sufficient amounts to insure safe operation under both normal and emergency circumstances.
2. Rescue devices, such as ring buoys and shepherd hooks, shall be prominently displayed in a convenient location in each pool area.
3. Safety signs and pool markings will be posted in plain view.
4. Emergency telephone numbers will be posted in plain view near the telephone. Emergency call procedures shall be understood by all pool employees and shall be posted near the telephone.
5. Emergency procedures shall be understood and rehearsed by personnel in charge.
6. One or more qualified lifeguards having no other duty to perform at the time, shall be on lifeguard duty whenever a pool is open for use. A minimum of one lifeguard for every fifty (50) swimmers, or fraction thereof, shall be maintained at all times. Additional personnel shall be used when necessary to minimize the danger of drowning.
7. Conversation with lifeguards is discouraged.

The water shall be clear enough for the bottom of the deep area to be visible at all times during pool operation. If the water is not clear the pool will be closed until the condition has been corrected.

Chlorine and pH kits shall be available for use by pool personnel, who shall be acquainted with water testing techniques.

**Illustration 2 (cont.)**

10. The pool lifeguard, under the direction of the pool activities manager, shall have the authority to use his judgment and discretion in authorizing use of the pool and its facilities or exclusion therefrom. He shall specifically be able to exclude for:
  - A. Disobedience of pool regulations.
  - B. Possession of eye, ear, skin, respiratory or other diseases.
  - C. Under the influence of alcohol.
11. Running and rough play shall not be permitted.
12. The pool guard shall have the right to require appropriate swimming tests before authorization of swimming in deep water. Swimmers shall not be permitted to take non swimmers or children into deep water.
13. There shall be no diving in water less than four (4) feet in depth.
14. Waterwings, buoys, tubes, etc., or other enabling devices and glassware, such as sunglasses, water goggles, or diving masks shall not be allowed in the pool without the expressed authority of the person in charge.
15. Baseballs, tennis balls, etc., will not be allowed in the pool.
16. All swimmers will be expected to familiarize themselves with the pool rules.

Safety and Health for Field Operations



***TOPIC 22***  
**SAFETY COMMITTEES**

## 22.1 References.

- A. 29 CFR 1960, Basic Program Elements for Federal Employees
- B. 485 OM, Safety and Health Handbook
- C. 25 IAM, Safety and Risk Management

## 22.2 General.

- A. Authority.** The Occupational Safety and Health Act of 1970 requires the head of each Executive Department to develop and support activities to reduce injuries and work related illnesses among employees and damage to property of his agency, encourage safe practices, and eliminate work hazards and risks.
- B. Policy.** It is the policy of the Bureau of Indian Affairs to prevent injuries and work related illnesses to its employees, to protect its property from damage and to provide for the safety of the public in connection with its operations and when using its facilities.
- C. Responsibility.** It is the responsibility of all levels of management in the Bureau of Indian Affairs to establish and support Safety Committees. These committees should be composed of representatives of management and representatives of the employees.

**.3 Safety Committee Activities.** Safety Committees are an important part of the safety organization, forming a chain of communication between employees and the various levels of management and giving program advice to appropriate management authorities.

- A. Function.** Each safety committee advises management in the development and coordination of accident loss prevention

programs. It meets periodically to review and analyze management problems identified through employee reports of unsafe or unhealthful working conditions, safety inspections, accident reports of investigation, safety program evaluation, etc. It provides a continual appraisal of the safety efforts under its jurisdiction, using records of meetings to communicate with other safety committees, safety managers, management and representatives of employees.

**B. Activity.** The activities of the safety committees should be as follows:

1. Discuss safety policies and recommend their adoption by management.
2. Discover unsafe conditions and practices and determine their remedies.
3. Work to obtain results by having its management approved recommendations put into practice.
4. Teach safety to other committee members who in turn will teach safety to the entire organization.

**C. Safety Committee Purpose.** In addition to these activities, safety committees should be organized for the following purposes:

1. To arouse and maintain the interest of superintendents, branch chiefs, and supervisors and to keep them informed on safety matters.
2. To arouse and maintain the interest of workers and convince them that their cooperation is needed to prevent accidents.

3. To make safety activities an integral part of operating policies and methods and a function of daily operations.
4. To provide an opportunity for free discussion of accident problems and preventive measures. A suggestion system may be used to obtain information from workers on unsafe conditions.
5. To help the operating manager evaluate safety suggestions. With operating officials, supervisors, foremen and production workers officially enlisted in the safety effort by membership on safety committees, the safety program has a better chance to succeed.

**22.4 Committee Development.** Without careful development of the committee structures and proper control of committee activities much of the potential value of the committee can be lost. Committees must not become unwieldy, nor shall membership in them be allowed to be indifferent. Nor should they attempt to take over authority of responsible supervisors. Ideally, a safety committee will function well only after the need for it is recognized and its services are welcomed. When the committee or committees are formed certain fundamentals should be followed:

- A. The committee membership should encompass the maximum knowledge of methods, practices and conditions in the organization unit represented.
- B. The committee should be as small as is consistent with the above requirements. A small committee may function more effectively than a large committee.
- C. Safety committees should have the full backing of management if they are to function efficiently.

D. Safety committees should provide for good two-way communication.

E. A committee must have leadership – someone who will make it go. Many safety authorities do not favor the idea of the safety professional serving as committee chairman. However, the leader should have the confidence of other committee members, be familiar with the practical side of accident prevention, be enthusiastic about the safety program, be able to draw out discussion rather than dominate it and be familiar with committee practice and procedures.

F. Employees should never be selected for committee work solely on the basis of popularity since the person most liked might not be entirely sold on the safety program. For that reason, it is best for management to appoint committee representatives rather than to have them elected, at least in the early stages of the program. To gain maximum participation and interest of supervisors and workers it is desirable to rotate membership on the committee.

## 22.5 Policies and Procedures.

**A. Plan of Operations.** When a committee is formed, certain policies and procedures should be set forth in writing and should cover at least:

1. Scope of committee activity
2. Extent of committee authority
3. Procedure
  - a. Time and place of meetings
  - b. Frequency of meetings
  - c. Order of business

d. Records to be kept

e. Attendance requirements

4. Although records of activities should be kept and the procedure to be followed should be put in writing, the paperwork should be kept to a minimum. Too much system is a waste of valuable time and effort. Likewise, when little thought is given to the system, it often leads to confusion and duplication of effort.

**B. Planning.** Good safety meetings require thorough planning and effort. Notices of meetings, preferably accompanied by an agenda should be sent to each member of the committee.

1. The frequency of meetings varies, depending upon the type of committee and the program. There should be sufficient items of business for at least one meeting a month.
2. When the interval between meetings is longer than one month the members tend to lose interest.
3. Where possible, the meeting place should be comfortable and cheerful. Each person attending the meeting should be provided with a seat and be in a position to see and hear the speakers.
4. Meetings should be conducted according to the generally accepted rules of order. Formality should not be allowed to overwhelm the meeting and inhibit free and frank discussions.

**C. Order of Business.** The following is presented as a suggested order of business that may be adopted for safety committee meetings in general:



1. **Call to Order.** The meeting should be called to order promptly at the appointed time.
2. **Roll Call by the Secretary.** Names of members and others present should be recorded. Members who cannot attend should notify the secretary in advance and the reasons for absence should be noted in the minutes.
3. **Introduction of Visitors.**
4. **Minutes.** Minutes of the previous meeting should be read and corrections made. (This item can sometimes be waived.)
5. **Unfinished Business.** All matters on which definite decisions have not been made should be brought up for reconsideration.
6. **Review of Accidents and Statistics.**  
Classification by accident cause should be determined, and preventive measures discussed.
7. **Safety Education.** When it is desired and time permits, the chairman should request a member to speak at the next meeting.  
The subject to be discussed should be recorded in the minutes. Other programs can be scheduled.
8. **Inspection and Recommendations.**  
An inspection of installations should be made at regular intervals, sometimes by a subcommittee. A record of the inspection time, territory covered, unsafe conditions found and recommendations made should be included in the minutes. Definite action, not necessarily favorable, should be taken on the recommendations and reported to the committee.

9. **Posters.** The chairman should question members as to the condition of bulletin boards and posters in the jurisdiction of the committee. Posters are useful in obtaining subject matter for meetings.
10. **New Business.** The chairman should appoint subcommittees to arrange for:
  - a. Competition between branches or installations
  - b. Special no accident weeks or months
  - c. Safety rally programs
  - d. Speakers from outside the installation
  - e. Accident statistics
  - f. Revision of safety rules and shop practices
11. **Adjournment.** Minutes should be taken, prepared, and circulated by the Secretary, after approval by the chairman. The minutes are of great importance since they are often sent to others besides committee members, especially top management. The minutes must record accurately all decisions made and actions taken since they serve as a means of keeping management informed of the group's work and as a follow-up.

## 2.6 Motivation of Committees.

**A. Maintaining Interest.** There are many ways of maintaining interest among safety committee members. To begin with, the employees selected to serve on the committee must have an interest in safety. Then, to maintain that interest requires constant effort on the part of the chairman, the

safety professional and the central organization. Members of safety committee should be given something to do other than mere reporting of unsafe conditions and practices. They should be given a more active part in the work and be made to feel that the success of the committee depends upon the individual support of each member. The primary aim is to arouse interest in the work among all employees to the extent that they will realize that safety is just as important to them as the work they perform.

- B. **Providing Information.** Among the ways of amusing and maintaining interest among committee members, none is more effective than supplying members with informative material, such as data from outside sources, frequency of certain classes of accidents and comparative statements with other months of the year, other years, and other organizations. Safety letters provide helpful information for committee members and may be used to advantage in promoting a safety spirit.
1. Monthly newsletters, consisting of contributions from members of safety committees, information concerning certain classes of accidents noticeable by their frequency, their causes and methods of overcoming them and interesting articles taken from magazines and bureau publications are often used to advantage.
  2. Knowledge in every occupation is the surest basis of success. The value of educating employees in accident prevention lies in their automatically watching out for methods in which employees are injured, and coming to realize that the personal causes of accidents are just as serious as the mechanical causes.

3. There are many other ways of maintaining interest among committee members such as well prepared safety bulletins, safety meetings, proper and prompt handling of suggestions by chairmen, rotation of members, membership cards, safety buttons and emblems, and awards for special accomplishments in connection with the safety program.

**C. Management Support.** It is important that management indicate in some appropriate way its appreciation of the service rendered by safety committee members. The method employed to do this need not involve undue expense or difficulty. The following suggestions are worthy of careful consideration:

1. Letter of appreciation signed by the Deputy Commissioner, Regional Director, Superintendent, Branch Chief, or a Supervisor of the agency.
2. Certificate of service that can be framed and displayed in the workers home.
3. Card or badge of membership.
4. Expression of appreciation at a general employee group meeting.
5. Special dinner or small gifts for safety committee members.

Carrying out one or more of the above suggestions is one definite way to encourage the members of a safety committee. Other methods should be employed to convince these members, and through them the whole body of workers - that safety is a serious matter, that it's a top management priority, that the executives are more than ready to do their part, and that worker cooperation is essential for success.

**22.7 Special Committees.** Special committees are sometimes created to make inspections. Such a committee aims at stopping accidents before they occur by discovering where they are likely to happen. A persistent, alert and aggressive inspection committee is a potent weapon against accident losses. It is also an effective device to bring rank-and-file employees actively into safety work, to train them in accident prevention methods, and to persuade them of the value of such methods.

- A. Depending upon agency/installation size, the inspection committee may have from one to five members, with three being optimum. There may be an inspection committee for the whole agency or one for each installation with perhaps an inspection committee to make general or special inspections.
- B. Since a main contribution of the inspection committee is that of bringing a fresh viewpoint to an old familiar scene, and therefore, of catching details overlooked by people too close to the job, some agencies conduct inspections by committees from other agencies.
- C. Committee membership should rotate at intervals long enough so that each member has time to make a positive contribution and to gain personal experience and interest and yet short enough so that the opportunity to serve can be passed around. Three months service is usually the minimum for inspection committee members.
- D. When inspection committees are started on their work they should understand that their job is essentially a helpful and constructive one. It is important that the supervisor accompany the committee on its inspection of his area. The supervisor can provide information and help required by the inspection committee and should be kept advised of its actions.

- E. In making inspections the committee should keep a watchful eye for unsafe practices. When they find these practices, they should report them immediately to the supervisor and thus give him an opportunity to correct them.
- F. Those making inspections should wear the protective equipment required in the areas they enter. On some jobs and in some locations special equipment is needed. Safety hats, acid goggles, rubber gloves and aprons and respirators are examples. If the inspecting team members do not have and cannot get the necessary special protective equipment, they should stay out of the area until this equipment is provided.
- G. Findings and observations are cleared through the committee report when the inspection has been completed. Under no circumstances does the committee or its members interfere with the work of employees or with the condition of the branch nor usurp any of the supervisors' authority.

**22.8 Suggestion System.** One of the many good methods used to encourage interest, thought, and cooperation for safety among employees may well be the adoption of a suggestion system. The men who operate the machines know the operation and condition of those machines and are often better able to suggest practical improvements in guards and safe practices than are inspectors, committee members, and others. What is true about machine operators is also true of most of the other workers in a plant. It requires only a little encouragement to secure from them valuable suggestions, the adoption of which will prevent many accidents. Accident prevention is closely allied to efficiency. Suggestions are valuable not only in the prevention of accidents but also in lowering the cost of production, improving conditions and methods, bettering the health and increasing the well-being of employees.

- A. Employees should be encouraged to make suggestions that will:
  - 1. Decrease the danger of accidents to themselves and their fellow workers and reduce risks of damage to equipment and materials.
  - 2. Eliminate fire hazards and increase the effectiveness of fire extinguishing methods and equipment.
  - 3. Improve the sanitary and health conditions in the work area.

Safety and Health for Field Operations



***TOPIC 23***  
**WORKERS'**  
**COMPENSATION**



23.1 **References.**

- A. 5 USC 8101 et seq., Federal Employees' Compensation Act
- B. 20 CFR Part 10, Office of Workers' Compensation Programs
- C. CA-810, Injury Compensation for Federal Employees' Handbook

23.2 **Definitions.**

- A. *Federal Employee's Compensation Act (FECA)* - The FECA provides for the payment of workers' compensation benefits to civilian officers and employee of all branches of the Government of the United States.
- B. *Office of Workers' Compensation Programs (OWCP)* - The Office of Workers' Compensation Programs within the U.S. Department of Labor is the federal agency that administers the FECA program. It is responsible for the initial processing of claims from injured employees.
- C. *Traumatic Injury* - A condition of the body caused by a specific event or incident, or series of events or incidents, within a single workday or shift.  
Such condition must be caused by external force, including stress or strain, which is identifiable as to time and place of occurrence and member or function of the body affected.
- D. *Occupational Disease or Illness* - A condition produced by the work environment over a period longer than a single workday or shift. It may result from systemic infection, repeated stress or strain, exposure to toxins, poisons, or fumes, or other continuing conditions of the work environment.

- E. *Continuation of Pay (COP)* - For most employees who sustain a traumatic injury, the FECA provides that the employer must continue the employee's regular pay during any periods of resulting disability, up to a maximum of 45 calendar days. The employer, not OWCP, pays COP.
- F. *Recurrence* - A spontaneous return or increase of disability due to a previous injury or occupational disease without intervening cause, or a return or increase of disability due to a consequential injury.

### 23.3 Procedures.

- A. The employee or someone acting on his or her behalf initiates claim for traumatic injury, occupational disease, recurrence of disability, and death.
- B. The employee must establish that he or she was injured in the performance of duty.
- C. Benefits provided under the FECA constitute the sole remedy against the United States for work-related injury or death.

### 23.4 Penalties. The regulations of 20 CFR Part 10 provide that:

- A. Any person who knowingly makes, or knowingly certifies to, any false statement, misrepresentation, concealment of fact, or any other act of fraud with respect to a claim under the FECA or who knowingly accepts compensation to which that person is not entitled, is subject to criminal prosecution and may, under appropriate U.S. Criminal Code provisions (e.g., 18 USC 287 and 1001), be punished by a fine of not more than \$10,000 or imprisonment for not more than five years, or both.

