Interspand Investments
CONSTRUCTION CONSULTANTS

SAFETY MANAUL

Revised: May 2023

Table of Contents

POLICY STATEMENT ON SAFETY 1
DUTIES AND RESPONSIBILITIES 2
COMPLIANCE AND ENFORCEMENT 5
SAFETY COMMITTEE 7
COMMUNICATION 8
CODE OF SAFE PRACTICES 9
PPE PROGRAM 24
BLOODBORNE PATHOGENS 29
HEAT ILLNESS AND PREVENTION 32
HAZARD IDENTIFICATION AND ASSESSMENT 34
HAZARD PREVENTION, CORRECTION, AND CONTROL 37
HAZARD COMMUNICATION PROGRAM 38
FIRST AID AND MEDICAL EMERGENCY PROCEDURES 43
ACCIDENT / EXPOSURE INVESTIGATION 46
TRAINING AND INSTRUCTION 49
FIRE PREVENTION AND EMERGENCY ACTION PLAN 51
RESPIRATORY PROTECTION 52
ELECTRICAL & LOCK-OUT / TAG-OUT PROGRAM 62
CONFINED SPACE OPERATIONS 66
FLEET AND DRIVER SAFETY 69
TRENCHING AND SHORING PROCEDURES 75
RECORDKEEPING 82
APPENDIXES 83
HAZARD ASSESSMENT AND CORRECTION RECORD 84
ACCIDENT / EXPOSURE INVESTIGATION REPORT 86
WORKER TRAINING AND INSTRUCTION RECORD 87
EMPLOYEE SAFETY CONTACT REPORT 87
NEW EMPLOYEE SAFETY ORIENTATION 89
CODE OF SAFE PRACTICES RECEIPT 90
COMPANY VEHICLE POLICY RECEIPT 90
SAFETY COMMITTEE MEETING MINUTES 91
SAFETY MEETING MINUTES 94
Vehicle Inspection Checklist 95
FACILITY INSPECTION CHECKLIST 96
GENERAL WORK ENVIRONMENT 97

POLICY STATEMENT ON SAFETY

The management of this company is very interested in working with you to provide a safe place in which to work. The prevention of accidents and injuries to our employees is the prime objective.

All company personnel are expected to take an active and constant interest in the prevention of accidents. We call upon all employees to use good common sense and in all their actions, take a second to think of the consequences to your fellow employees. We cannot overemphasize that all employees must do their part to minimize accidents.

Please show your support by demonstrating the following:

1. OBSERVING COMPANY SAFETY RULES.

2. KEEPING WORK AREAS FREE OF UNSAFE CONDITIONS.

3. AVOIDING AND ELIMINATING UNSAFE ACTS.

4. PROMPTLY REPORTING UNSAFE ACTS AND CONDITIONS.

5. REPORTING ALL ACCIDENTS IMMEDIATELY.

Accidents cause suffering and pain. We value each of you as individuals and hope you will cooperate with us in this important endeavor.

Any constructive criticism or suggestions toward improving safety on any of our jobs will be given prompt and careful consideration.

DUTIES AND RESPONSIBILITIES

A successful Safety and Injury and Illness Prevention Program can only be achieved and maintained when there is active interest, participation, and accountability at all levels of the organization. To ensure this, the company, delegates the following safety duties to all management personnel. In some cases employees will need to perform safety duties outside their regular responsibilities to prevent accidents.

The Safety Program Administrator must plan, organize, and administer the program by establishing policy, setting goals and objectives, assigning responsibility, motivating subordinates, and monitoring results. Company management will support and maintain an ongoing Safety and Injury and Illness Prevention Program through the following:

1. Providing clear understanding and direction to all management and employees regarding the importance of safety through the development, implementation, monitoring and revision of policy and procedures.

2. Providing financial support for the Safety / Injury and Illness Prevention Program through the provision of adequate funds for the purchase of necessary safety materials, safety equipment, proper personal protective equipment, adequate time for employee safety training, and maintenance of tools and equipment.

3. Overseeing development, implementation, and maintenance of the safety manual, IIPP, and other required safety programs.

4. Maintaining a company commitment to accident prevention by expecting safe conduct on the part of all managers, supervisors, and employees.

5. Holding all levels of management and employees accountable for accident prevention and safety.

6. Reviewing all accident investigations to determine corrective action.

Managers and Supervisors play a key role in the prevention of accidents on the job. They have direct contact with the employees and know the safety requirements for various jobs. Safety responsibilities for these individuals include:

1. Enforce all safety rules in the Code of Safe Practices and ensure safe work procedures.

2. Verifying corrective action has been taken regarding safety hazards and accident investigations.

3. Conducting periodic documented inspections of the work sites to identify and correct unsafe actions and conditions that could cause accidents.

4. Act as a leader in company safety policy and setting a good example by following all safety rules.

5. Becoming familiar with local, state, and federal safety regulations. The Safety Coordinator is available for assistance.

6. Train all new and existing employees in proper safety procedures and the hazards of the job.

7. Instruct all employees, under their supervision, in safe work practices and job safety requirements.

8. Hold weekly safety meetings with employees.

9. Ensure employee proficiency when assigning work requiring specific knowledge, special operations or equipment.

10. Ascertain that all machinery, equipment, and workstations are maintained in safe working condition and operate properly.