- B. Any person who, with respect to a claim under the FECA, enters into any agreement, combination, or conspiracy to defraud the United States by obtaining or aiding to obtain the payment or allowance of any false, fictitious or fraudulent claim is subject to criminal prosecution and may, under appropriate U.S. Criminal Code provisions (e.g., 18 USC 286), be punished by a fine of not more than \$10,000 or imprisonment for not more than 10 years, or both.
- C. Any person charged with the responsibility of making reports in connection with an injury who willfully fails, neglects, or refuses to do so; induces, compels, or directs an injured employee to forego filing a claim; or willfully retains any notice, report, or paper required in connection with an injury is subject to a fine of not more than \$500 or imprisonment for not more than one year, or both.
- D. Moreover, claimants convicted of fraudulently claiming or obtaining benefits under the Federal Employees' Compensation Act (FECA) on or after October 21, 1993, the effective date of Public Law 103-112, will lose entitlement to medical benefits, compensation for wage loss, and any other benefits payable under the FECA.

### **23.5 Forms.**

- A. CA-1 Federal Employee's Notice of Traumatic Injury and Claim for Continuation of Pay/Compensation
- B. CA-2 Federal Employee's Notice of Occupational Disease and Claim for Compensation
- C. CA-2a Notice of Employee's Recurrence of Disability and Claim for Pay/Compensation
- D. CA-3 Report of Termination of Disability and/or Payment

E. CA-5 Claim for Compensation by Widow,  
Widower and/or Children

F. CA-5b Claim for Compensation by Parents,  
Brothers, Sisters, Grandparents, or  
Grandchildren

G. CA-6 Official Superior's Report of  
Employee's Death

H. CA-7 Claim for Compensation on Account of  
Traumatic Injury or Occupational Disease

I. CA-8 Claim for Continuing Compensation  
on Account of Disability

J. CA-16 Authorization for Examination and/or  
Treatment

K. CA-17 Duty Status Report

L. CA-20 Attending Physician's Report  
(attached to Form CA-7)

M. CA-20a Attending Physician's Supplemental  
Report (attached to Form CA-8)

N. CA-35a-h Occupational Disease Checklists

**23.6 Traumatic Injury.** Traumatic injuries also include damage to or destruction of prosthetic devices or appliances, including eyeglasses and hearing aids if they were damaged incidental to personal injury requiring medical services.

**A. Notice of Traumatic Injury.**

1. An employee who sustains a work-related traumatic injury should complete Form CA-1 and submit it to his or her supervisor as soon as possible, but no later than 30 days from the date of injury for COP purposes. Another person, including the employer, can give notice of the injury on the employees' behalf.

2. The supervisor should complete and sign the reverse of Form CA-1. The supervisor should also review the front of the form for completeness and accuracy, and assist the employee in correcting any deficiencies found.
3. If an employee requires medical treatment because of the injury, the supervisor should promptly complete the front of Form CA-16 within four hours of the request whenever possible. If the supervisor doubts whether the employee's condition is related to the employment, he or she should so indicate on the form.

**B. Continuation of Pay (COP).**

1. The supervisor should inform employee of the right to elect continuation of regular pay, annual, or sick leave if time loss will occur.
2. The supervisor should advise employee whether COP will be controverted, and if so, whether pay will be terminated. The basis for the action must be explained to the employee.

**C. Duty Status Report.**

1. To obtain interim medical reports concerning the employee's fitness for duty, the supervisor should complete the agency's portion of Form CA-17. The supervisor should describe the physical requirements of the employee's job and noting availability of any light duty. Form CA-17 should then be forwarded on to the physician for completion.
2. The physician should complete reverse of Form CA-17 and forward back to employing agency and/or supervisor.

3. The supervisor may send Form CA-17 to the physician at reasonable intervals (but not more often than once a week) to monitor the employee's medical status and ability to return to light or full duty.

#### **D. Claim for Wage Loss.**

1. If disability is expected to continue beyond the period of entitlement to COP, the employee may claim compensation or use leave to cover his or her absence from work on Form CA-7. The employee should complete the front of form and forward on to the supervisor for his or her completion.
2. The employee must also provide medical evidence to support the period of disability claimed. Medical evidence can be provided on Form CA-20.
3. The supervisor should complete and sign the reverse of Form CA-7. The supervisor should also review the front of the form for completeness and accuracy, and assist the employee in correcting any deficiencies found.

#### **E. Continuing Wage Loss.**

1. If disability is expected to continue, employee should complete Form CA-8 ten days before the period claimed on Form CA7 expires. The employee should complete the front of form and forward on to the supervisor for his or her completion.
2. As with the Form CA-7, the employee is responsible for obtaining medical support for the period claimed, and the dates of compensation claimed should represent the period of disability supported by the medical evidence or the interval until the employee's next medical appointment. Medical evidence can be provided on Form CA-20a.

3. The supervisor should complete and sign reverse of Form CA-8. The supervisor should also review the front of the form for completeness and accuracy, and assist the employee in correcting any deficiencies found.
4. During the period of disability, the Form CA-8 should be submitted every two weeks until OWCP notifies the employee otherwise.

**F. Entitlement to Compensation.**

1. An employee with no dependents is entitled to 66 2/3% of the established gross pay rate.
2. An employee with dependents is entitled to 75% of the established gross pay rate.
3. Compensation payments are **tax free**.

**G. Leave Repurchase.**

1. An employee who uses sick or annual leave to avoid possible interruption of income may repurchase that leave, subject to agency concurrence, if the claim is approved. Form CA-7, CA-7a, and CA-7b should be completed for repurchase of leave.
2. The employee and supervisor should supply factual and medical evidence and a detailed breakdown of leave used, showing number of hours charged for each day claimed and whether sick or annual leave was used.

**H. Medical Benefits.**

1. Hospital Bills
2. Doctor Bills
3. Prescriptions
4. Travel to obtain medical treatment.

**23.7 Occupational Disease.****A. Notice of Occupational Disease.**

1. An employee who sustains an occupational disease injury should complete Form CA-2. Another person, including the employer, can give notice of the injury on the employees' behalf.
2. The supervisor should complete and sign reverse of Form CA-2. The supervisor should also review the front of form for completeness and accuracy, and assist the employee in correcting any deficiencies found.
3. The employee and supervisor must also provide all information requested on the Checklist, Form CA-35a-h. Specific checklists have been devised for various conditions **in** order to facilitate submission of evidence.
4. The supervisor should advise employee of the right to elect sick or annual leave or leave without pay, pending adjudication of the claim.
5. COP is not authorized for occupational disease claims. **It** is only given **in** traumatic injury cases.

**B. Claim for Wage Loss.** (Same as Traumatic Injury)

**C. Continuing Wage Loss.** (Same as Traumatic Injury)

**D. Entitlement to Compensation.** (Same as Traumatic Injury)

**E. Leave Repurchase.** (Same as Traumatic Injury)

**F. Medical Benefits.** (Same as Traumatic Injury)



**23.8 Recurrence.** A recurrence differs from a new injury in that with a recurrence, no event other than the previous injury accounts for the disability.

**A. Claim for Recurrence.**

1. If a recurrence develops, the employee should complete Form CA-2a. The employee should complete front of form and forward on to the supervisor for his or her completion.
2. The supervisor should complete and sign the reverse of Form CA-2a. The supervisor should also review the front of the form for completeness and accuracy, and assist the employee in correcting any deficiencies found.

**B. Continuation of Pay (COP).**

1. If the employee was entitled to use COP and the 45 calendar days have not been exhausted, he or she may elect to use the remaining days if 90 days have not elapsed since first return to duty.
2. The employee may elect to use sick or annual leave pending adjudication of the claim for recurrence.

**C. Medical Evidence/Treatment.**

1. The employee should arrange for submission of the factual and medical evidence described in the instructions of Form CA-2a, paying particular attention to the need for "bridging" information which describes his or her condition and job duties between the original injury and the recurrence.
2. The supervisor, at his or her discretion, may issue Form CA-16 to authorize examination or treatment for a recurrence of disability if it

resulted from an injury previously recognized as compensable by OWCP. However, the supervisor may not authorize examination or treatment when OWCP has disallowed the original claim or when more than six months have elapsed since the employee last returned to work.

#### **D. Claim for Wage Loss.**

1. If the employee wishes to claim compensation because of a recurrence, Form CA-? is required if one was not previously submitted.
2. If Form CA-? was submitted, then the employee is to complete Form CA-8 and submit it to the supervisor along with supporting medical evidence.

**23.9 Death.** When an employee dies because of an injury incurred while in the performance of duty, the supervisor should immediately contact the district office by telephone or facsimile message. The supervisor should also contact any survivors, and provide them with claim forms.

#### **A. Claim for Death Benefits.**

1. The survivors of a deceased employee should use Form CA-5 or CA-5b to submit claims for death benefits. The survivor should complete the front of the form and forward on to attending physician for completion.
2. The attending physician should complete the medical report on the reverse of Form CA-5 or CA-5b and forward it back to the agency for submission to OWCP.
3. The supervisor should complete Form CA-6 to report the work-related death within 10 working days.

**B. Submission of Documents.**

1. A copy of the death certificate.
2. A certified marriage certificate if a spouse is making the claim.
3. A copy of any divorce or annulment decree if the deceased employee or spouse was formerly married.
4. Certified copies of birth certificates of any children for whom a claim is made.

**C. Benefits.**

1. A surviving spouse with no children is eligible for wage 1055 compensation equal to 50% of regular pay. Benefits are paid to the spouse until death or remarriage if he or she is under age 55. If a spouse under age 55 remarries, OWCP makes a lump sum payment equal to 24 times the monthly compensation at the time of remarriage. The benefits of a spouse who remarries after the age of 55 will not be affected by the marriage.
2. If children are eligible in addition to the spouse, he or she may receive compensation equal to 45%, plus an additional 15% for each child, not to exceed 75% of regular pay.
3. If the deceased employee leaves no SpOUSE the first child is entitled to 40% and each additional child is entitled to 15 percent of tl employee's salary, up to a maximum of 75~ payable on a share and share-alike basis.
4. Up to \$800 will be paid for funeral and burial expenses.

5. If the employee dies away from home, the cost of transporting the body to the place of burial will be paid in full.
6. A \$200 allowance will be paid in consideration of the expense of terminating the deceased's status as a Federal employee.

#### 23.10 Termination of Disability.

- A. Once entitlement to COP ends, or when the employee returns to work, and the disability ceases, the supervisor should complete Form CA-3.
- B. In all cases, OWCP has the final authority to determine whether the agency's action for termination is correct.

#### 23.11 Compensation Requirements. Each claim for compensation must meet the following five requirements before OWCP can accept it:

- A. The claim was filed within three (3) years.
- B. The injured person was a federal employee at the time of the injury.
- C. An injury, disease, or death must in fact have occurred.
- D. The injury, disease, or death occurred while the employee was performing job duties.
- E. The medical condition for which compensation or medical benefits are claimed is causally related to the claimed injury, disease, or death.

**23.12 Controversion of COP.** Sometimes a supervisor objects to paying a claim either for one of the reasons provided by regulation or for some other reason. The supervisor may controvert a claim by completing the indicated portion of Form CA-1 and submitting detailed information in support of the controversion to OWCP.

**A. Nine Reasons to Controvert COP.** Controvert should be based upon one of the nine reasons listed below:

1. The disability results from an occupational disease or illness.
2. The employee is a volunteer working without pay or for nominal pay.
3. The employee is neither a citizen nor a resident of the United States.
4. The injury occurred off the employing agency's premises and the employee was not involved in official "off premise" duties.
5. The employee caused the injury by his or her willful misconduct, intent to bring about injury or death to self or another person, or intoxication.
6. The injury was not reported on Form CA-1 within 30 days following the injury.
7. Work stoppage first occurred 90 days or more following the injury.
8. The employee initially reported the injury after his or her employment was terminated.
9. The employee is enrolled in the Civil Air Patrol, Peace Corps, Youth Conservation Corps, Work Study Programs, or other similar groups.

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***TOPIC 24***  
**RETURN TO WORK (OWCP)**

#### 24.1 References.

- A. CA-81 0 injury Compensation for Federal Employees' Handbook
- B. 20 CFR Part 10, Office of Workers' Compensation Program
- C. 5 U.S.C. 8101 et seq., Federal Employees' Compensation Act

#### 24.2 Definitions.

- A. Department of labor** - Department of Labor/ Office of Workers' Compensation Programs (DOUOWCP) administers the Federal Employees Compensation Act (FECA) through district offices located throughout the United States. DOUOWCP adjudicates and approves or disapproves all injury or illness claims.
- B. Reemployment** - Rehire of injured employees and placement into modified, newly created, or alternate positions with previous employing agency.
- C. Light Duty** - Assignment of limited and appropriate job duties to allow injured employee to continue working while recuperating.
- D. Assisted Reemployment** - Wage subsidy which can partially reimburse new employer for wages paid injured employee. Program is administered by OWCP.
- E. Rehabilitation** - Process of providing medical and vocational services to facilitate a former employee's return to employment in either the federal or private sectors. Program is administered by OWCP.

**F. Rehabilitation Counselor** - Professional counselor who provides direct vocational rehabilitation services to injured employee. Must be certified by OWCP. Counselor's services are authorized and supervised by OWCP Rehabilitation Specialist.

**G. Rehabilitation Specialist** - OWCP employee responsible for coordinating vocational rehabilitation services authorized under the Federal Employees' Compensation Act.

#### **24.3 Policy.**

- A.** It is the policy of the OWCP to assist permanently disabled employees injured on-the-job to return to gainful employment within their medically defined work restrictions. Consideration in the return-to-work effort is always given first to the previous employer. Should the previous employer be unable to place the injured worker, then other rehabilitation services necessary for placement of the injured worker with other government agencies or the private sector are considered. Administrative policies and procedures are outlined in the Federal Employees' Compensation Act (FECA) Procedures Manual and the Office of Workers Compensation Programs (OWCP) Rehabilitation Procedures Manual.
- B.** It is the policy of the OWCP to make every effort to reemploy or reassign permanently disabled employees who have been injured on-the-job to positions consistent with their medical work restrictions. The policy and procedures are outlined in 20 CFR 10.

#### **24.4 Legal Responsibility and Authority.**

- A.** It is the administrative responsibility of the Secretary of Labor pursuant to Title 5, United States Code, Chapter 81, to direct the



rehabilitation efforts of those permanently disabled individuals covered under the Federal Employees' Compensation Act (FECA). The Office of Workers' Compensation Program (OWCP), Employment Standards Administration, Department of Labor, administers those responsibilities at the direction of the Secretary.

B. The Department of the Interior (DOI) responsibilities are outlined in 5 USC 8151 (b)(2) , and further defined in CA-810, Injury Compensation Handbook. This responsibility in DOI is administered in the Office of the Assistant Secretary – Policy, Management and Budget. These efforts are coordinated with the Director of Program Services and Office of Managing Risk and Public Safety (DOI).

C. The Federal Employees' Compensation Act provides the following:

1. Section 8104 of the FECA provides that the Secretary of Labor may direct a permanently disabled beneficiary under the FECA to undergo vocational rehabilitation, and may furnish services from the Employees' Compensation Fund. The worker is entitled to compensation at the total disability rate while in a rehabilitation program.
  - a. Section 8106 provides that an employee who refuses to seek suitable work or refuses or neglects to work after suitable work is offered is not entitled to compensation. Section 8113(b) provides that a worker who refuses to participate in a rehabilitation program may have compensation adjusted to reflect a presumed earning capacity had the program been undertaken. Compensation may be adjusted to \$0. The FECA regulations outlined in 20 CFR 10.124(c), (e) and (f) amplify these provisions.

- b. Section 8103(a) provides for any medical care prescribed by a qualified physician that is considered likely by the Secretary to cure, give relief, or reduce the degree or period of disability, or aid in lessening the severity of the injury.
- c. Section 8111 provides compensation for the services of an attendant up to \$1,500 in a case of severe disability and for a maintenance allowance of up to \$200 per month for a worker who incurs additional expense in pursuing approved rehabilitation programs.
- d. Section 8115(a) provides for the reduction of compensation to reflect worker's earning capacity.