11. Correct unsafe acts and conditions that could cause accidents.

12. Communicate with all employees about safety and accident prevention activities.

13. Correct the cause of any accident as soon as possible.

14. Ascertain that proper first aid and fire fighting equipment is maintained and used when conditions warrant its use.

15. Maintain good housekeeping conditions at all times.

16. Investigate all injuries and accidents to determine their cause and potential corrective action.

17. Ascertain that all injuries involving our employees that require medical attention are properly treated and promptly reported to the office.

The Safety Program Administrator acts as a safety resource for the company and is responsible for maintaining program records. They will also be our primary person to deal with outside agencies regarding the safety program and its contents. Additional duties include:

1. Coordination of all loss prevention activities as a representative of management. Acting as a consultant to management in the implementation and administration of the Safety Program.

2. Develop and implement loss prevention policies and procedures designed to insure compliance with the applicable rules and regulations of all federal, state, and local agencies.

3. Review all accident reports to determine cause and preventability.

4. Conduct periodic reviews of the program and job sites to evaluate performance, discuss problems and help solve them.

5. Consult with representatives of our insurance companies in order that their loss control services will support the Safety Program.

6. Review Workers' Compensation Claims. Help supply the insurance carrier with information about injured employees in order to keep loss reserves as low as possible.

Every employee is responsible for working safely, both for self-protection and for protection of fellow workers. Employees must also support all company safety efforts. Specific employee safety responsibilities include:

1. If you are unsure how to do any task safely, ask your supervisor.

2. Read and abide by all requirements of the Safety Manual.

3. Know and follow the Code of Safe Practices and all company safety policies and rules.

4. Wear all required personal protective equipment.

5. Report all accidents and injuries, no matter how minor, to your supervisor immediately.

6. Do not operate any equipment you have not been trained and authorized to use.

7. Report any safety hazards or defective equipment immediately to your supervisor.
8. Do not remove, tamper with or defeat any guard, safety device or interlock.
9. Never use any equipment with inoperative or missing guards, safety devices or interlocks.
10. Never possess, or be under the influence of, alcohol or controlled substances while on the premises.
11. Never engage in horseplay or fighting.
12. Participate in, and actively support, the company safety program.

COMPLIANCE AND ENFORCEMENT

The compliance of all employees with our Safety Manual / IIPP is mandatory and shall be considered a condition of employment.

The following programs will be utilized to ensure employee compliance with the safety program and all safety rules.

- Training programs
- Retraining
- Disciplinary action
- Optional safety incentive programs

Training Programs

The importance of safe work practices and the consequences of failing to abide by safety rules will be covered in the New Employee Safety Orientation and safety meetings. This will help ensure that all employees understand and abide by company safety policies.

Retraining

Employees that are observed performing unsafe acts or not following proper procedures or rules will be retrained by their supervisor. A Safety Contact Report may be completed by the supervisor to document the training. If multiple employees are involved, additional safety meetings will be held.

Safety Incentive Programs

Although strict adherence to safety policies and procedures is required of all employees, the company may choose to periodically provide recognition of safety-conscious employees and job sites without accidents through a safety incentive program.

Disciplinary Action:

The failure of an employee to adhere to safety policies and procedures can have a serious impact on everyone concerned. An unsafe act can threaten not only the health and well being of the employee committing the unsafe act but can also affect the safety of his/her coworkers and customers. Accordingly, any employee who violates any of the company's safety policies will be subject to disciplinary action.

Note: Failure to promptly report any on-the-job accident or injury, on the same day as occurrence, is considered a serious violation of the Company's Code of Safe Practices. Any employee who fails to immediately report a work-related accident or injury, no matter how minor shall be subject to disciplinary action.

Employees will be disciplined for infractions of safety rules and unsafe work practices that are observed, not just those that result in an injury. Often, when an injury occurs, the accident investigation will reveal that the injury was caused because the employee violated an established safety rule and/or safe work practice(s). In any disciplinary action, the supervisor should be cautious that discipline is given to the employee for safety violations, and not simply because the employee was injured on the job or filed a Workers' Compensation claim.

Violations of safety rules and the Code of Safe Practices are to be considered equal to violations of other company policy. Discipline for safety violations will be administered in a manner that is consistent with the company's system of progressive discipline. If, after training, violations occur, disciplinary action will be taken as follows:

1. Oral warning. Document it, including date and facts on the “Safety Contact Report” form. Add any pertinent witness statements. Restate the policy and correct practice(s).

2. Written warning. Retrain as to correct procedure/practice.

3. Written warning with suspension.

4. Termination

As in all disciplinary actions, each situation is to be carefully evaluated and investigated. The particular step taken in the disciplinary process will depend on the severity of the violation, employee history, and regard to safety. Managers and supervisors should consult with the office if there is any question about whether or not disciplinary action is justified. Employees may be terminated immediately for willful or extremely serious violations. Union or contract employees are entitled to the grievance process specified by their contract.

Note: You must be consistent in the enforcement of all safety rules.