#### 24.5 Restoration Rights.

- A. Fully Recovered Within One Year. Employee has mandatory restoration rights to their old position or its equivalent, regardless of whether employee is still on the agency rolls.
- B. Fully Recovered After One Year. Entitled to priority consideration, provided that application is made within 30 days of the date compensation ceases.
- C. Partially Recovered. Entitled to be considered for employment in the former commuting area. If the individual is restored at a lower grade or pay level, then:
  - 1. OWCP will make up the difference in pay, or
  - 2. Agency may elect to pay the employee at the former rate. If the employee later fully recovers, employee is then entitled to the restoration right of fully recovered employees, according to the timing of the recovery.

- D. **Physically Disqualified.** Entitled, within one year of the date compensation begins, to be placed in a position that most closely approximates the seniority, status, and or pay to which otherwise entitled, according to the circumstances in each case. After one year, the individual is entitled to the same restoration rights as individuals who are partially recovered.
- E. **Status Upon Recovery.** Generally entitled to be treated as though employee had never left for the period employee was on compensation or continuation of pay:
  - 1. Credit for length of service; within-grade increase; career tenure; time-in-grade restrictions; leave rate accrual; and completion of probationary period.

#### **24.6 Rehabilitation Benefits.**

- A. If an employee is permanently disabled and cannot resume usual duties, the injured employee may be eligible for vocational rehabilitation services authorized by DOUOWCP. Such services can include vocational testing, counseling, training and job placement.
- B. If employee is unable to return to work with previous employer, the injured employee may utilize the Assisted Reemployment Program which provides partial reimbursement of wages to new employers. Reimbursements may be made to private sector employers, local governments, and other federal agencies. Assisted reemployment agreements with new employers can be extended through three years.

#### **Employee Responsibilities.**

- A. To obtain medical documentation to support the filing of a claim.

- B. If employee refuses to furnish medical records or a survivor refuses to furnish a copy of death certificate, OWCP will determine whether to suspend compensation benefits.
- C. To ask treating physician for the earliest date employee may be able to return to work.
- D. To notify and keep your supervisor and the compensation specialist informed.
- E. To seek restoration as soon as the medical condition permits.

#### **24.8 Types of Reemployment Efforts.**

- A. Light duty
- B. Reemployment
- C. Other rehabilitation efforts

#### **24.9 Actions To Be Taken for Reemployment.**

- A. Upon authorizing medical care, the employer should advise the employee in writing as soon as possible of his or her obligation to return to work under 10.210 and as defined in this subpart. The term "return to work" as used in this subpart is not limited to returning to work at the employee's normal worksite or usual position, but may include returning to work at other locations and in other positions. In general, the employer should make all reasonable efforts to place the employee in his or her former or equivalent position, in accordance with 5 U.S.C. 8151 (b)(2) , if the employee has fully recovered after one year. The Office of Personnel Management, (not OWCP) administers this provision.

#### 24.10 Steps For Reemployment.

- A. The attending physician or OWCP notifies the employer that the employee has partially recovered (that is, the employee can perform some work but not return to the position held at date of injury). The employer should act as follows:
1. If the employee can perform in specific alternative position available in the agency, and the employer has advised the employee in writing of the specific duties and physical requirement, the employer shall notify the employee in writing immediately of the date of availability.
  2. If the employee can perform restricted limited duties, the employer should determine whether such duties are available or whether an existing job can be modified. If so, the employer shall advise the employee in writing of the duties, their physical requirements and availability.
  3. The employer must make any job offer in writing. However, the employer may make a job offer verbally as long as he/she provides the job offer to the employee in writing within two business day of the verbal job offer.
  4. The offer must include a description of the duties of the position, the physical requirements of those duties and the date by which the employee is either to return to work or notify the employer of his or her decision to accept or refuse the job offer. The employer must send a complete copy of any job to OWCP at the time it is sent to the employee.

**24.11 Actions the Employee Must Take with Respect to Returning to Work.**

- A. If an employee can resume regular Federal employment, he or she must do so. No further compensation for wage loss is payable once the employee has recovered from the work related injury to the extent that he or she can perform the duties of the position held at the time of injury, or earn equivalent wages.
- B. If an employee cannot return to the job held at the time of injury due to partial disability from the effects of the work-related injury, but has recovered enough to perform some type of work, he or she must seek work. The employee must accept suitable work offered to him or her. This work may be with the original employer or through job placement efforts made by or on behalf of OWCP.
- C. If the employer has advised an employee in writing that specific alternative positions exist within the agency, the employee shall provide the description and physical requirements of such alternative positions to the attending physician and ask whether and when he or she will be able to perform such duties.
- D. From time to time, OWCP may require the employee to report his or her efforts to obtain suitable employment, whether with the Federal Government, State and local Governments or in the private sector.

**24.12 Medical Documentation.**

- A. Safety office will contact physician in writing. Enclose a CA-17, Duty Status Report and Position Description and request current medical condition of employee or a medical release to return to work.

B. Physician will provide work limitations.  
The agency has five options:

1. Modify current position description.
2. Consider suitable vacant position.
3. Remove employee from position.
4. Refer employee to DOL rehabilitation program.
5. Advise employee to consider disability retirement.

C. If the agency disagrees with the physician's determination, Safety Officer will contact the 001 Medical Officer or DOUOWCP and request a second opinion.

24.13 **Medical Considerations.**

**A. Nature of Disability.** Can the Agency accommodate employee's limitations?

1. **Concurrent Disability.** Does the employee have further disabilities in addition to the work related disability, which increase the limitations?
2. **Employment History.** Did the employee have a good employment record prior to injury?
3. **General Qualifications.** Does the employee have other skills that might qualify employee for a job with lighter physical demands? Does employee have special education or training?
4. **Previous Light Duty Assignment.**  
Was the employee ever on light duty assignment? Was it effective?
5. **Tour of Duty.** Determine if the employee is able to work full days or at least half days?

#### 24.14 Modify Position Description (PD).

- A. If physician stipulates limitations, the personnel office and supervisor will need to modify current PO to accommodate limitations OR
  - 1. This might require reducing the grade level. *Note:* OWCP will make up the difference in salary.
- B. Personnel may consider another suitable vacant position.
  - 1. This could be at a lower grade level. *Note:* OWCP will make up the difference in salary.
- C. If personnel cannot find or design a suitable job, Safety Officer will notify DOUOWCP and request employee be referred to DOL Rehabilitation Program.
- D. Safety Officer will submit modified P. D. to physician for review and approval.
- E. If approved, personnel will schedule a reemployment interview with employee.

#### 24.15 Reemployment Interview.

- A. Personnel will send a certified letter with return receipt to employee to report for reemployment interview.
- B. Safety will conduct the interview.

#### 24.16 Job Offer.

- A. Personnel will inform employee, in writing, of the job offer. At the same time, a copy will be sent to DOUOWCP for review and concurrence.



- B. The Agency need not wait for suitability determination by DOUOWCP prior to bringing an employee back to work.
- C. DOUOWCP will advise the Agency and employee in writing if the offered job is determined suitable or not.
- D. If employee accepts the job offer, a CA-3 needs to be submitted by the supervisor, through Safety, to DOUOWCP to avoid any dual compensation.
- E. If employee declines, Safety Officer will notify DOUOWCP in writing. DOUOWCP will determine if employee is eligible for continued benefits.
- F. If not suitable, DOUOWCP will notify Agency and employee's case will be screened for referral to the rehabilitation program.
- G. Supervisor and the personnel office will initiate removal actions. Advise employee that he/she may apply for disability retirement.
- H. Safety Officer will send copies of removal action letter to DOUOWCP.
- I. Safety Officer will keep in contact with employee until employee no longer is eligible for OWCP benefits.

**.17 Reemployed Worker.**

- A. The Safety Officer needs to monitor employee's progress.
- B. Employee Assistance Program can be used if employee is having a difficult time adjusting.

#### 24.18 Vocational Rehabilitation.

Under 5 U.S.C. 8104(a), OWCP may direct a permanently disabled employee to undergo vocational rehabilitation services. To ensure that vocational rehabilitation services are available to all who might be entitled to benefit from them, an injured employee who has a loss of wage earning capacity shall be presumed to be "permanently disabled" for purposes of this section only, unless and until, the employee proves that the disability is not permanent. If an employee without a good cause fails or refuses to apply for, undergo, participate in, or continue to participate in a vocational rehabilitation effort when so directed, OWCP will act as follows:

- A. Where a suitable job has been identified, OWCP will reduce the employee's future monetary compensation based on the amount which would likely have been his or her wage earning capacity had he or she undergone vocational rehabilitation. OWCP will determine this amount in accordance with the job identified through the vocational rehabilitation planning process which includes meetings with the OWCP nurse and employer. The reduction will remain in effect until such time as the employee acts in good faith to comply with OWCP instructions.
- B. Where a suitable job has not been identified, because the failure or refusal occurred in the early but necessary stages of a vocational rehabilitation effort (that is, meeting with the OWCP nurse, interviews, testing, counseling, functional capacity evaluations, and work evaluations), OWCP cannot determine what would have been the employee's wage-earning capacity.

- C. Under the circumstances identified in paragraph (b) of this section, in the absence of evidence to the contrary, OWCP will assume that the vocational rehabilitation effort would have resulted in a return to work with no loss of wage earning capacity, and OWCP will reduce the employee's monetary compensation accordingly (that is, to zero). This reduction will remain in effect until such time as the employee acts in good faith to comply with OWCP instructions.
- D. After completion of a vocational rehabilitation program, OWCP may adjust compensation to reflect the injured worker's wage-earning capacity. Actual earnings will be used if they fairly and reasonably reflect the earning capacity if it is suitable and performed in sufficient numbers so as to be reasonably available, whether or not the employee is placed in such a position.
- E. An employee who is receiving compensation for partial or total disability must advise OWCP immediately of any return to work, either parttime or full-time. In addition, an employee who is receiving compensation for partial disability will periodically be required to submit a report of earnings from employment or self-employment, either part-time or full-time.
- F. OWCP may, in its discretion, provide vocational rehabilitation services as authorized by 5 U.S.C. 8104. These services include assistance from registered nurses working under the direction of OWCP. Among other things, these nurses visit the worksite, ensure that the duties of the position do not exceed the medical limitations as represented by the weight of medical evidence established by OWCP, and address any problems the employee may have in adjusting to the work setting. The nurses do not evaluate medical evidence; OWCP claims staff performs this function.

- G. Vocational rehabilitation services may also include vocational evaluation, testing, training, and placement services with either the original employer or a new employer, when the injured employee cannot return to the job held at the time of injury. These services also include functional capacity evaluations, which help to tailor individual rehabilitation programs to employees' physical reconditioning and behavioral modification needs, and help employees to meet the demands of current or potential jobs.

#### 24.19 Relocation Expenses.

- A. If possible, the employer should offer suitable reemployment in the location where the employee currently resides. If this is not practical, the employer may offer suitable reemployment at the employee's former duty station or other location. Where the distance between the location of the offered job and the location where the employee currently resides is at least 50 miles, OWCP may pay such relocation expenses as are considered reasonable and necessary if the employee has been terminated from the agency's employment rolls and would incur relocation expenses accepting the offered reemployment. OWCP may also pay such relocation expenses when the new employer is other than a Federal employer. OWCP will notify the employee that relocation expenses are payable if it makes a finding that the job is suitable. To determine whether a relocation expense is reasonable and necessary, OWCP shall use as a guide the Federal travel regulations for permanent changes of duty station.

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***TOPIC 25***

**LOSS COMPENSATION**

**25.1 References.**

- A. Federal Tort Claims Act of 1966
- B. Military Personnel and Civilian Employees' Claims Act of 1964
- C. 451 OM, Loss Compensation

**25.2 Policy.** The Bureau policy is to promptly and thoroughly investigate and document all accidents and incidents which will aid in the prompt settlement of loss compensation claims.

**25.3 Responsibilities.**

**A. Management.** The prevention of situations which give rise to tort claims and the proper investigation and documentation of the facts incident to tort claims are management functions. The expenses incurred in the investigation and related activities in connection therewith will be borne by the Bureau activity whose employee's action gave rise to the claim. Line officials are responsible for:

1. Prevention action by (a) taking such steps as reasonable to prevent situations which give rise to tort claims, (b) proper training and supervision of employees, (c) adequate safety measures, and (d) accident prevention programs.
2. Proper handling of claims by making necessary reports, thorough and timely investigations, and the documentation of facts incident to claims so that the government's, the employee's, and the claimant's interests are equally protected. In connection with tort claims activities, 451 OM 1.2 assigns the responsibility for carrying out the policy objectives stated therein to the Deputy Commissioner of Indian Affairs.

- B. Division of Safety and Risk Management.** The Chief, Division of Safety and Risk Management is designated as the Bureau Tort Claims Officer and has staff responsibility for administering the loss compensation program.
- C. Regional Tort Claims Officer.** The expeditious handling of tort claims requires cooperation from the claimant, the claimant's representative, the investigators, the Bureau Tort Claims Officer, the Solicitor's office, Department of Justice personnel and others involved. Provisions at all levels for the effective discharge of tort claim responsibilities can be effected.
- D. Solicitor's Role in Tort Claims.** Administrative determination as to the merit of any tort claim presented is a function delegated to the Office of the Solicitor and redelegated to other members of his office. Judicial determination is a function of the courts.

**25.4 Background.** The Federal Tort Claims Act was enacted on August 2, 1946, (60 Stat. 842). The original act and its amendments are found in the 1944 -1949 supplement to laws relating to the National Park Service.

- A. General Purpose.** The Act authorized claims against the United States: "for damage to or loss of property or on account of personal injury or death caused by the negligent or wrongful act or omission of any employee of the government while acting within the scope of his office or employment, under circumstances where the United States, if a prudent person, would be liable to the claimant for such damage, loss, injury, or death in accordance with the law of the place where the act or omission occurred."
- B. Definition.** A tort is defined as a civil wrong, not arising from a contract relation, giving the person who suffers from the wrong a right of action of

damages. It is also defined as a breach of a legal duty not imposed by contract. The word comes from the French word "tort", meaning "wrong."

**C. General Principle.** The general principle of English and American law is that the sovereign cannot be sued in its own courts without its consent. The general consent of the United States to be sued in cases of contract was given first by the Act of February 24, 1855, (24 Stat. 505).

**O. Compensation for Torts.** The method of providing compensation for torts before the Federal Tort Claims Act was the introduction of private bills in Congress for the relief of claimants. This was the usual method in cases of personal injury, or of property damage over \$1,000. The 79th Congress, which enacted the Federal Tort Claims Act, had before it saw 1,500 bills of this character.

**E. Government Liability.** The government's liability under the Federal Tort Claims Act is nearly always based on negligence, which is defined as a breach of the legal duty to use reasonable care for the safety of persons and their property.

## 25.5 Tort Claims.

### A. Investigation Procedures.

1. **Investigations by Supervisors and Safety Officers.** The requirements and procedures for investigating accidents set forth in 485 OM 3 and OM 1-4 shall be followed. In investigating accidents which have resulted or may result in tort claims, supervisors and safety officers shall consult with the Tort Claims Officer to assure that all appropriate steps have been taken to fully document the case for tort claims purposes. Copies of the investigation report by supervisors, safety officers, and others of such accidents shall be furnished to the Tort Claims Officer.



2. **Investigation by Tort Claims Officer.** It is necessary that an investigation be made of all accidents in order that all claims may be properly evaluated. The extent of his investigation will rest on the exercise of good judgment with emphasis on thoroughness. The complete investigative file shall be forwarded to the appropriate Associate, Regional, or Field Solicitor not later than 30 days after the occurrence of the incident.
- a. Every investigation shall be conducted by a Tort Claims Officer, who shall be responsible for the prompt investigation of every incident while witnesses are available and before damage has been repaired to the end of securing all relevant information. (The duties of the employee in his/her capacity as a Tort Claims Officer shall ordinarily have priority over any other assignments he/she may have).
- b. The Tort Claims Officer shall:
- i. Conduct the investigation in a fair and impartial manner, covering all phases of the incident so that a comprehensive, accurate, and unbiased factual report of the incident may be made available in order that all claims may be properly evaluated.
  - ii. Find and interview all competent witnesses and secure signed statements of fact pertinent to the incident. Such witnesses are drivers and passengers of all vehicles involved, ambulance attendants, tow-truck operators, doctors, police officers, and eyewitnesses. The Tort

Claims Officer should interview witnesses at the earliest opportunity. Statements from witnesses should be in writing and their signatures obtained thereon if at all possible. The interest of the United States may be seriously prejudiced if the Tort Claims Officer fails to obtain such statements before witnesses lose their clear recollection or can be confused by interrogation by persons with adverse interests.

- iii. Inspect the property damage and interview injured persons, and their representatives, personally, and if such personal inspection and interview is not conducted, state the reason therefore.
- iv. Ascertain the nature, extent, and the amount of damage and obtain all pertinent repair bills, or estimates, medical, hospital and associated bills as are necessary for the proper adjudication of a claim against the government which may arise from the incident.
- V. Obtain from the proper maintenance office the reports of the inspection of the government owned vehicle that were conducted prior to and subsequent to the accident in all cases in which they appear pertinent to a determination of liability.
- vi. Reduce to writing and incorporate into a unified investigative report all pertinent testimony, exhibits, and any other evidence taken or considered.

vii. Furnish the proper claim forms to any person who inquires concerning the procedure for making claims. against the government as a result of an accident and advise such person where the claim should be filed. (See 43 CFR 22)

viii. Submit the complete investigative report to the appropriate Associate, Regional, or Field Solicitor as promptly as the circumstances permit, but no later than 30 days after the occurrence of the accident or incident. In the case of an incident involving death, serious personal injury, or substantial property damage, it is imperative to submit a preliminary report immediately, containing such information as is available at that time, to the appropriate Associate, Regional, or Field Solicitor with a follow-up report in 10 days.

Where not all of the required information is immediately available, as in an accident resulting in personal injuries requiring an extended period of hospitalization or medical care, the investigation report shall be submitted promptly, containing all information available at the time of submission, and shall be completed by means of a supplementary report or reports submitted as soon as the previously omitted information becomes available.

### **3. Contents of the Investigative Report.**

- a. A written report of investigation shall be made of each incident or accident. For motor vehicle accidents, Standard Forms 91 and 94 must be used.
- b. The report shall be completed in every significant detail and will include the following pertinent information:
  - i. Date, time and exact place the accident or incident occurred.
  - ii. A concise, but complete, statement of the circumstances of the accident or incident. References should be made to pertinent physical facts observed and to any material statements, admissions, or declarations against the interests of the United States by any person involved.
  - iii. A statement as to whether the driver is the sole owner of the damaged property and, if not, the name and address of the owner or part owners.
  - iv. Names and addresses of employees involved as participants or witnesses.
  - v. Names and addresses of all eyewitnesses, including the driver and the occupants of the vehicle.
  - vi. Accurate description of government property involved, and nature and amount of damage, if any, and the name(s) and address(es) of the owner(s) thereof.

- vii. A statement as to whether any person involved was cited for violating any Federal or State statute, local ordinances or Department regulation, and, if so, in what respect. The statute, ordinance, or regulation should be set out in full.
- viii. A statement as to whether a police investigation was made. If available, a copy of the police report of the investigation shall be included.
- ix. A statement as to whether any arrests were made or charges preferred, and the result of any trial or proceedings. Include names of all witnesses and the substance of their testimony. When available a copy of the transcript must be secured.
- x. Newspaper accounts, weather reports, plats, and photographs of the site and of the vehicles involved.
- xi. As many exhibits or enclosures as are pertinent and appear necessary or useful for purposes of claim determinations shall be obtained during the course of the investigation and shall be attached to the investigative report. The enclosures shall be numbered consecutively and shall be listed numerically in the investigative report.

#### **4. Information to be Submitted by Claimant.**

- a. In support of a claim based on death, the claimant may be required to submit the following evidence for information:

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- i. An authenticated death certificate or other competent evidence showing cause of death, date of death, and age of the decedent.
- ii. Decedent's employment or occupation at time of death, normally or yearly salary or earnings (if any) and the duration of last employment or occupation.
- iii. Full names, addresses, birth dates, kinship, and marital status of the decedent's survivors, including identification of those survivors who were dependent upon the decedent for support at the time of death.
- iv. Degree of support afforded by the decedent to each dependent survivor at the time of death.
- v. Decedent's general physical and mental condition before death.
- vi. Itemized bills for medical and burial expenses incurred by reason of the incident causing death, or itemized receipts of payment of such expenses.
- vii. If damages for pain and suffering prior to death are claimed, a physician's detailed statement specifying the injuries suffered, duration of pain and suffering, drugs administered for pain, and the decedent's physical condition in the interval between injury and death.

- viii. Any other evidence or information which may have a bearing on either the responsibility of the United States for the death or the damages claimed.
- b. In support of a claim for personal injury, including pain and suffering, the claimant, may be required to submit the following evidence and information:
  - i. A written report by the attending physician or dentist showing the nature and extent of the injury, the nature and extent of treatment, any degree of temporary or permanent disability, the prognosis, and period of hospitalization, and any diminished earning capacity.
  - ii. Itemized (and signed) bills for medical, dental, hospital expenses incurred, or itemized receipts of payment for such expenses.
  - iii. If the prognosis reveals the necessity for future treatment, a statement of expected expenses for such treatment.
  - iv. When a claim is made for loss of time from work or loss of earnings, a written statement from the employer showing actual time lost from employment, the number of hours usually worked per week, the amount of wages or salary which the employee was earning at the time of the accident, and whether the employee worked full-time or part-time.

- v. When claim is made for loss of income and the claimant is selfemployed, documentary evidence showing the amount of claimant's earnings during the preceding two years.
  - vi. Any other evidence which would have a bearing on the award.
  - vii. In addition, the claimant may be required to submit to an examination by a physician selected by the Bureau of Indian Affairs.
- C. In support of a claim for damage to or loss of property, real or personal, the claimant may be required to submit the following evidence and information:
  - i. Proof of ownership.
  - ii. A detailed statement of the amount claimed for each item of property.
  - iii. An itemized receipt of payment of necessary repairs to each item of property.
  - iv. A statement listing date of purchase, purchase price and salvage value where repair is not economical.
  - v. Any other evidence which would have a bearing on the award.

**B. Reports & Recordkeeping.** Quarterly reports will be submitted by the Regional Tort Claims Officer to the Division of Safety and Risk Management indicating the number of tort claims processed during the past quarter year.



### C. Processing of Claims.

1. **Responsibilities for Tort Claims.** Proper handling of claims by making necessary reports, through the timely investigation and documentation of facts incident to claims so that the government's, the employee's and the claimant's interests are equally protected is the responsibility of the Tort claims officer.
2. **Presentation of Claims.**
  - a. A claim shall be deemed to have been presented when the Appropriate Director or office receives from a claimant, duly authorized agent or legal representative, an executed Standard Form 95, or a written notification of an incident, together with a claim for money damages, in a certain sum, for damage to or loss of property or personal injury, or death. (See Illustration No.2)
  - b. A claim presented to the wrong Federal agency shall be transferred forthwith to the appropriate agency.
3. **Receiving Claims.**
  - a. The claimant's envelope shall be retained, and the claim form shall be time and date stamped, recorded, and forwarded immediately to the appropriate Tort Claims Officer.
  - b. The Tort Claims Officer shall forward the original claim form no later than 24 hours after receipt, together with all the original papers, to the appropriate Associate, Regional, or Field Solicitor (See 111 DM 2). If the claim is not forwarded within this time, a memorandum stating the reason for delay must be submitted.

4. **Accident Reporting.** An employee shall immediately notify his or her supervisor of any incident or accident involving a private person or private property which may give rise to a claim against the government. The supervisor, in turn, shall immediately notify the appropriate Tort Claims Officer. Standard Forms 91 and 94 (if witnessed) must be completed.
- a. In the event of death, actual or potential serious personal injury or substantial property damage (estimated to be in excess of \$1,000), the appropriate Associate, Regional, or Field Solicitor and the appropriate Tort Claims Officer shall be notified immediately by telegram or telephone. If by telephone, it shall later be confirmed in writing and dispatched by close of business of the following business day.
  - b. Copies of all accident reports shall be furnished to the Tort Claims Officer of the office involved.
  - c. Copies of the basic accident reports involving death, serious personal injury, and substantial property damage shall be furnished to the appropriate Associate, Regional, or Field Solicitor no later than 10 days after the incident<sup>1</sup> (See Illustration No.1)
  - d. In reporting an accident, an employee should state the facts to the best of his or her knowledge. Conclusions as to fault or responsibility should not be stated. The employee should report the accident to authorized representatives of the government, the employee's insurance company, and police officers investigating.

the accident. The employee shall also file any report required by law.

- e. If an employee involved in an accident carries liability insurance which may cover the employee or the government, the employee shall report the accident to the insurance company and shall also furnish the Tort Claims Officer a copy of the insurance policy together with applicable endorsements and amendments.
- f. For additional reporting requirements in connection with accidents and claims involving General Services Administration motor pool vehicles. (See FPMR 101-39.8)
- g. In the event that accidents or other incidents are due to malfeasance, neglect of duty, or irresponsible performance on the part of employees, the provisions outlined in Parts 355-358 of the Departmental Manual for investigating and reporting such incidents shall be followed.

#### **D. Claims Settlement.**

1. **Solicitor Determination.** Upon receipt of the claim and the Bureau's or office's investigative report, the appropriate Solicitor's office shall make a determination of the claim. The determination may either deny, compromise, or pay the claim in full.
2. **Court Settlement.** An employee shall notify his or her supervisor immediately whenever a lawsuit is threatened or filed in court alleging a tort arising out of government employment.

- a. Upon institution of a suit, the assigned Associate, Regional, or Field Solicitor shall notify the appropriate Bureau or office and request the original and two copies of the investigative report.  
In addition, the Associate Solicitor, Division of General Law, should be notified of the filing of the suit.
  - b. The appropriate Associate, Regional, or Field Solicitor shall in turn forward a copy of the investigative report to the Attorney General and the original copy to the United States Attorney.
  - c. The appropriate Associate, Regional, or Field Solicitor will notify the Bureau or office involved and the Associate Solicitor, Division of General Law of the final disposition of the litigation.
3. **Awards Schedule.** Notice of disposition of claims shall be in writing and sent to the claimant, his/her attorney, or legal representative. In compromises and denials, notice shall be sent by certified or registered mail, return receipt requested. The notice shall include a statement that if the claimant is dissatisfied, he/she is entitled to institute suit within a period of six months from the date of the mailing of the notice of determination.
- a. **Bureau Authority.**
    - i. If any award, compromise or settlement is made for \$2,500 or less, the appropriate Associate, Regional, or Field Solicitor will send a signed copy of the administrative determination together with an original payment voucher (Standard Form 1145, "Voucher for Payment

under Federal Tort Claims Act"), by certified or registered mail, return receipt requested. When an attorney represents claimant, the voucher for payment shall designate both the claimant and his attorney as payees. The signed voucher constitutes full release of the claim.

- ii. When a signed payment voucher is received, the appropriate Associate, Regional, or Field Solicitor will sign the original voucher in the space designed "Head of Federal Agency or Authorized Designee;" and forward it with two copies, the original determination and the complete claim file to the appropriate Tort Claims Officer. The Tort Claims Officer shall assign the appropriate accounting classification information to the voucher and forward to the Finance officer.
- b. **General Accounting Office.** If any award, compromise or settlement is made in excess of \$2,500 and not more than \$100,000, the appropriate Associate, Regional, or Field Solicitor will forward Form 1145 with a cover letter stating that the designee has delegated authority to make the award under the Act, to the Transportation and Claims Division, General Accounting Office.
- c. **Department of the Treasury.** If any award, compromise or settlement is made in excess of \$100,000, the appropriate Associate, Regional or Field Solicitor shall forward Form 1145 to the Bureau of Accounts, Department of the Treasury.

**25.6 Employee Claims.** This chapter prescribes policies for the settlement of claims against the United States arising after August 31, 1964, for damage or loss of personal property of employees of the Department of the Interior. The statutory authority for these regulations is contained in the "Military Personnel and Civilian Employees' Claims Act of 1964," (78 Stat. 767, 31 U.S.C.240).

**A. Scope.**

1. Claims against the United States, arising after August 31, 1964, are settled for damage to or loss of personal property of employees of the Bureau of Indian Affairs. The damage or loss must be incident to the employee's service, and possession of the property must be reasonable, useful, or proper in the circumstances. The maximum amount allowable on a claim is \$15,000.
2. The rules stated in 485 OM 4 (Required Reports of Accident Investigations), and in 451 OM I (Tort Claims Against the United States) are controlling in the investigation, processing and settlement of claims cognizable under the "Military Personnel and Civilian Employees' Claims Act of 1964" insofar as these regulations are not inconsistent with these rules.

**B. Claimants.**

1. A claim may be filed by any involved person who was an employee of the Bureau at the time of the incident which resulted in the damage or loss, or by such a person's authorized agent or legal representatives.  
If the employee is dead, the claim may be filed by his (1) spouse, (2) children, (3) father and mother, or both and 4. brothers or sisters, or both. Payments in settlement of claims to survivors will be made in the order in which the individuals are listed above.

2. A claim may not be filed by or for the benefit of a subrogee, assignee, conditional vendor or other third party.

**C. Ownership and Possession of Property.** Compensation may be allowed even though the property was not in the possession of the claimant at the time of the damage or loss, provided the claimant was the owner of the property. Compensation may also be allowed even though the claimant was not the owner of the property, provided it was lawfully in his/her possession, or lawfully under his/her dominion and control (e.g., borrowed from others), but the government will not be required to pay the owner of such property.

**D. Claims Cognizable.** Any meritorious claim within the scope of the Military Personnel and Civilian Employees' Claims Act of 1964, which is not specifically prohibited by these regulations may be allowed. The following are examples of allowable claims:

1. **Losses in Quarters or Other Authorized Places.** Damage to or loss of property caused by fire, flood, hurricane, or other serious occurrence, or by theft, while located at:
  - a. Quarters, wherever situated, which were occupied by the claimant and were assigned to him/her whether or not a charge was made for the quarters or otherwise provided in kind by the government.
  - b. Quarters outside the 50 states and the District of Columbia which were occupied by the claimant but were neither assigned to him/her nor provided in kind by the government, except when the claimant is an employee who was a local inhabitant at the time of the damage or loss.

- C. Any warehouse, office, or other place designated by proper authority for the reception or storage of the property.
- 2. **Transportation Losses.** Damage to or loss of property incident to transportation or storage pursuant to orders (e.g., change of station), in connection with travel under orders, or in performance of duty, including property in the custody of:
  - a. A common carrier or any other commercial concern.
  - b. An agent or agency of the government.
  - c. The claimant, including property in a private or public conveyance in which he is traveling.
- 3. **Disaster Losses.** Damage to or loss of property caused by a marine, rail, aircraft, or other common disaster, provided the claimant, was on duty at the time and place of the damage or loss.
- 4. **Public Service Losses.** Damage to or loss of property used for the benefit of the government at the direction of proper authority.
- 5. **Losses Incident to Extraordinary Risks.** Damage to or loss of property subjected to extraordinary risks incurred in the performance of duty, such as risks incident to enemy action, overseas hostilities, civil disturbance, public disorder, or disaster alleviation, or incurred in efforts to save human life or government property.



6. **Money Losses.** Losses of money when:
  - a. Accepted by government personnel with apparent authority to accept it for such purposes as safekeeping, purchase of United States bonds or other authorized disposition.
  - b. Caused by fire, flood, hurricane, or other serious occurrence, or by theft, while located at quarters as qualified in 2.20(1) or 2.20(1) (a) and (b), or caused by marine, rail, aircraft, or other common disaster as qualified in 2.20(2). In instances of theft from quarters it must be conclusively shown that reasonable precautions were used to safeguard the money.

#### **E. Claims not Cognizable.**

1. **In General.** Any property for which the government has paid to the employee a rental fee or other use fee (e.g., an automobile for which the government pays a mileage allowance).
2. **Contributory Negligence.** Any property damaged or lost, in whole or in part, as a result of any negligence or wrongful act of the claimant, or any agent or employee of the claimant acting within the scope of the agency or employment.
3. **At Quarters.** Any property damaged or lost while located at quarters within one of the 50 states or the District of Columbia which were occupied by the claimant, but were neither assigned to him nor otherwise provided in kind by the government.