SAFETY COMMITTEE

Purpose

The purpose of the safety committee is to promote workplace safety and health by increasing the communication, education, and involvement of company personnel. The Safety Program Administrator holds permanent membership in the safety committee in order to ensure that responsibility is delegated appropriately.

Membership

The safety committee membership shall be represented by the safety program administrator, supervisory and non-supervisory employees, with non-supervisory employees being the majority. The employees on the committee will be volunteers and will serve on the committee for a two-year term (except for the safety program administrator).

Meetings

There will be one committee meeting every quarter. The dates will be determined by the members' schedules. All committee meetings and training will be conducted during working hours. All committee members will be compensated at their normal rate of pay during the meetings, committee specific training, and any other committee related duties.

Emergency Meetings

The committee may conduct an emergency meeting if the majority of the members feel that such a meeting is necessary. If an emergency meeting is called outside regular working hours, the non-salaried employees will be compensated at their overtime rate.

Recordkeeping

Complete and accurate records of the functions and proceedings of the safety committee will be maintained by the Corporate Office with copies distributed to each worksite.

Meetings will be recorded and minutes will be prepared following each committee meeting. Copies of the minutes will be kept at each worksite. These documents will be made available for inspection upon request by any employee.

Communication

All original written communications between the company and the committee, or true copies thereof, will be maintained at each jobsite and made readily available for inspection by government agencies.

The company shall issue a timely written response to all written questions and recommendations from the safety committee.

COMMUNICATION

This section establishes procedures designed to develop and maintain employee involvement and interest in the Safety Manual. These activities will also ensure effective communication between management and employees on safety related issues that is of prime importance to the company. The following are some of the safety communication methods that may be used:

1. Periodic safety meetings with employees that encourage participation and open, two-way communication.

2. New employee safety orientation and provision of the Code of Safe Practices.

3. Provision and maintenance of employee bulletin boards discussing safety issues, accidents, and general safety suggestions.

4. Written communications from management or the Safety Program Manager, including memos, postings, payroll stuffers, and newsletters.

5. Anonymous safety suggestion program.

Employees will be kept advised of highlights and changes relating to the safety program. Management shall relay changes and improvements regarding the safety program to employees, as appropriate. Employees will be involved in future developments and safety activities, by requesting their opinions and comments, as necessary.

All employee-initiated safety related suggestions shall be properly answered, either verbally or in writing, by the appropriate level of management. Unresolved issues shall be relayed to the program manager or safety committee members.

All employees are encouraged to bring any safety concerns they may have to the attention of management. The company will not discriminate against any employee for raising safety issues or concerns.

The company also has a system of anonymous notification whereby employees who wish to inform the company of workplace hazards without identifying themselves may do so by phoning or sending written notification to the main office.

CODE OF SAFE PRACTICES

ALL EMPLOYEES

Housekeeping

1. Do not place material such as boxes or trash in walkways and passageways.
2. Keep floors clear of items such as paper clips, pencils, tacks, or staples.
3. Clean up spills or leaks immediately by using a paper towel, rag or a mop and bucket.
4. Mop up water around drinking fountains, drink dispensing machines, and ice machines.
5. Do not store or leave items on stairways.
6. Do not block or obstruct stairwells, exits, or accesses to safety and emergency equipment such as fire extinguishers or fire alarms.
7. Straighten or remove rugs and mats that do not lie flat on the floor.
8. Return tools to their storage places after use.
9. Do not use gasoline for cleaning purposes.
10. Use caution signs or cones to barricade slippery areas such as freshly mopped floors.
11. Obey all posted safety and danger signs.

Ergonomics and Video Display Terminals

1. Take periodic rest breaks from repetitive or prolonged activities by standing up and stretching.
2. Use a chair that is padded, is stable, mobile, swivels, and allows operator movement.
3. Sit straight up in your chair, and when needed use a footrest that has an adjustable height and is large enough to allow operator movement.
4. Adjust your computer screen and keyboard so that they are directly in front of you. Use a table large enough to hold keyboard, the display screen and all necessary documents.
5. Place the keyboard low enough so that the operator is not required to reach up or out to the keys.
6. Keep wrists and hands in a straight position while keystroking by keeping forearms parallel to the floor and elbows at your sides.

Hazardous Materials

1. Follow the instructions on the label and in the corresponding Material Safety Data Sheet (MSDS) for each chemical product used in your workplace.
2. Use personal protective clothing or equipment such as neoprene gloves, rubber boots, shoe covers, rubber aprons, and protective eyewear, when using chemicals labeled "Flammable", "Corrosive", and “Caustic" or "Poisonous".
3. Each time you use your gloves, wash your gloves before removing them using cold tap water and normal hand washing motion. Always wash your hands after removing the gloves.
4. Use a rubber cradle when transporting unpackaged, glass bottles of chemicals.
5. Do not store chemical containers labeled "Oxidizer" with containers labeled "Corrosive" or "Caustic".
6. Wear chemical goggles and a face shield when using, applying, or handling chemical liquids or powders from containers labeled "Caustic" or "Corrosive".

Lifting Procedures

1. Plan the move before lifting; remove obstructions from your chosen pathway.
2. Test the weight of the load before lifting by pushing the load along its resting surface.
3. If the load is too heavy or bulky, use lifting and carrying aids such as hand trucks, dollies, pallet jacks and carts, or get assistance from a co-worker.
4. If assistance is required to perform a lift, coordinate and communicate your movements with those of your co-worker.
5. Position your feet 6 to 12 inches apart with one foot slightly in front of the other.
6. Face the load.
7. Bend at the knees, not at the back.
8. Keep your back straight.
9. Get a firm grip on the object with your hands and fingers. Use handles when present.
10. Never lift anything if your hands are greasy or wet.

11. Wear protective gloves when lifting objects with sharp corners or jagged edges.
12. Hold objects as close to your body as possible.
13. Perform lifting movements smoothly and gradually; do not jerk the load.
14. If you must change direction while lifting or carrying the load, pivot your feet and turn your entire body. Do not twist at the waist.
15. Set down objects in the same manner as you picked them up, except in reverse.
16. Do not lift an object from the floor to a level above your waist in one motion. Set the load down on a table or bench and then adjust your grip before lifting it higher.
17. Slide materials to the end of the tailgate before attempting to lift them off a pick-up truck. Do not lift over the walls or tailgate of the truck bed.
18. Wear protective gloves when lifting objects that have sharp corners or jagged edges.

Ladders and Step Ladders

1. Read and follow the manufacturer's instructions label affixed to the ladder if you are unsure how to use the ladder.
2. Do not use ladders that have loose rungs, cracked, or split side rails, missing rubber footpads, or other visible damage.
3. Keep ladder rungs clean and free of grease. Remove buildup of material such as dirt or mud.
4. Do not use a metal ladder on rooftops or within 50 feet of electrical power lines.
5. Do not place a ladder in a passageway or doorway without posting warning signs or cones that detour pedestrian traffic away from the ladder. Lock the doorway that you are blocking with the ladder and post signs that will detour traffic away from your work.
6. Allow only one person on the ladder at a time.
7. Face the ladder when climbing up or down.
8. Maintain a three-point contact by keeping both hands and one foot or both feet and one hand on the ladder at all times when climbing up or down.
9. When performing work from a ladder, face the ladder and do not lean backward or sideways from the ladder.
10. Do not stand on the top two rungs of any ladder.
11. Do not stand on a ladder that wobbles, or that leans to the left or right.
12. When using a ladder, extend the top of the ladder at least 3 feet above the edge of the landing.
13. Secure the ladder in place by having another employee hold it.
14. Do not move a rolling ladder while someone is on it.
15. Do not place ladders on barrels, boxes, loose bricks, pails, concrete blocks, or other unstable bases.
16. Do not carry items in your hands while climbing up or down a ladder.
17. Do not try to "walk" a ladder by rocking it. Climb down the ladder, and then move it.
18. Do not use a ladder as a horizontal platform.

Carts

1. Do not exceed the rated load capacity noted on the manufacturer's label on the cart.
2. Ask a spotter to help guide carts around corners and through narrow aisles.
3. Do not stand on a cart or float or use it as a work platform.

Hand Truck Operations

1. When loading hand trucks, keep your feet clear of the wheels.
2. Do not exceed the manufacturer's load rated capacity. Read the capacity plate on the hand truck if you are unsure.
3. Place the load so that it will not slip, shift, or fall. Use the straps, if they are provided, to secure the load.
4. For extremely bulky or pressurized items such as gas cylinders, strap or chain the items to the hand truck.
5. Tip the load slightly forward so that the tongue of the hand truck goes under the load.
6. Push the tongue of the hand truck all the way under the load that is to be moved.
7. Keep the center of gravity of the load as low as possible by placing heavier objects below the lighter objects.
8. Push the load so that the weight will be carried by the axle and not the handles.
9. If your view is obstructed, ask a spotter to assist in guiding the load.
10. Do not walk backward with the hand truck, unless going up stairs or ramps.
11. When going down an incline, keep the hand truck in front of you so that it can be controlled at all times.
12. Move hand trucks at a walking pace.

13. Store hand trucks with the tongue under a pallet, shelf, or table.

Storeroom/Stockroom:

1. Use long handled snips when cutting strapping bands away from a shipping container.
2. Wear your safety glasses when cutting strapping bands, uncrating materials, and driving nails.
3. Stand to the side of the strapping band when cutting it. Use extreme care when removing bands from pipe on round stock loads. Chock or block loads before removing band to prevent a load shift.
4. Do not use pallets or skids that are cracked or split or have other visible damage.
5. Stack heavy or bulky storage containers on middle and lower shelves of the storage rack.
6. Do not run on stairs or take more than one-step of a staircase at a time.
7. Do not jump from elevated places such as truck beds, platforms, or ladders.
8. Do not lift slippery or wet objects; use a hand truck.
9. Follow the safe handling instructions listed on the label of the container or listed on the corresponding Material Safety Data Sheet when handling each chemical stored in the stockroom.
10. Do not handle or load any containers of chemicals if their containers are cracked or leaking.

Driving Safety

Fueling Vehicles

1. Turn the vehicle off before fueling.
2. Do not smoke while fueling a vehicle.
3. Wash hands with soap and water if you spill gasoline on your hands.