4. **Intangible Property.** Any intangible property such as checks, promissory notes, stock certificates, bonds, bills of lading, warehouse receipts, baggage checks, insurance policies, money orders, traveler's checks, and bank books.
5. **Government Property.** Any government property, except that for which the claimant is responsible to a government agency other than the Bureau of Indian Affairs.
6. **Property for Business.** Any property is to be disposed of by sale or for use in a private business enterprise.
7. **Clothing.** Any clothing or articles being worn, except when involved in a marine, rail, aircraft, or other common disaster, as qualified in 2.20(3), or when subjected to extraordinary risks as qualified in 2.20(5).
8. **Motor Vehicles.** Any motor vehicle or trailer, except when used for the benefit of the government as qualified in 2.204, or when subjected to extraordinary risks as qualified in 2.20(5).
9. **Money.** Any money or currency, except as provided in 2.20(6).
10. **Valuable Items.** Small items of substantial value, such as expensive cameras, watches, jewelry, and furs, which, during shipment by ordinary means (e.g., with household goods, or hold baggage), are lost, damaged or stolen.
11. **Contractual Coverage.** Any claim, or any portion of a claim, which is recovered or is recoverable pursuant to contract, express or implied, including a policy of insurance.

Recoverable here means actually recoverable and not that the claim or some part of it technically should be recoverable.

12. **Mysterious Disappearance.** Any property which has mysteriously disappeared. In any claim for missing property, there must be satisfactory evidence that the property was stolen or destroyed.

#### F. Filing of Claim.

1. **Statute of Limitations.** No claim may be paid unless it is presented in writing within two years after the loss or damage. If a claim accrues in time of war or in time of armed conflict in which any armed force of the United States is engaged or if such was or armed conflict intervenes within two years after it accrues, and if good cause is shown, the claim may be presented not later than two years after the cause ceases to exist, or two years after the war or armed conflict is terminated, whichever is earlier.
2. **Presentation.** Claims should be submitted to the Tort Claims Officer at the office employing the claimant.
3. **Claim Form.** The claim will ordinarily be submitted in triplicate on the form provided by the Department of the Interior for this purpose (Form 01-570). However, any writing timely received by the proper Tort Claims Officer will be considered as a claim, if it constitutes a demand for compensation from the United States, sets forth the facts and circumstances in detail, and establishes that such a claim is within the scope of these regulations. (See Illustration No.3).

**G. Recovery from Third Parties.** Whenever compensation for property damaged or lost incident to service has been recovered or is recoverable from a carrier, insurer or other third party, the amount otherwise allowable will be reduced to the extent of the compensation so recovered, or recoverable. The rules and procedures set forth are provided for the benefit of the claimant in obtaining recovery from a carrier or insurer and thereby receiving the maximum amount of compensation for the loss or damage. Failure of the claimant to comply with the rules and adhere to the required procedures may reduce or preclude payment. (See OM 451.3).

#### **H. Settlement of Claims.**

1. **Responsibility.** The responsibility for the investigation, processing and settlement of claims under the regulations is the same as that for tort claims as stated in 2.IC insofar as what is stated there is not inconsistent with regulations.
2. **Administrative Determination.** The appropriate Associate, Regional, or Field Solicitor, or his designee, may administratively determine and settle claims for the Bureau of Indian Affairs.
3. **Final Denial and Reconsideration.** Any claimant who is dissatisfied with an administrative determination of his claim may ask for reconsideration within a period of six months from the date of the determination. Notice of the determination shall be in writing and sent to the claimant, his authorized agent, or legal representative by certified or registered mail. Upon timely filing of a request for reconsideration, the agency shall have six months from the date of filing in which to make a final disposition

of the claim. Notice of final action on a request for reconsideration shall be effected in the same manner as above.

4. **Payment from Bureau Activity.** When an administrative determination has been made in favor of the employee, the signed payment voucher will be forwarded to the appropriate Tort Claims Officer who will in turn assign the appropriate accounting classification information and forward to the Finance Officer.

#### 25.7 Contract Loss - Rental of Cars.

- A. **Collision Damage Waiver.** Collision Damage Waiver and settlement procedures in the event of accidental damage to rental cars while they are being used by government employees are covered in the following excerpt from 347 DM 9.78 - Travel and Transportation of Employees:

"The collision damage waiver or collision damage insurance (usually \$100) offered by a rental agency in its commercial rental contracts provides full coverage for property damage to the rental vehicle. This coverage is available at an extra cost and is additional to that insurance which is a part of the rental contract. The cost of the collision damage waiver is not payable by the government or reimbursable to the traveler (FTR, paragraph 1-3.2c). This regulation makes the government a self-insurer for the collision damage waiver or collision damage insurance, provided that the employee was acting within the scope of his employment. If the employee is not acting within the scope of his employment, he is, of course, personally liable, for the damage to the rented vehicle up to the amount of the collision damage waiver. If the accident occurred because of the negligence of the employee while acting within the scope of his employment, the

claim up to the amount of the collision damage waiver can be presented by the rental agency under the Federal Tort Claims Act. However, if the claim of the rental agency arose because of the negligence of a third party (for example; the parked rental car was struck by an unknown vehicle) the claim supported by proper proof is paid by the employing Bureau or office out of its funds up to the amount of the collision damage waiver. In the event that the lessor collects from a third party, the Bureau or office should make a claim against the rental agency for the amount the government paid as a result of declining the collision damage waiver. Since in most cases of this nature the Bureau or office would not have knowledge of such a collection, it is recommended that the government check covering payment for damages to the rental vehicle be transmitted by official letter with a demand that the rental agency refund the payment if they collect from a third party."

#### **B. Reporting an Accident.**

##### **1. Required Reports:**

SF-91 - Operator's Report Of Motor-Vehicle Accident

SF-94 - Witness Statement (If witnessed)

Police Report and S.M.I.S. Accident  
Incident Report

- 2. Investigation by Safety Officer.** All accidents involving government employees use of a rental vehicle should whenever possible be investigated by a safety officer.

**C. Regional Safety Officer Determination.**

1. It is important that the safety officer receive the required reports concerning a rental car accident/incident as soon as possible. The safety officer has the responsibility to make the following determinations:
  - a. Was the rental car being used for official purposes?
  - b. Was the employee acting within the scope of his employment?
  - c. Was the employee negligent while acting in the scope of his employment?
  - d. Was the accident caused by a third party?
  - e. Is the third party identifiable?
2. The above determinations must be made, and can only be done if properly completed forms are submitted so that the proper method of settlement may be pursued.

**25.8 Damage to Government Property by Third Party.**

**A. Investigation.** The Regional Safety Officer has the responsibility to investigate all property damage accidents in which the government may pursue a claim for damages. The safety officer should be assisted by a member of the Branch of Property Management and a member of the Branch most closely associated with the damage.

**B. Required Reports.**

1. **Police Reports**
2. **Fire Department Reports**
3. **Property Damage Report**
4. **Narrative Report of Findings**
  - a. Complete report of damage
  - b. Estimated report of cost of repairs and/or replacement
  - c. Statements of witnesses
  - d. Photographs
  - e. Cause of damage

**C. Claims Collection.** The above reports, properly completed will allow a Region/Agency/ Installation to pursue an administrative collection of claims as is required by Title 4 of the Code of Federal Regulations, Parts 101 through 105 Federal Claims Collection Standards.



**Illustration 1****SERIOUS ACCIDENT INVESTIGATION REPORT**

The serious accident investigation is a detailed account of the accident based upon the findings of the Board of Investigation and/or the Tort Claims Officer if there is reason to believe an employee or tort claim may be filed as a result of the accident. The findings will consist of observations made during the investigation, statements of witnesses, photographs, sketches, etc. The report should be in the form of a memorandum to the Chief, Division of Safety and Risk Management with the findings attached. The format should be as follows: The first paragraph should be a very brief description of the accident and the result.

**Before the Accident**

This section should contain a very detailed description of all physical conditions as far as can be determined. Such things as the date and time of the day, weather and/or environmental conditions, lighting and visibility, traffic conditions, physical location, etc.

**During the Accident**

This section should describe all events leading to and results of the accident as far as can be determined. This part should be as objective as possible.

**After the Accident**

This section details all resulting losses and/or injuries from the accident. This section should be as concise and objective as possible.

**Illustration 1 (continued)**

**Summary**

A final general statement summarizing the accident based upon the findings. Once again, this should be as objective as possible. This report is not fault finding but merely the facts.

The report should be signed by the investigator or the members of the Board of Investigation with concurrence by the line officer.

## Illustration 2

## SF - 95, Claim for Damage, Injury, or Death

CLAIM FOR DAMAGE, INJURY, OR DEATH		INSTRUCTIONS: Please read carefully the instructions on the reverse side and supply information requested on both sides of this form. Use additional sheets if necessary. See reverse side for additional instructions.		FORM APPROVED OMB NO. 1105-0005	
1. Submit To Appropriate Federal Agency:		2. Name, Address of claimant and claimant's personal representative, if any. (See instructions on reverse.) (Number, street, city, State and Zip Code)			
3. TYPE OF EMPLOYMENT 1. MILITARY 2. CIVILIAN	4. DATE OF BIRTH	5. MARITAL STATUS	6. DATE AND DAY OF ACCIDENT	7. TIME (A.M. OR P.M.)	
8. Basis of Claim (State in detail the known facts and circumstances attending the damage, injury, or death, identifying persons and property involved, the place of occurrence and the cause thereof) (Use additional pages if necessary.)					
9. PROPERTY DAMAGE NAME AND ADDRESS OF OWNER, IF OTHER THAN CLAIMANT (Number, street, city, State, and Zip Code)  BRIEFLY DESCRIBE THE PROPERTY, NATURE AND EXTENT OF DAMAGE AND THE LOCATION WHERE PROPERTY MAY BE INSPECTED. (See instructions on reverse side.)					
10. PERSONAL INJURY/WRONGFUL DEATH STATE NATURE AND EXTENT OF EACH INJURY OR CAUSE OF DEATH, WHICH FORMS THE BASIS OF THE CLAIM IF OTHER THAN CLAIMANT, STATE NAME OF INJURED PERSON OR DECEDENT.					
11. WITNESSES NAME ADDRESS (Number, street, city, State, and Zip Code)					
12. (See instructions on reverse) AMOUNT OF CLAIM (in dollars) 12a. PROPERTY DAMAGE 12b. PERSONAL INJURY 12c. WRONGFUL DEATH 12d. TOTAL (Failure to specify may cause forfeiture of your rights.)					
I CERTIFY THAT THE AMOUNT OF CLAIM COVERS ONLY DAMAGES AND INJURIES CAUSED BY THE ACCIDENT ABOVE AND AGREE TO ACCEPT SAID AMOUNT IN FULL SATISFACTION AND FINAL SETTLEMENT OF THIS CLAIM					
13a. SIGNATURE OF CLAIMANT (See instructions on reverse side.)			13b. Phone number of signatory		14. DATE OF CLAIM
CIVIL PENALTY FOR PRESENTING FRAUDULENT CLAIM The claimant shall forfeit and pay to the United States the sum of \$2,000, plus double the amount of damages sustained by the United States. (See 31 U.S.C. 3729.)			CRIMINAL PENALTY FOR PRESENTING FRAUDULENT CLAIM OR MAKING FALSE STATEMENTS Fine of not more than \$10,000 or imprisonment for not more than 5 years or both. (See 18 U.S.C. 287, 1001.)		
35-108 Previous editions not usable.		NSN 7540-00-834-4249		STANDARD FORM 95 (Rev. 7-85) PRESCRIBED BY DEPT. OF JUSTICE 28 CFR 14.2	

## Illustration 2

## SF - 95, Claim for Damage, Injury, or Death

PRIVACY ACT NOTICE	
<p>This Notice is provided in accordance with the Privacy Act, 5 U.S.C. 552(a)(5), and contains the information requested in the letter to which this Notice is attached.</p> <p>A. Authority: The requested information is solicited pursuant to one or more of the following: 5 U.S.C. 551, 58 U.S.C. 561 or 562, 28 U.S.C. 2671 or 2672, 28 C.F.R. Part 14.</p>	
<p>B. Principal Purpose: The information requested is to be used in evaluating claims.</p> <p>C. Routine Use: See the Notices of Systems of Records for the agency to whom you are submitting the form for this information.</p> <p>D. Effect of Failure to Respond: Disclosure is voluntary. However, failure to supply the requested information or to execute the form may render your claim "invalid".</p>	
INSTRUCTIONS	
<p>Complete all items - Insert the word <b>NONE</b> where applicable.</p> <p>A CLAIM SHALL BE DEEMED TO HAVE BEEN PRESENTED WHEN A FEDERAL AGENCY RECEIVES FROM A CLAIMANT HIS FULLY AUTHORIZED AGENT, OR LEGAL REPRESENTATIVE AN EXECUTED STANDARD FORM 95 OR OTHER WRITTEN NOTIFICATION OF AN INCIDENT, ACCOMPANIED BY A CLAIM FOR MONEY DAMAGES IN A <b>SUM CERTAIN</b> FOR INJURY TO OR LOSS OF PROPERTY, PERSONAL INJURY, OR DEATH ALLEGED TO HAVE OCCURRED BY REASON OF THE INCIDENT. THE CLAIM MUST BE PRESENTED TO THE APPROPRIATE FEDERAL AGENCY WITHIN <b>THREE YEARS</b> AFTER THE CLAIM ACCRUES.</p> <p>Any instructions or information necessary in the preparation of your claim will be furnished, upon request, by the office indicated in Item #1 on the reverse side. Complete regulations pertaining to claims asserted under the Federal Tort Claims Act can be found in Title 28, Code of Federal Regulations, Part 14. Many agencies have published supplemental regulations also. If more than one agency is involved, please state each agency.</p> <p>The claim may be filed by a duly authorized agent or other legal representative, provided evidence satisfactory to the Government is submitted with said claim establishing express authority to act for the claimant. A claim presented by an agent or legal representative must be presented in the name of the claimant. If the claim is signed by the agent or legal representative, it must show the title or legal capacity of the person signing and be accompanied by evidence of his/her authority to present a claim on behalf of the claimant as agent, executor, administrator, parent, guardian or other representative.</p> <p>If a claimant intends to file a claim for both personal injury and property damage, claim for both must be shown in Item 12 of this form.</p> <p>The amount claimed should be substantiated by competent evidence as follows: (a) In support of the claim for personal injury or death, the claimant should submit a written report by the attending physician, showing the nature and extent of injury, the nature and extent of treatment, the degree of permanent disability, if any, the prognosis, and the period of hospitalization, or incapacitation, attaching itemized bills for medical, hospital, or burial expenses actually incurred.</p> <p>Public reporting burden for this collection of information is estimated to average 18 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to: Director, Bureau of the Census, Washington, DC 20543.</p> <p>to the: Office of Management and Budget, Paperwork Reduction Project (105-0006), Washington, DC 20503.</p>	
INSURANCE COVERAGE	
<p>In order that subrogation claims may be adjudicated, it is essential that the claimant provide the following information regarding the insurance coverage of his vehicle or property.</p> <p>15. Do you carry accident insurance? <input type="checkbox"/> Yes, if yes, give name and address of insurance company (Number, street, city, State, and Zip Code) and policy number. <input type="checkbox"/> No.</p>	
16. Have you filed claim on your insurance carrier in this instance, and if so, is it full coverage or deductible?	17. If deductible, state amount.
18. If claim has been filed with your carrier, what action has your insurer taken or proposes to take with reference to your claim? (If necessary that you ascertain this fact)	
19. Do you carry public liability and property damage insurance? <input type="checkbox"/> Yes, if yes, give name and address of insurance carrier (Number, street, city, State, and Zip Code). <input type="checkbox"/> No.	

SF 95 (Rev. 7-85) BACK

## Illustration 3

## DI - 570, Employee Claim for Loss or Damage to Personal Property (P.L. 88-558)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
**EMPLOYEE CLAIM**  
**FOR LOSS OR DAMAGE TO PERSONAL PROPERTY**  
(P.L. 88-558)

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*INSTRUCTIONS - Submit in triplicate. Please type.*

Name of Claimant		Address of Claimant	
Business or Office	City	Telephone no.	
Location of loss or damage		Date of loss or damage	Total amount of claim

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*DESCRIPTION OF PROPERTY (Attach supplemental sheet, if necessary)*

ITEMIZED LISTING	DATE ACQUIRED	PURCHASE PRICE OR VALUE	VALUE WHEN LOST	ESTIMATED REPAIR COST

Claim is for ☐ Loss ☐ Damage (Check one) Please give brief statement of circumstances:

Was property insured? ☐ Yes ☐ No (If "Yes," give name of insurer and amount amount collected)

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**CRIMINAL PENALTY FOR PRESENTING A FRAUDULENT CLAIM OR MAKING FALSE STATEMENTS:** Fine of not more than \$10,000 or imprisonment for not more than 5 years, or both (See 62 Stat. 698, 749; 18 U.S.C. 287, 1001).

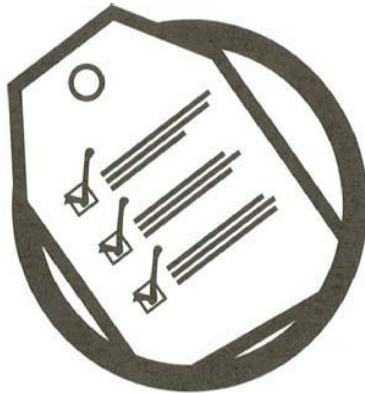
**CIVIL PENALTY FOR PRESENTING A FRAUDULENT CLAIM:** The claimant shall forfeit and pay to the United States the sum of \$2,000, plus double the amount of damages sustained by the United States (See R.S. Sec. 1480, 1418, 31 U.S.C. 231).

I make this claim with full knowledge of the penalties for willfully making a false claim, and certify that I am entitled to my payments.

Date	If claimant is not owner, state relationship	Signature of Claimant
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Form (DI-570)  
(July 1965)

Safety and Health for Field Operations



***TOPIC 26***

**SAFETY AND HEALTH  
INSPECTION PROGRAM**

## 26.1 References.

- A. 485 DM Chapter 6, Inspections and Abatement
- B. 25 IAM, Safety and Risk Management
- C. 29 CFR 1960, Subpart D, Inspection and Abatement

## 26.2 Procedures.

**A. Scope.** The Safety and Health Inspection Program will apply to all workplaces (physical locations) where Bureau employees perform work or operations, including leased space or field locations. Any space that is assigned by the General Services Administration shall comply with this part before acceptance and occupancy by the Bureau. The Safety and Health Inspection Program shall apply to the planning, programmatic, design, construction, alteration, repair, equipment, use and occupancy, location, maintenance, removal and demolition, of every building, site, utility, or structure or any appurtenances connected or attached to such buildings or structures. Educational and other facilities operated under the contract provisions of Public Law 93-638 and 100-297 are specifically included in this program.

**B. Background.** The Bureau of Indian Affairs is involved in the operation construction, major repair and alteration, rehabilitation and remodeling of buildings, plants and facilities. Most states and local governments have adopted safety and health codes which provide minimum standards to safeguard life or limb, health, property and public welfare by regulating and controlling the design, construction, quality of materials, use, occupancy, location and operation and maintenance of all buildings, plant and facilities within their jurisdiction. Many units of local government provide authority to a central jurisdiction (state or

county) for the enforcement of these adopted codes. This handbook establishes a central jurisdiction for the adoption, interpretation, administration and enforcement of Bureau wide safety and health codes and standards.

**C. Policy.** The Bureau policy is to assure that all operations, new construction, major alterations and improvements, minor remodeling, maintenance and program operations comply with applicable Federal regulations and guidelines and national model codes and standards adopted by the Bureau which address safety and health issues.

**26.3 Program Administration.** The Chief, Division of Safety and Risk Management, Albuquerque, New Mexico shall administer the Safety and Health Inspection Program.

**A. The Chief, Division of Safety and Risk Management** is delegated the jurisdictional authority for: (a) developing regulations and procedures; (b) interpreting; (c) implementing, and (d) enforcing the Bureau's Safety and Health Inspection Program. The position is the "Chief Building Official" and "Authority Having Jurisdiction" for codes, standards, regulations, and guidelines adopted by this Handbook.

**B. Facilities Management Information System (FMIS).** The Bureau of Indian Affairs' automated system used for encoding and tracking safety, health, and accessibility deficiencies identified during inspections.

1. **Deficiency Category and Rank Codes.** Letters and numbers utilized in the FMIS to identify safety and health deficiencies in accordance with Occupational Safety and Health Administration definitions of "serious" and "other-than-serious" violations, to identify handicap accessibility deficiencies, and to identify other physical plant deficiencies.



- a. **U-1:** Is an Emergency that is considered immediate, imminent, critical, and/or dangerous condition. "Where any condition or practice which is such that a danger exists which could reasonably be expected to cause death or serious physical harm immediately or before the imminence of such danger can be eliminated through the enforcement procedures."
- b. **5-1:** Is a Serious-Safety Deficiency that is life threatening. "A violation which causes a substantial probability that death or serious physical harm could result from a condition which exists, or from one or more practices, means, methods, operations, or processes which have been adopted or are in use."
- c. **5-2:** Is a Moderate-Safety Deficiency affecting safety and health other than a serious violation. "A violation, which would probably not cause death or serious physical harm, but would have a direct and immediate relationship to the safety and health of persons."
- d. **H-1:** Is a Serious Handicap Code Deficiency. "A violation with high potential to discriminate against the physically challenged which can also be classified as a serious-safety deficiency."
- e. **H-2:** Is a Violation of Federal Handicap Codes and Standards that is a NonSerious Handicap Code Deficiency. "A violation of accessibility law, codes, and standards, which cannot be classified as a safety and health deficiency."

- f. X-1: Is a Serious Environmental Code Deficiency that poses a threat to life or property.
    - g. X-2: Is an Environmental Code Deficiency.
- 2. Finalize. To perform the final computer encoding procedure necessary to distribute a new inspection report's data through the FMIS, making the data accessible for abatement plan development and other management procedures. Safety inspectors (when authorized by the Division of Safety and Risk Management) are the only individuals with finalization authority.
- 3. Types of Reports.
  - a. Safety and Health Inspection Report. A report, also known as the "Notice of Unsafe or Unhealthful Working Conditions" or "Safety Report," produced by encoding and finalizing safety, health, or accessibility violations or deficiencies into FMIS.
  - b. Inspection Abatement/Correction Plan. A plan, also referred to as the "abatement plan," produced in FMIS, subsequent to the finalization of a safety or boiler inspection report. It describes the actions to be taken to remedy the identified violations or deficiencies and must comply with 29 CFR 1960, Subpart D. The preparation is accomplished by the official-in-charge and encoding this plan is accomplished by other than the safety or boiler inspector.

C. **Backlog Report.** A report generated from FMIS that stores a list of pending work items that are needed to improve or repair each BIA building, site, or operation. Inspectors encoding safety inspection reports are required to consult this backlog and determine whether deficiencies have been previously identified in FMIS. If a backlog record already exists for a deficiency, the deficiency shall be re-entered as a repeat deficiency to prevent duplicate entries into the backlog. This process will also identify deficiencies that have not received timely correction.

d. **Inventory Building Summary.** A report generated from FMIS that lists buildings by FMIS building number and use. Each inspector is required to refer to this report to enhance his/her observing all pertinent workplace buildings and to assure that proper FMIS building numbers are used during tracking system encoding.

C. **Citations.** If there exists a hazard or condition which does not comply with adopted safety and health codes and standards, the inspector, shall issue a "Notice of Unsafe or Unhealthful Working Conditions" citation identifying the condition or hazard. The citation shall detail the applicable code and/or standard, which is violated and will also state the time for abating the condition or hazard.

**Discretionary Powers of the Division of Safety and Risk Management.** The Division of Safety and Risk Management shall determine the adequacy of safety provisions in accordance with the safety and health codes adopted herein. In cases of practical difficulty or unnecessary hardship, the Deputy Commissioner of Indian Affairs may grant exceptions from these codes, but only when it is clearly evident that reasonable safety is thereby secured.

E. Board of Review. A Board of Review is hereby established.

1. Membership. The Board membership will consist of three members who are: (a) the Director, Office of Administration, (b) the Chief, Division of Safety and Risk Management, (c) and the Program Manager/Director affected.
2. Procedure. The Board shall establish rules and regulations for its own procedure not inconsistent with the provisions of adopted safety and health codes and standards.
3. Complaints.
  - a. Any person having a complaint may file their complaint with the Board of Review regarding any decision of the Safety and Health Official.
  - b. A complaint may be filed within 30 days from the date of a disputed decision. The complaint will be filed with the Board of Review and the Safety and Health Official. The complaint will specify the grounds and/or circumstances for submittal. In the case of a building or structure, which in the opinion of the Safety and Health Official is unsafe or dangerous, the Division of Safety and Risk Management may in its order, limit the time for such review to a shorter period. The Division of Safety and Risk Management shall immediately transmit to the Board of Review all the documents upon which the action was based.
4. Decision of the Board of Review.
  - a. The Board of Review shall in every case reach a decision without unreasonable

or unnecessary delay. Every decision of the Board of Review shall be in writing and shall indicate the vote upon the decision. Every decision shall be promptly filed in the office of the Division of Safety and Risk Management and shall be open to public inspection. A certified copy shall be sent by mail or otherwise to the complainant and a copy shall be kept publicly posted in the office of the Division of Safety and Risk Management for two weeks after filing.

- b. If a decision of the Board of Review reverses or modifies a refusal, order, or disallowance of the Division of Safety and Risk Management, or varies the application of any provisions of the Safety and Health Codes and Standards, the Division of Safety and Risk Management shall take action immediately in accordance with such decision.

**F. Historic Buildings.** Repairs, alterations and additions necessary for the preservation, restoration, rehabilitation or continued use of a building, structure, or its building service equipment may be made without conformance to the requirements of this part when authorized by the building safety code, provided:

- 1. The building or structure has been listed by the National Register of Historic Places.
- 2. Any unsafe conditions as described in this part are corrected.
- 3. The restored building or structure and its building service equipment will be no more hazardous than the existing building and clearly assure that reasonable safety is thereby secured.

**G. Administrative Costs.** In lieu of Building Safety Codes fee schedules, the administrative costs for the Safety and Health Inspection Program will be part of the Division's financial program. If a citation is issued for failure to comply with codes, the responsible program office shall assume the travel costs of the follow-up inspection team and this includes re-inspection of new work.

**H. Enforcement.** If there exists a condition or hazard in a workplace that poses potential injury or harm, or that has resulted in injury, harm, serious injury, or death to employees, students, or the visiting public, or that has resulted in serious property damages, or losses, in the opinion of the Division of Safety and Risk Management, the responsible official shall be notified of the condition or hazard and shall be required to abate the condition within 30 days or the period set forth in the notice.

**26.4 Major Elements.** The major elements of the Safety and Health Inspection Program enumerate the Bureau of Indian Affairs' adopted safety and health codes and standards governing the use, construction, and modification of buildings, plants and facilities.

**A. Occupational Safety and Health Administration (OSHA)**

**Compliance.** All operations, new construction, major alterations and improvements, minor remodeling and workplace sites shall comply with all occupational safety and health standards issued under Section 6 of the Occupational Safety and Health Act of 1970, as amended, or alternate standards issued pursuant to this part.

**B. Fire and Fire Safety.** All new construction, major alterations and improvements and minor remodeling shall be classified according to occupancy and/or use shall conform to the National Fire Codes, 25 IAM, and Chapter 37, Structural Fire Program, in this handbook.

- C. Accommodations for People with Disabilities.** All new construction, major alterations and improvements shall be in accordance with the 41 CFR 101, 19.6, Uniform Federal Accessibility Standards (UFAS). 25 USC 2005 Section 1124 requires that all facilities connected with the education of Indian children be in compliance with the "most stringent" of UFAS and 28 CFR Part 36, Americans with Disabilities Act Accessibility Guidelines (ADAAG). If educational facilities house children 6th grade and under, compliance with "Recommendations for Accessibility to Serve Physically Handicapped Children in Elementary Schools" (Elem. Stds.) as prepared by the Architectural and Transportation Barriers Compliance Board is required.
- D. Building Safety Code.** All buildings, structures and facilities shall be designed and constructed in accordance with the provisions of the current edition of the Uniform Building Code except, where the Uniform Building Code conflicts with the National Fire Protection Association (NFPA) Fire Codes, the provisions of the NFPA Fire Codes will apply.
- E. Boiler/Pressure Vessels.** The fabrication and installation of all new boiler and unfired pressure vessels shall conform in all respects to the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code and shall be marked with appropriate ASME Code symbols.
- F. Elevators.** All passenger and freight elevators, dumbwaiters, escalators, or moving sidewalks constructed or leased by the Bureau of Indian Affairs shall conform to the ASME American National Standard Safety Code for Elevators, Dumbwaiters, Escalators, and Moving Walks (ANSI A17.1-1971) and applicable accessibility standards (36.4C). Safety enforcement for new elevator installations shall be the responsibility

the Division of Safety and Risk Management. The Division of Safety and Risk Management is also responsible for inspecting and posting a Certificate of Inspection.

**G. Piping.** Boiler/Pressure Vessel external piping and piping installations shall conform to American National Standards Institute (ANSI) B31.1, American National Standard, Power Piping, ASME Boiler and Pressure Vessel Code, Section I - Power Boilers; Section **IV** - Heating Boilers and Section VIII - Pressure Vessels - Division I. The piping or associated mechanical system shall not be operated unless that part of the system has been inspected and approved by a Qualified Boiler Inspector. Other fuel piping, steam and water piping, air piping and their respective installations shall conform to applicable sections of the Uniform Plumbing Code and the Uniform Mechanical Code.

#### **H. Mechanical Systems.**

1. **Liquefied Petroleum Gas.** Liquefied petroleum gas heating systems and distribution facilities shall conform to NFPA No. 58 and 86.
2. **Natural Gas.** Natural gas systems shall comply with NFPA No. 54 and 86.
3. **Oil.** Oil burning system installations shall conform to NFPA No. 31 and 86.
4. **Electrical.** Electrical heating and cooling systems shall be installed in accordance with the National Electrical Code (NFPA No. 70). Specific equipment shall be Laboratory (UL) listed or labeled.



5. **Solar.** Solar installations shall be installed in accordance with the Uniform Solar Code and the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASH RAE) Standards.
6. **Cooling and Ventilation.** Cooling and ventilation systems shall conform to the Uniform Mechanical Code and NFPA No. 90A.
- I. **Electrical.** Electrical power transmission, distribution and installation shall comply with the National Electrical Code (NFPA No. 70) and the National Electrical Safety Code.
- J. **Environmental Quality.**
  1. **Food Service.** All new construction, major alterations and improvements, minor remodeling and operation of food service facilities shall conform to the guidelines set forth in the latest edition of the PHS, Food Services Sanitation Manual.
  2. **Sanitation Facilities.** All new construction, major alterations and improvements and minor remodeling of sanitation facilities shall conform to the following guidelines:
    - a. **Liquid Waste:** Applicable parts of 40 CFR, Protection of Environment, and 29 CFR 1910, Occupational Safety and Health Standards (OSHA).
    - b. **Solid Waste:** Applicable parts of 40 CFR, Protection of the Environment.
  3. **Water Facilities.** All new construction, major alterations and improvements and minor remodeling of domestic water facilities shall conform to 40 CFR, Protection of the Environment, and 29 CFR 1910 (OSHA).

4. **Illumination.** All new construction, major alterations and improvements and minor remodeling shall provide facilities which conform to Illuminating Engineering Society Standards and Regulations on Illumination which include, 29 CFR 1910 (OSHA), and those provisions outlined in PHS Institutional Sanitation Guidelines.
  5. **Heating, Ventilation and Air Conditioning (HVAC).** All new construction, major alterations and improvements and minor remodeling of facilities shall conform to minimum requirements given in the Uniform Mechanical Code, NFPA No. 90B and ASH RAE Standards.
  6. **Pest, Vector and Vermin Control.** All new construction, major alterations and improvements and minor remodeling shall provide facilities which conform to regulations on pest, vector and vermin control included in 29 CFR, Protection of Environment, Parts 162, 163, 165, 170 and those provisions outlined in the Public Health Service (PHS) Food Services Sanitation Manual and PHS Institutional Sanitation Guidelines.
- K. Plumbing.** All plumbing installations, equipment and fixtures shall comply with the Uniform Plumbing Code. They shall be subject to periodic and final inspections to assure compliance. Code reference to the administrative authority refers to the Division of Safety and Risk Management or its authorized representatives.
- L. Highway and Bridge Design and Construction.** The Bureau has adopted the design standards of the American Association of State Highway & Transportation Officials (AASHTO). The current edition of the following publications will be enforced in all highway and bridge design and construction.