Driver Safety Rules

1. The use of a vehicle while under the influence of intoxicants and other drugs is forbidden and is sufficient cause for discipline, including dismissal.
2. No driver shall operate a vehicle when his/her ability to do so safely has been impaired by illness, fatigue, injury, or prescription medication.
3. All drivers and passengers operating or riding in vehicles must wear seat belts, even if air bags are available.
4. No unauthorized personnel (e.g. Hitchhikers) are allowed to ride in vehicles.
5. Headlights shall be used 1/2 hour after sunset and 1/2 hour before sunrise, or during inclement weather or at any time when a distance of 500 feet ahead of the vehicle cannot be seen clearly.
6. All other state laws, local laws, or D.O.T. Motor Carrier Safety Regulations must be obeyed.

Defensive Driving Rules

1. Drivers are required to maintain a safe following distance at all times. To estimate your following distance, pick a stationary object ahead of you. As the vehicle in front of you passes the object, begin counting 1001, 1002, 1003, etc. until you reach the same object. This counts the number of seconds between you and the vehicle ahead of you.
2. Drivers of passenger vehicles should keep a two-second interval between their vehicle and the vehicle immediately ahead. During slippery road conditions, the following distance should be increased to at least four-seconds.
3. Drivers must yield the right of way at all traffic control signals and signs requiring them to do so. Drivers should also be prepared to yield for safety's sake at any time. Pedestrians and bicycles in the roadway always have the right of way.
4. Avoid driving in other driver's blind spots; attempt to maintain eye contact with the other driver, either directly or through mirrors.
5. Drivers must honor posted speed limits. In adverse driving conditions, reduce speed to a safe operating speed that is consistent with the conditions of the road, weather, lighting, and volume of traffic. Tires can hydroplane on wet pavement at speeds as low as 40 MPH.
6. Turn signals must be used to show where you are heading; while going into traffic and before every turn or lane change.
7. When passing or changing lanes, view the entire vehicle in your rear view mirror before pulling back into that lane.
8. Be alert of other vehicles, pedestrians, and bicyclists when approaching intersections. Never speed through an intersection on a caution light. Approach a stale green light with your foot poised over the brake to reduce your

reaction time should it be necessary to stop. When the traffic light turns green, look both ways for oncoming traffic before proceeding.

9. When waiting to make left turns, keep your wheels facing straight ahead. If rear-ended, you will not be pushed into the lane of oncoming traffic.
10. When stopping behind another vehicle, leave enough space so you can see the rear wheels of the car in front. This allows room to go around the vehicle if necessary, and may prevent you from being pushed into the car in front of you if you are rear-ended.
11. Avoid backing where possible, but when necessary, keep the distance traveled to a minimum and be particularly careful.
12. Check behind your vehicle. Operators of large vehicles should walk around their vehicle before backing and/or have someone guide you.
13. Back to the driver's side. Do not back around a corner or into an area of no visibility.

What To Do In Case of An Accident

In an attempt to minimize the results of an accident, the driver must prevent further damages or injuries, obtain all pertinent information, and report it accurately.

1. Call for medical aid if necessary.
2. Secure accident scene -- pull onto shoulder or side of road, redirect traffic, set up road flares/reflectors, etc.
3. Call the police. All accidents, regardless of severity, must be reported to the police. If the driver cannot get to phone, he should write a note giving location to a reliable appearing motorist and ask him to notify the police.
4. Record names and addresses of driver, witnesses, and occupants of the other vehicles and any medical personnel who may arrive at the scene.
5. Obtain pertinent information including: license number of other drivers, insurance company names and policy numbers of other vehicles, make, year, model of other vehicles, date and time of accident, overall road and weather conditions.
6. Draw a diagram of the accident scene and note the street names and locations of traffic signs, signals, etc.
7. Do not discuss the accident with anyone at the scene except the police. Do NOT accept any responsibility for the accident. DO NOT argue with anyone.
8. Provide the other party with your name, address, phone number, drivers' license number, and insurance information.
9. Immediately report the accident to your supervisor. Provide a copy of the accident record and/or your written description of the accident.
10. Cooperate fully with any follow-up from claims personnel.

OFFICE EMPLOYEES

General Rules

1. Do not stand on furniture to reach high places.
2. Do not kick objects out of your pathway; pick them up or push them out of the way.
3. Do not jump from ladders or step stools.
4. Do not block your view by carrying large or bulky items; use the dolly or hand truck or get assistance from a fellow employee.
5. Do not throw matches, cigarettes or other smoking materials into trash baskets.
6. Do not tilt the chair you are sitting in. Keep all chair legs on the floor.
7. Use a ladder or step stool to retrieve or store items that are located above your head.

Doors

1. Keep doors in hallways fully open or fully closed.
2. Use the handle when closing doors.

Files

1. Open only one file cabinet drawer at a time. Close the filing cabinet drawer you are working in before opening another filing drawer in the same cabinet.
2. Put heavy files in the bottom drawers of file cabinets.