Safety and Health for Field Operations

1. A policy on Geometric Design of Rural Highways
2. Geometric Design Standards for Highways other than Freeways
3. Geometric Design Guide for Local Roads and Streets
4. Highway Design and Operational Practices Related to Highway Safety
5. Standard Specifications for Highway Bridges
6. A Policy on Design Standards for Stopping Sight Distance
7. The Federal Highway Administration's "Manual on Uniform Traffic Control Devices for Streets and Highways"

**M. Airports and Runways.** Every airport or runway designed, constructed, repaired or maintained by the Bureau shall comply with the provisions of 14 CFR, Subpart C, Federal Aviation Administration (Aircraft).

**N. Pipelines.** Pipelines used to transport hazardous materials, including natural and other gas and liquids, shall be designed, constructed, operated, maintained, tested and repaired as required by 49 CFR, Subchapter C, Parts 172 and 173; Sub-chapter D, Pipeline Safety and Parts 190, 191, 192, 195.

**26.5 Occupancy Classification of Facilities.** Every facility, whether existing or new construction, shall be classified, by the Division of Safety and Risk Management or its authorized representative according to its use or the character of its occupancy as defined in the model building and fire codes. Facilities shall also be assigned

a hazard classification, with "ordinary hazard" being the minimum assigned risk factor due to the remote locations of most Bureau facilities, the limited amount of fire protection available, and the failure of many facilities to achieve code compliance. The Bureau Fire Marshal may reduce the hazard rating of specific facilities, which are not affected by those problems upon review of materials submitted with a request from the Regional Director for a reduction in hazard classification.

- A. **New Construction.** New construction shall conform to the safety standard and/or code edition in effect the date the design contract is awarded, if the construction contract is bid within two years from that date. If not, drawings and specifications shall be modified for compliance to existing codes and resubmitted to the Division of Safety and Risk Management for review and approval.
- B. **Changing Occupancy of Existing Facilities.**  
Whenever facility occupancy is changed, either through use, remodeling, redecorating, or relocation, the responsible official shall request a safety and health inspection by the Division of Safety and Risk Management or its authorized representative prior to occupancy.
- C. **Unoccupied and Unused Hazardous Facilities.**  
Refers to unoccupied or unused facilities that may be hazardous to public safety or may be an attractive nuisance.  
Such facilities shall be inspected and evaluated by the Division of Safety and Risk Management or its authorized representative. The unoccupied and unused building, plant or facility shall be managed in accordance with property management regulations.

**26.6 Safety and Health Compliance.** Bureau operation, planning, programming, design, construction, alteration or remodeling of facilities shall comply with minimum requirements of the Safety and Health Inspection Program.

**A. Safety and Health Review.** The following phases of project development, as applicable, shall be reviewed and approved by **the** Division of Safety and Risk Management. All Central Office and Regional projects are required to be submitted to the Division of Safety and Risk Management and shall include two complete sets of the material to be reviewed, as one copy will be retained by the Division for use throughout the process. The remaining copy will be returned to the submitting office.

1. **Program of Requirements (POR).** The program of requirements is a document prepared by or under the direction of a design office of the Bureau. Its purpose is to provide instruction and design criteria to the designers of the project. This document will be submitted to the Division of Safety and Risk Management for review and approval to assure that safety and health codes, regulations, standards and guidelines adopted by this handbook have been included in the paR. In addition, consideration will be given to such items as: availability and quality of potable and fire suppression water, foundation characteristics, seismic zone, radiological conditions, availability of commercial utilities and similar items.

2. **Final Construction Documents.**

- a. Final (99-100 Percent) construction documents shall be submitted to the Division of Safety and Risk Management for review for compliance with Bureau

adopted safety and health codes, Bureau policy, and mandatory standards prior to the project being advertised for bid. All final construction documents, regardless of ownership, shall meet the Bureau of Indian Affairs adopted code criteria unless a formal waiver has been requested and granted by the Chief Building Official/Authority Having Jurisdiction. Documents shall include construction plans, specifications, and all other documents constituting the technical portion of the bid document.

- b. One set of review documents will be returned to the submitting office stamped either "approved" or "disapproved". Each project is to be reviewed only once by the Division of Safety and Risk Management and resubmission is not to occur. Compliance remains the responsibility of those individuals and firms who provide the designs.

3. **Change Orders.** The Division of Safety and Risk Management shall review and approve all construction contract change orders for safety compliance prior to installation.
4. **Shop Drawings.** The Division of Safety and Risk Management shall review and approve all shop drawings (fire alarm systems; fire sprinkler systems; and grandstand/ bleacher seating) for safety compliance prior to installation. All shop drawings that are "Disapproved" shall be resubmitted for review and final approval prior to installation.

**B. Safety and Health Compliance Inspections.** The Division of Safety and Risk Management or its authorized representative will inspect all Bureau and contracted installations upon completion of new work or at least annually. More

frequent inspections will be conducted where there is an increased risk of accident, injury, and illness due to the nature of the work.

1. **Acceptance of New Work.** After installation of new equipment, new construction, or major rehabilitation work, the Division of Safety and Risk Management or its authorized representative will inspect, also known as "final inspection", the new items for compliance with safety and health codes, standards, regulations and guidelines. If re-inspection is required, the responsible program shall incur all travel costs for the inspection team. Safety and health inspection information will become a part of the overall inspection report or punch list. Deficiencies that appear on a contractor's punch list should not be encoded into the FMIS.
2. **Annual Inspections and Evaluations.** The Division of Safety and Risk Management or its authorized representative, qualified in accordance with 29 CFR 1960.25 (a), shall conduct annual workplace inspections and evaluations of all Bureau and contracted facilities to assure that all facilities and operations are in compliance with safety and health codes, standards, regulations and guidelines.
3. **Indian Health Service Reports.** Applicable safety deficiencies found in reports for BIA facilities received from the Indian Health Service, are to be entered into the FMIS by the respective Regional Office. The Regional Safety Manager or full-time Agency Safety Officer is responsible for determining the proper citation for the applicable safety and health deficiencies, category and rank and abatement period in the report.

4. **Reporting Procedures.** All inspection findings shall be entered into the FMIS.
  - a. **Authorization.** Only authorized users are permitted to enter and finalize the safety and boiler reports. All full-time Regional Safety Managers and Agency Safety Officers are required to have proper authorization to access the FMIS Safety Module. To obtain authorization, contact the Division of Safety and Risk Management, 201 3rd Street, NW Suite 310, Albuquerque, New Mexico, 87102.
  - b. **Code Citations.** Code citations should be specific and correct. The identification should refer to a specific code manual and a specific paragraph.
  - c. **Category and Rank.** It is the responsibility of the inspector to determine the category and rank of each deficiency.
  - d. **Abatement Period.** It is the responsibility of the inspector to determine the abatement period.
  - e. **Inspection Reports.** Once a report has been encoded and finalized in the FMIS, it is to be submitted to the subject location. A copy of the report is to be sent to the respective Official-in-Charge of the workplace, and respective Employee Representative and/or Safety Committee, and Regional Facilities Management. All reports shall be transmitted via memorandum signed by the Regional Director.





**TOPIC 27**  
**STRUCTURAL**  
**FIRE PROGRAM**

#### 27.1 References.

A. 485 DM, Safety and Health Handbook

B. 25 IAM, Safety and Risk Management

#### 27.2 Procedures.

- A. Policy.** The policy of the Bureau is to provide fire safe federal facilities at each Bureau installation and to assist tribes with fire prevention activities.
- B. Responsibility.** The Deputy Commissioner of Indian Affairs is responsible for fire prevention for all Bureau-owned properties and facilities. The Chief, Division of Safety and Risk Management, is designated as the Bureau Fire Marshal. The Bureau Fire Marshal shall be responsible for the administration and enforcement of the policies and procedures in this handbook. Under the direction of the Bureau Fire Marshal, Regional Directors and Agency Superintendents shall enforce all requirements within their respective jurisdictions. The Bureau Fire Marshal, with the approval of the Deputy Commissioner of Indian Affairs, is authorized to make and enforce such rules and regulations for the prevention of fires as may be necessary to carryout the intent of this handbook.

#### 27.3 Definitions.

- A. Board of Survey.** A group of employees appointed to investigate and report on fires causing damage to government-owned buildings and/or equipment, or resulting in serious injury or death.
- B. Fire Marshal.** A designated official responsible for fire prevention, fire inspections, fire cause investigations, and fire code enforcement.
- C. Fire Prevention.** Measures directed toward avoiding the inception of fire.

**D. Fire Protection.** The detection and extinguishment of fire.

**E. Institutional Building.** Government-owned building used as a dormitory, dining hall, hospital, jail, etc.

#### 27.4 Organization.

##### A. Region.

1. **Office of the Regional Director.** The Regional Director is the responsible Bureau line officer for the Region-wide Fire Prevention Program.
2. **Regional Safety Manager.** The Regional Safety Manager is responsible to the Regional Director for administration of the Fire Prevention Program.
3. **Regional Board of Survey.** The Board of Survey shall consist of not less than three members appointed by the Regional Director. Neither the supervisor nor the employee responsible for the property to be surveyed shall be a member of the Board of Survey.

##### B. Agency.

1. **Agency Superintendent.** The Agency Superintendent is the responsible agency line officer for the Fire Prevention Program.
2. **Agency Safety Officer.** The Agency Safety Officer shall review fire prevention activities and advise management periodically on the status of the fire prevention programs and make recommendations for changes needed to improve these programs.

**27.5 Program Administration.** Fire Prevention regulations shall be administered and enforced by the Bureau Fire Marshal. Law enforcement agencies having authority within the Bureau shall render necessary assistance in the enforcement of these regulations when requested to do so by the Fire Marshal.

**27.6 Major Elements.** The major elements of the fire prevention program are as follows:

**A. Adoption of Codes and Regulations.**

The National Fire Codes of the NFPA are hereby adopted and shall govern the fire prevention program Bureau-wide. Current copies of the National Fire Codes shall be available at each Regional Safety Office.

1. **Plan Review.** All plans and specifications for new construction, alterations, and additions shall include all fire and life safety features as required by the National Fire Codes. Plans shall be submitted to the Bureau Fire Marshal for code review prior to beginning construction.
2. **Inspections.** Periodic detailed fire prevention inspections are required by the Bureau to detect potential fire hazards, to ensure that the necessary corrective measures have been taken to prevent injury or death to employees, to minimize property loss from fire, and to alert management as to the necessary corrective action required.

**B. Education and Training.** Fire safety training and education should be made available to all employees through organized formal training programs. In addition, employees should be encouraged to actively participate in the program, offer suggestions, and participate in inspection activities.

1. **Fire Safety Training.** Newly hired employees shall be trained in fire safety fundamentals. All Bureau employees shall be required to retrain on a periodic basis. Fundamentals to be taught shall include the following:
  - a. How to report a fire, the location of the nearest fire alarm box, and a telephone number for reporting a fire.
  - b. The need for prompt reporting of all fires regardless of size.
  - c. The location of exits and evacuation routes to be used, including alternates in the event the regular ones are blocked. All exits will be shown on a floor plan of the area, placed in a glass-covered frame, and located conspicuously in all areas concerned.
  - d. The location of the nearest fire extinguishers and other fire protection services and how to properly use them.
2. **Safe Working Methods and Practices.** Employees shall be instructed with regard to fire prevention practices that apply to their specific occupation. This instruction shall address the fire safety aspects which are inherent and which normally occur during the performance of duties.
3. **Fire Exit Drills.** The purpose of fire exit drills is to ensure the efficient and safe exit of facilities in the event of a fire.
  - a. **School Fire Exit Drills.** Procedures for primary and secondary school fire exit drills are listed in the BIA Safety and Health Handbook, Chapter 30.

- b. **Fire Exit Drills in Large Office Buildings.** Fire exit drills in large office buildings and other structures with high occupancy levels shall be conducted at intervals specified by the Regional Safety Manager.
- c. **Detention or Correctional Facilities.** Detention/correctional facilities shall have in effect and provide to all supervisory personnel, written copies of the Emergency Evacuation Plan for the protection of all persons in the event of fire and for their safe evacuation from the building to areas of refuge when necessary. All employees shall be periodically instructed and kept informed of their duties under the plan.
- d. **Dormitory Fire Exit Drills.** Procedures for dormitory fire exit drills are listed in the BIA Safety Handbook and Health, Chapter 30.

#### 27.7 Fire Safety Regulations.

- A. General Provisions.** Fire safety regulations shall be those specified in NFPA NO.1 - Fire Prevention Code and other applicable sections of the National Fire Codes.
- B. Automatic Sprinkler System.** Automatic sprinkler protection can be expected to minimize fire loss. The installation of sprinkler systems can be justified for all property where the probability of loss is such that the cost of the sprinkler system will be balanced by the reduction in losses over a reasonable period of years. For this reason, all new Bureau buildings, regardless of occupancy, which exceed 2,000 square feet in gross floor area, shall be provided with automatic sprinkler protection in accordance with NFPA 1 ~

**C. Occupancy Hazard Classification.** Due to the remoteness of most Bureau locations and the lack of organized, trained, fire departments, the lowest occupancy hazard classification shall be "Ordinary". Where a Bureau facility is located in a municipal setting, protected by a full-time, paid, fire department, the official-in-charge may request a waiver of this requirement that would allow the occupancy hazard classification at "Light Hazard".

#### **27.8 Post Fire Program.**

**A. Fire Loss Report.** The Fire Loss Report, Form BIA-2515 shall be prepared for all structural fires. The report shall be prepared by the local Fire Marshal and forwarded to the Agency Fire Marshal (or work center of facilities management) and the Regional Safety Manager. If the fire results in serious injury, or if property damage is over \$5,000, the Officer-in-Charge shall notify the Regional Director and the Bureau Fire Marshal by telephone or electronic mail and the report shall be forwarded in triplicate within 24 hours. Upon receiving the report and completing an appropriate investigation, the Regional Board of Survey shall submit two copies of the complete report and investigation to the Regional Safety Manager. When fires result in non-serious injuries, or in property damage of less than \$5,000, the Officer-in-Charge shall promptly forward the report, original only, to the Regional Director, Attention: Safety Management.

**B. Accident/Incident Report.** A supervisor shall complete an Accident/Incident Report through the Safety Management Information System (SMIS) ([WWW.SMIS.DOI.GOV](http://WWW.SMIS.DOI.GOV)) on all runs by a Bureau Fire Department, including false alarms.

- C. **Investigations.** Gathering facts and figures on the Bureau's fire loss experience is essential. Fire loss experience can be used in many beneficial ways, which include: a measure of overall effectiveness; a way of disclosing trends and discovering trouble areas; a management medium to stress the waste in work force and resources from fire; a basis for the formulation of suitable education material; and a way to identify the cause of fires so that suitable changes can be made to prevent similar fires. Investigations shall be conducted as soon as possible after a fire has occurred, and the fire scene must be preserved until an investigation is completed. Failure to preserve the fire scene may result in the loss of evidence relative to the origin of the fire.
- D. **Board of Survey.** After any structural fire loss, a Board of Survey shall be convened in accordance with the provisions of the Bureau.





**TOPIC 28**  
**RECORDKEEPING**  
**&**  
**REPORTING**

**28.1 References.**

- A. 29 CFR 1960 Subpart I
- B. 485 DM

**28.2 Procedures.** Each Regional Office is required to provide quarterly safety and health reports describing their safety and health activity for the previous quarter. The reports include accident/incident data as well as activities in Workers' Compensation. Reports are required for proper evaluation of the program and are used to prescribe necessary corrective action.

- A. **Supervisor Responsibility.** Supervisors are to ensure that all accidents/incidents reported by the employee, is entered into the Safety Management Information System (SMIS) within six working days at [www.smis.doi.gov](http://www.smis.doi.gov).
- B. **Safety Manager Responsibility.** The Safety Manager is responsible for reviewing SMIS reports for accuracy and completion and to assist Supervisors in prescribing any necessary corrective action. Safety Managers are required to provide quarterly safety and health reports to the Division of Safety & Risk Management within 20 days following the close of the fiscal quarter.

**28.3 Log of Occupational Injuries & Illnesses.** Each Federal Agency is required to maintain a record or log of all recordable occupational injuries and illnesses for each establishment.

**28.4 Report of Accident/Incident (Safety Management Information System (SMIS)).** SMIS is the Department's official source for investigation and reporting of all accidents and incidents. The web site address is [www.smis.doi.gov](http://www.smis.doi.gov). The following accidents/incidents must be reported:

- A. Any employee work injury or death when a formal claim for medical care or compensations is filed with the Office of Workers' Compensation Programs.
- B. Any employee injury requiring first aid.
- C. Any accidental injury or property damage involving the public when there is a reasonable possibility of a tort claim being filed against the United States.
- D. Any fire, regardless of cost, including General Services Administration motor pool vehicles under Department control and those which are privately owned or commercially leased and driven on official business.
- E. Any property under control of the Department damaged by accident when the loss is greater than \$100.
- F. All student accidents/incidents.

**28.5 Quarterly Summaries and Annual Reports.** Each Regional Office is required to compile accident/incident data for proper evaluation of the Safety & Health Program using the following forms:

- A. **BIA-2501, Safety Management Quarterly and Cumulative Report.** This form is used to report total injuries and illnesses, all losses, and recoveries.
- B. **BIA-2502, Tort Claim Payments and Third Party Recoveries.** This form should contain the number of claims settled and the total amount for each type of claim. It is further broken down by those claims paid with Bureau appropriation and those paid by the Department of the Treasury or the General Accounting Office.
- C. **BIA-2503, Property Damage from Accidental Causes.** This form is used to report damages to motor vehicles, heavy equipment, aircraft, marine and any other property that is damaged by accident.
- D. **BIA-2504, Occupational Injuries and Illnesses.** This form is used to report all injuries and illnesses which involve loss of workdays, loss of consciousness, restriction of work or motion, transfer to another job, or medical treatment.
- E. **BIA-2505, Fire Damage.** This form is used to report any fire regardless of its cost that involves equipment, structures, or contents of any property under Bureau control excluding forest, range, and tundra fires.
- F. **BIA-2506, Safety Training.** This form is used to report all safety trainings.

Safety and Health for Field Operations



*Appendix*

**FACILITIES SAFETY  
INSPECTION CHECKLIST**

ACTION		
OK	NEEDED	
GENERAL		
( )	( )	1. Is the required OSHA workplace poster prominently displayed?
( )	( )	2. Has the office head demonstrated an active interest in safety and health matters by defining a policy for the workplace and communicating it to all employees?
( )	( )	3. Are supervisors encoding reports of accidents/incidents into the Safety Management Information System (SMIS)?
( )	( )	4. Has the safety coordinator/manager received the required training?
( )	( )	5. Is there an active safety committee or group that allows and encourages participation of employees in safety and health activities?
( )	( )	6. Does the safety committee or group meet regularly and prepare written reports of its activities? Are copies of the minutes promptly sent to the safety manager?
( )	( )	7. Is there an established procedure for handling employee concerns regarding safety and health issues without fear of reprisal?
( )	( )	8. Are workplace emergency plans current? Do they cover all types of natural disasters that might be anticipated to affect the workplace?
( )	( )	9. Are emergency telephone numbers posted where they can be easily seen in the event of an emergency?
( )	( )	10. Are the workplace emergency plans readily available for quick reference during working hours?

- ( ) ( ) 11. Are the workplace emergency plans readily available for quick reference before and after working hours and on weekends? Are appropriate after-hours telephone numbers included in the emergency plans?
- ( ) ( ) 12. Does the workplace emergency plan list the name and extension of employees currently certified in CPR and first aid?
- ( ) ( ) 13. Have copies of the current emergency workplace plans been sent to the safety manager?
- ( ) ( ) 14. Have all employees who drive either a Government vehicle or a private or rental vehicle on Government business attended a driver improvement course within the last three years? Has the training been documented? Do the employees have valid state driver licenses?
- ( ) ( ) 15. Have all aircraft users had a minimum of eight hours of aviation safety training within the last three years? Has the training been documented?
- ( ) ( ) 16. Have all employees who operate all-terrain vehicles or other large or unique vehicles been properly trained in the operation of such vehicles? Has the training been documented? When appropriate, do the employees have valid state driver's licenses to operate such vehicles?
- ( ) ( ) 17. Have appropriate employees been trained in CPR and first aid? Has the training been documented? Are employees notified of available refresher training before their CPR and/or first-aid certificates expire?

- ( ) ( ) 18. Has other suitable safety and health training been provided for appropriate employees?  
Has such training been documented?

**ELECTRICAL WIRING, FIXTURES, AND CONTROLS**

**29 CFR 1910.301**

- ( ) ( ) 1. Are fuses and circuit breakers the right type and size for the load on each circuit?
- ( ) ( ) 2. Are all fuses free of "jumping" with pennies or metal strips?
- ( ) ( ) 3. Are all switches properly identified to show their purpose?
- ( ) ( ) 4. Do switches or circuit breakers show evidence of overheating?
- ( ) ( ) 5. Are switches mounted in clean, tightly closed metal boxes?
- ( ) ( ) 6. Are all outlets covered by face plates?
- ( ) ( ) 7. Are all plugs safe to use?
- ( ) ( ) 8. Are metallic cable and conduit systems properly grounded?
- ( ) ( ) 9. Are outlets tested for proper grounding?
- ( ) ( ) 10. Are ground-fault circuit interrupter outlets provided in restrooms or at other locations within six feet of a water source?
- ( ) ( ) 11. Are portable electric tools and appliances grounded or double-insulated?
- ( ) ( ) 12. Is any cord temporarily placed in a walkway covered by a runner?



- ( ) ( ) 13. Are all electrical cords three-pronged and free from fraying or other defects?
- ( ) ( ) 14. Are all telephone cords and any temporary extension cords secured under desks or alongside baseboards?
- ( ) ( ) 15. Do all electrical installations in locations classified as hazardous - due to the possible presence of flammable vapors, liquids or gasses, or combustible dusts or fibers - meet the OSHA requirements of 29 CFR 1910.307 for such locations?
- ( ) ( ) 16. Are electric motors clean and kept free of excessive grease and oil?
- ( ) ( ) 17. Are electric motors properly maintained and provided with adequate overcurrent protection?
- ( ) ( ) 18. Are portable lights equipped with proper guards?
- ( ) ( ) 19. Are all lamps kept free of combustible material?

**EXITS AND ACCESS**  
**29 CFR 1910.35**

- ( ) ( ) 1. Are all exits visible and unobstructed?
- ( ) ( ) 2. Are all exits marked with a readily visible sign that is properly illuminated?
- ( ) ( ) 3. Are there sufficient exits to ensure prompt escape in cases of emergency?
- ( ) ( ) 4. Are adequate controls established and posted for areas requiring limited occupancy?

- ( ) ( ) 5. Is the exterior egress from the emergency exit to designated safe areas smooth, solid, and substantially level?
- ( ) ( ) 6. Are special precautions taken to provide employees with adequate exits during construction and rehabilitation work?
- ( ) ( ) 7. Are latches or other fastening devices on exit doors provided with a panic bar for easy exit?

#### **FIRE PROTECTION**

##### **29 CFR**

##### **1910.155**

- ( ) ( ) 1. Is there an adequate number of the appropriate type of portable fire extinguishers?  
(total travel distance does not exceed 75 feet for a Class A fire or 50 feet for a Class B fire)?
- ( ) ( ) 2. Are fire extinguishers serviced annually and such service properly noted on the inspection tag?
- ( ) ( ) 3. Are fire extinguishers mounted in readily accessible locations?
- ( ) ( ) 4. Are fire extinguisher locations marked with a readily visible sign?
- ( ) ( ) 5. Are fire extinguishers inspected monthly for general condition and operability?  
Is the monthly inspection recorded on a tag attached to the extinguisher?
- ( ) ( ) 6. Is the fire alarm system tested at least once a year?
- ( ) ( ) 7. Are evacuation drills conducted at least once a year?

- ( ) ( ) 8. Are employees periodically instructed in use of extinguishers and fire protection procedures?
- ( ) ( ) 9. Is the emergency evacuation plan current and posted throughout the building?
- ( ) ( ) 10. Are any interior standpipes and valves inspected regularly?
- ( ) ( ) 11. Are fire doors and shutters in good operating condition? Are fusible links in place, unobstructed, and protected from obstruction?
- ( ) ( ) 12. Is the local fire department well acquainted with the facilities and any specific hazards?

**HOUSEKEEPING AND GENERAL WORK ENVIRONMENT**  
**29 CFR 1910.141**

- ( ) ( ) 1. Are halls, passageways, storerooms, and service rooms kept in a clean, orderly, and sanitary condition?
- ( ) ( ) 2. Is the general work area free from clutter and excess accumulation of paper or other debris?
- ( ) ( ) 3. Are food products not kept in the same refrigerator as batteries, film, chemicals, or other nonfood products?
- ( ) ( ) 4. Are rubbish and litter disposed of daily?
- ( ) ( ) 5. Are there tripping hazards in halls, walkways, or work areas?
- ( ) ( ) 6. Are carpets well secured to the floor and free of worn or frayed seams?
- ( ) ( ) 7. Is smoking permitted in designated smoking areas only?

- ( ) ( ) 8. Are "no smoking" signs prominently posted for areas containing combustibles and flammables?
- ( ) ( ) 9. Do toilet facilities meet the requirements of applicable sanitary codes?
- ( ) ( ) 10. Are adequate washing facilities provided?
- ( ) ( ) 11. Are all areas of the facility adequately illuminated?
- ( ) ( ) 12. Are the building ventilation systems regularly checked for their performance and balanced when necessary?
- ( ) ( ) 13. Are stairways in good condition, with standard risers provided for every flight having four or more risers? Are nonslip treads provided?
- ( ) ( ) 14. Have weeds or other combustible material been removed from within 20 feet of any building?
- ( ) ( ) 15. Are portable ladders adequate for their purpose, in good condition, and provided with secure footing?
- ( ) ( ) 16. Are fixed ladders adequate, in good condition, and equipped with side rails or cages or special climbing devices, if required?
- ( ) ( ) 17. Are all areas below seven feet in height free from nails, hooks, screws, and any other sharp protruding object.

**MEDICAL AND FIRST AID**  
**29 CFR 1910.151**

- ( ) ( ) 1. If a hospital or medical clinic is not located near your facility, are one or more employees trained in first aid?
- ( ) ( ) 2. Are the first-aid supplies adequate for the type of potential injuries in the workplace?
- ( ) ( ) 3. Are there quick water-flush facilities available where employees are exposed to corrosive materials?

**MACHINES AND EQUIPMENT**  
**29 CFR 1910.212**

- ( ) ( ) 1. Are all machines or operations that expose operators or other employees to rotating parts, pinch points, flying chips, particles, or sparks adequately guarded?
- ( ) ( ) 2. Are mechanical power transmission belts and pinch points guarded?
- ( ) ( ) 3. Are hand tools and other equipment regularly inspected for safe condition?
- ( ) ( ) 4. Whenever compressed air is used for cleaning, is the pressure reduced to 30 psi or less?
- ( ) ( ) 5. Are power saws and similar equipment provided with safety guards?
- ( ) ( ) 6. Are grinding wheel tool rests set to within one-eighth inch or less of the wheel?
- ( ) ( ) 7. Are grinding wheels worn or cracked?

- ( ) ( ) 8. Are all machinery and equipment kept clean and properly maintained?
- ( ) ( ) 9. Are power saws and similar equipment provided with proper safety guards?
- ( ) ( ) 10. Are radial arm saws equipped with an automatic return?
- ( ) ( ) 11. Are table saws equipped with anti-kickback devices?
- ( ) ( ) 12. Are eye guards and other protective equipment located near the machine area?

**COMPRESSED GASES**

**29 CFR 1910.101**

- ( ) ( ) 1. Are compressed gas cylinders examined regularly for obvious signs of defects, deep rusting, or leakage?
- ( ) ( ) 2. Are compressed gas cylinders securely fastened and capped at all times when not in actual use?
- ( ) ( ) 3. Are compressed gas cylinders moved only with an appropriate dolly?
- ( ) ( ) 4. Are compressed gas cylinders segregated so that full or empty oxidizers and flammable gases are stored separately?

**FLAMMABLE LIQUIDS**

**29 CFR 1910.106**

- ( ) ( ) 1. Are approved safety cans or other acceptable containers used for handling and dispensing flammable liquids?

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- ( ) ( ) 2. Are contents of safety cans or other acceptable containers clearly marked in large letters on the outside of the container?
- ( ) ( ) 3. Are all flammable liquids that are kept inside buildings stored in proper storage containers and placed in approved flammable storage cabinets?
- ( ) ( ) 4. Is storage of flammable materials at the work area limited to only a one day's supply, with all excess materials returned to the flammable storage cabinet at the end of the workday?
- ( ) ( ) 5. Are flammable storage sheds provided with adequate ventilation?
- ( ) ( ) 6. Are properly designed electrical wiring and equipment installed in flammable storage sheds?
- ( ) ( ) 7. Do flammable storage sheds have a clear aisle at least three-feet wide?
- ( ) ( ) 8. Is there at least one portable fire extinguisher located outside, but not more than 10 feet from the door of the flammable storage shed?
- ( ) ( ) 9. Are containers of over 30-gallon capacity not stacked?
- ( ) ( ) 10. Are "no smoking" signs posted and smoking regulations strictly enforced in areas used for storage of flammable liquids?

**WELDING, CUTTING, AND BRAZING**  
**29 CFR 1910.251**

- ( ) ( ) 1. Are only authorized, trained personnel permitted to perform welding, cutting, or brazing operations?
- ( ) ( ) 2. Have operators been provided a copy of operating instructions and directed to follow them?
- ( ) ( ) 3. Are welding-gas cylinders stored so they are not subjected to damage?
- ( ) ( ) 4. Are valve-protection caps in place on all cylinders not connected for use?
- ( ) ( ) 5. Are all combustible materials located near the operator covered with protective shields or otherwise protected?
- ( ) ( ) 6. Is a fire extinguisher provided **at** the welding site?
- ( ) ( ) 7. Do operators have the proper protective clothing and equipment?

**PERSONAL PROTECTIVE EQUIPMENT**  
**29 CFR 1910.132**

- ( ) ( ) 1. Are hard hats provided and worn where any danger of falling objects exists?
- ( ) ( ) 2. Are protective goggles or glasses provided and worn where there is any danger of flying particles or splashing of corrosive materials?
- ( ) ( ) 3. Are protective gloves, aprons, shields, or other equipment provided for protection from sharp, hot, cold, or corrosive materials?



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- ( ) ( ) 4. Are approved respirators provided for regular or emergency use where needed?
  - ( ) ( ) 5. Is all protective equipment maintained in a sanitary condition and readily available for use?
  - ( ) ( ) 6. Is special equipment available for electrical workers?
  - ( ) ( ) 7. Are noise protection devices available?

**HAZARD COMMUNICATION****29 CFR 1910.1200**

- ( ) ( ) 1. Is a written Hazard Communication Plan on file?
- ( ) ( ) 2. Have all hazardous materials been inventoried, with the inventory made available to all employees?
- ( ) ( ) 3. Have employees been trained in the use of hazardous materials that they might use or come in contact with?
- ( ) ( ) 4. Are all hazardous-material containers properly labeled?
- ( ) ( ) 5. Are Material Safety Data Sheets (MSDS) available for all hazardous materials?
- ( ) ( ) 6. Are all containers of hazardous materials properly stored?
- ( ) ( ) 7. Is storage of hazardous materials at the work area limited to a one-day's supply, with all excess quantities returned to the storage area at the end of the workday?