3. Use the handle when closing drawers and files.

Sharp Objects

1. Store sharp objects, such as pens, pencils, letter openers or scissors in drawers or with the tips pointing down in a container.
2. Carry pencils, scissors, and other sharp objects with the tips pointing down.

Paper Cutter/Shredder

1. Position hands and fingers on the handle of the paper cutter before pressing down on the blade.
2. Keep the paper cutter handle in the closed or locked position when it is not being used.
3. Do not use paper-cutting devices if the finger guard is missing.
4. Do not place your fingers in or near the feed of a paper shredder.

Staplers

1. Point the ejector slot away from yourself and bystanders when refilling staplers.
2. Keep fingers away from the ejector slot when loading or testing stapling devices.
3. Use a staple remover, not your fingers, for removing staples.

Electrical

1. Do not use frayed, cut, or cracked electrical cords.
2. Do not connect multiple electrical cords into a single outlet.
3. Do not use extension or power cords that have the ground prong removed or broken off.
4. Use a cord cover or tape the cord down when running electrical cords across aisles, between desks or across entrances or exits.
5. Turn the power switch to "Off" and unplug office machines before adjusting, lubricating or cleaning them.

Fans

1. Do not use fans that have excessive vibration or missing guards.
2. Do not place floor type fans in walkways, aisles, or doorways.

Stairs

1. Use the handrails when ascending or descending stairs or ramps.
2. Do not run on stairs or take more than one-step at a time.

Phone Use

1. Sit up straight in your chair.
2. Keep your feet on floor.
3. If the chair height is too high, use a book or other object as a footrest.
4. If you use a traditional handset, do not hold the receiver by bending your neck to trap the receiver between your head and shoulder. Hold the receiver with your hand.
5. Use your headset for extended phone use.
6. For additional lower back support, place a pillow or bundled clothing in the chair at the small of your back.

SHOP/SERVICE EMPLOYEES

Lockout/Tag out

NOTE: Devices such as padlocks shall be provided for locking out the source of power at the main disconnect switch. Before any maintenance, inspection, cleaning, adjusting or servicing of equipment (hydraulic, electrical, mechanical or air) that requires entrance into or close contact with the machinery or equipment, the main power disconnect switch or valve, or both, controlling its source of power or flow of material, shall be locked-out or blocked off with a padlock, blank flange or similar device.

1. Do not perform any maintenance, inspection, cleaning, adjusting or servicing of any equipment without following the employer lockout / tag out program.
2. If required to work on powered equipment (hydraulic, electrical, air, etc.), you must have

your personal padlock with your name on it and personal key on your person at all times.

3. Attach your own lock or tag when you need to isolate an energy source.
4. Do not remove a lock from any equipment unless you placed it there yourself. Each person shall place his/her own lock/tag when required to isolate an energy source.
5. Do not start any adjustment, service or repair without verifying that the tag/lock out switch or control cannot be by-passed or over-ridden.
6. Disconnect and padlock all machine power disconnects in the off position before removing guards for the purpose of working "ON" or "IN" the machinery or its approaching unguarded parts. (NOTE: When more than one employee is working on a single piece of equipment, each employee must use his own padlock along with lockout tongs to lock out the equipment. When the work is completed, he must remove only his lock.)
7. Lockout verification:
   - Verify that the locked-out switch or control cannot be overridden.
   - Test the equipment to be certain that the locked-out switch is de-energized and not simply malfunctioning.
   - Press all start buttons to see if the equipment starts.
   - Ensure the system you will be working on is the same one that has been locked out.
8. Before restarting the equipment, verify the following:
   - All tools and other items have been removed.
   - All machine guards are in place.
   - All electric systems are reconnected.
   - All employees are clear of equipment.
9. Before machinery is put back into use after LOCKOUT/TAGOUT, give a verbal announcement / sound warning to fellow employees.

Forklifts – Pre-Use Inspection

Do not use forklift if any of the following conditions exist:

1. The mast has broken or cracked weld-points.
2. The roller tracks are not greased or the chains are not free to travel.
3. Forks are unequally spaced or cracks exist along the blade or at the heels.
4. Hydraulic fluid levels are low.
5. Hydraulic line and fitting have excessive wear or are crimped.
6. Fluid is leaking from the lift or the tilt cylinders.
7. The hardware on the cylinders is loose.
8. Tires are excessively worn, split, or have missing tire material.
9. Air filled tires are not filled to the operating pressure indicated on the tire.
10. Batteries have cracks or holes, uncapped cells, frayed cables, broken cable insulation, loose connections, or clogged vent caps.

Starting the Forklift

- Apply the foot brake and shift gears to neutral before turning the key.

Picking Up a Load

1. Square up on the center of the load and approach it straight on with the forks in the travel position.
2. Stop when the tips of your forks are about a foot from the load.
3. Level the forks and slowly drive forward until the load is resting against the backrest of the mast.
4. Lift the load high enough to clear whatever is under it.
5. Back up about one foot, and then slowly and evenly tilt the mast backwards to stabilize the load.

Putting a Load Down

1. Square up and stop about one foot from desired location.
2. Level the forks and drive to the loading spot.
3. Slowly lower the load to the floor.
4. Tilt the forks slightly forward so that you do not hook the load.

5. When the path behind you is clear of obstructions, back straight out until the forks have cleared the pallet.

Stacking One Load on Top of Another

1. Stop about one foot away from the loading area and lift the mast high enough to clear the top of the stack.
2. Slowly move forward until the load is squarely over the top of the stack.
3. Level the forks and lower the mast until the load is no longer supported by the forks.
4. Look over both shoulders for obstructions and back straight out if the path is clear.

Forklift Safety Rules

1. Do not exceed the lift capacity of the forklift. Read the lift capacity plate on the forklift if you are unsure.
2. Follow the manufacturer's guidelines concerning changes in the lift capacity before adding an attachment to a forklift.
3. Lift the load an inch or two to test for stability: If the rear wheels are not in firm contact with the floor, take a lighter load or use a forklift with a higher lift capacity.
4. Do not raise or lower a load while you are en route. Wait until you are in the loading area and have stopped before raising or lowering the load.
5. After picking up a load, adjust the forks so that the load is tilted slightly backward for added stability.
6. Drive with the load at a ground clearance height of 4-6 inches at the tips and 2 inches at the heels in order to clear most uneven surfaces and debris.
7. Drive at a walking pace and apply brakes slowly to stop when driving on slippery surfaces such as icy or wet floors.
8. Do not drive over objects in your pathway.
9. Do not drive into an area with a ceiling height that is lower than the height of the mast or overhead guard.
10. Steer wide when making turns.
11. Do not drive up to anyone standing or working in front of a fixed object such as a wall.
12. Do not drive along the edge of an unguarded elevated surface such as a loading dock or staging platform.
13. Obey all traffic rules and signs.
14. Sound horn when approaching blind corners, doorways, or aisles to alert other operators and pedestrians.
15. Stay a minimum distance of three truck lengths from other operating mobile equipment.
16. Drive in reverse and use a signal person when your vision is blocked by the load.
17. Look in the direction that you are driving; proceed when you have a clear path.
18. Do not use bare forks as a man-lift platform.
19. Do not drive the forklift while people are on the attached man-lift platform.
20. Drive loaded forklifts forward up ramps.
21. Raise the forks an additional two inches to avoid hitting or scraping the ramp surface as you approach the ramp.
22. Drive loaded forklifts in reverse when driving down a ramp.
23. Drive unloaded forklifts in reverse when going up a ramp and forward when going down a ramp.
24. Do not attempt to turn around on a ramp.
25. Do not use "Reverse" to brake.
26. Lower the mast completely, turn off the engine, and set the parking brake before leaving your forklift.

Loading Docks

1. Keep the forklift clear of the dock edge while vehicles are backing up to the dock.
2. Do not begin loading or unloading until the supply truck has come to a complete stop, the engine has been turned off, the dock lock has been engaged, and the wheels have been chocked.
3. Attach the bridge or dock plate before driving the forklift into the truck.
4. Do not drive the forklift into a truck bed that has soft or loose decking or other unstable flooring.
5. Drive straight across the bridge plates when entering or exiting the trailer.
6. Use dock lights or headlights when working in a dark trailer.

Cranes and Hoists

1. Do not use load hooks or chains that are cracked, bent, elongated, or broken.
2. Do not use cranes that do not have their rated load capacity indicated on each side of the crane or on its load block.
3. Passengers are not permitted to ride inside the operator's cab of a truck crane.
4. Keep crane windows clean. Do not use a crane if its windows are broken.

5. Do not exceed posted weight limits on hoists.
6. Do not operate a crane on soft ground without cribbing and mats.
7. Fully extend outriggers before attempting a lift.
8. Stay outside the barricades of the posted swing radius.
9. Do not perform any crane retrofits or modifications without the manufacturer's approval.
10. Do not leave the crane unattended with a hoisted load.
11. Do not hoist loads over people.
12. Do not drive on the road shoulders.
13. Wear high visibility vests.
14. Wear the prescribed personal protective equipment such as hardhat, goggles, gloves, dust masks, and hearing protection when operating a hoist.
15. Replace the belts, gears or rotating shaft guards after servicing a crane; do not use the crane if guards are missing from these areas.

Lifting Equipment (Chains, Cables, Ropes, Slings, etc.)

1. Do not use chain slings if links are cracked , twisted, stretched, or bent.
2. Fabricate all wire in wire rope slings by using thimbles; do not form eyes by using wire clips or knots.
3. Do not shorten slings by using makeshift devices such as knots or bolts.
4. Do not use a kinked chain.
5. Protect slings from the sharp edges of their loads by placing pads over the sharp edges of the items that have been loaded.
6. Do not place your hands between the sling and its load when the sling is being tightened around the load.
7. Wear work gloves when handling rough, sharp-edged, or abrasive material such as chains, cables ropes, or slings.
8. Do not alter or remove the safety latch on hooks. Do not use a hook that does not have a safety latch, or if the safety latch is bent.
9. Lift the load from the center of hooks, not from the point.

Heavy Equipment Safety

General

1. No passengers are permitted on heavy equipment.
2. Keep windows and windshield clean.
3. Do not use heavy equipment if its horn or backup alarm does not sound.
4. Turn off the engine before leaving heavy equipment unattended.
5. Do not jump off or onto any heavy equipment.
6. Keep heavy equipment in gear when going down grade. Do not use neutral.
7. Display the "Slow Moving Vehicle" sign when operating heavy equipment on roads.
8. Do not operate backhoes, power shovels and other heavy equipment within two (2) feet from the edge of an excavation.

Backhoe/Power Shovel Operations

1. Do not operate backhoes, power shovels and other heavy equipment within two (2) feet from the edge of the excavation.
2. Do not use a bucket or other attachments for a temporary platform for workers.
3. Stay in the compartment during operation of the backhoe or power shovel. Do not reach in or attempt to operate controls from outside the backhoe or power shovel.
4. Do not use a bucket or other attachments for a staging or temporary platform for workers.
5. Do not operate backhoe over or across underground utilities that are marked by paint, flagged, or staked.
6. Set swing brake of the bucket arm when moving the vehicle to and from the digging site.

Front End Loader Operator

1. Only the front-end loader operator is allowed to operate the front-end loader.
2. Do not carry passengers on the front-end loader.
3. To avoid "tipping", do not exceed the manufacturer's load rated capacity posted on the arm of the front-end loader.
4. Do not lift the front-end loader bucket over another person.

5. Never leave the front-end loader unattended while the motor is running.

Hand Tools

1. Use tied-off containers to keep tools from falling off scaffolds and other elevated work platforms.
2. Keep the blades of all cutting tools sharp.
3. Carry all sharp tools in sheaths or holsters.
4. Tag worn, damaged, or defective tools "Out of Service" and do not use them.
5. Do not use a tool if its handle has splinters, burrs, cracks, splits or if the head of the tool is loose.
6. Do not use impact tools such as hammers, chisels, punches, or steel stakes that have mushroomed heads.
7. When handing a tool to another person, direct sharp points and cutting edges away from yourself and the other person.
8. Do not chop at heights above your head when working with a hand axe.
9. Do not carry sharp or pointed hand tools such as screwdrivers, scribes, aviation snips, scrapers, chisels or files in your pocket unless the tool or pocket is sheathed.
10. Do not perform "make-shift" repairs to tools.
11. Do not use "cheaters" on load binders or "boomers."
12. Do not carry tools in your hand when climbing. Carry tools in tool belts or hoist the tools to the work area with a hand line.
13. Do not throw tools from one location to another, from one employee to another, from scaffolds or other elevated platforms.

Chisels

1. Keep the cutting edge of the chisel sharp.
2. Do not use chisels with damaged striking ferrules.
3. Hold a chisel with a tool holder if possible.
4. Clamp a small work piece in a vise and chip towards the stationary jaw when working with a chisel.

Clamps

1. Do not use the C-clamp for hoisting materials.
2. Do not use the C-clamp as a permanent fastening device.

Files/Rasps

1. Do not use a file as a pry bar, hammer, screwdriver, or chisel.
2. When using a file or a rasp, grasp the handle in one hand and the toe of the file in the other.
3. Do not hammer on a file.

Hammers

1. Use a claw hammer for pulling nails and driving nails.
2. Do not strike nails or other objects with the cheek of the hammer.
3. Do not strike a hardened steel surface, such as a cold chisel, with a claw hammer.
4. Do not strike one hammer against another hammer.
5. Do not use a hammer if your hands are oily, greasy, or wet.
6. Do not use a hammer as a wedge, a pry bar or for pulling large spikes.
7. Use only a sledge-type hammer on a striking face wrench.

Knives/Sharp instruments

1. When handling knife blades and other cutting tools, direct sharp points and edges away from you.
2. Store knives in knife blocks or in sheaths after use.
3. Do not use knives with dull blades.
4. Do not use honing steels that do not have disc guards.
5. Do not attempt to catch a falling knife.
6. Use knives for the operation for which they are named.
7. Do not use knives with broken or loose handles.
8. Do not use knives as screwdrivers, pry bars, can openers or ice picks.
9. Do not pick up knives by their blades.

10. Carry knives with their tips pointed towards the floor.

Pliers

1. Do not attempt to force pliers by using a hammer on them.
2. Do not slip a pipe over the handles of pliers to increase leverage.
3. Use pliers with insulated handles for electrical work.
4. Do not use pliers that are cracked, broken, or sprung.
5. When using diagonal cutting pliers, shield the loose pieces of cut material from flying into the air by using a cloth or your gloved hand.

Saws

1. Do not use an adjustable blade saw such as a hacksaw, coping saw, keyhole saw, or bow saw, if the blade is not taut.
2. Do not use a saw that has dull saw blades.
3. Keep hands and fingers away from the saw blade while using the saw.
4. Do not carry a saw by the blade.
5. When using a handsaw, hold the work piece firmly against the worktable.
6. Do not use woodworking equipment such as circular saws, radial saws, or jointers if they do not have guards on the saw blade.
7. Keep control of saws by decreasing downward pressure at the end of the stroke.
8. When operating scroll saws, stop the machine before removing scrap pieces from the table.
9. Clamp work when using a hole saw.

Screwdrivers

1. Always match the size and type of screwdriver blade to fit the head of the screw.
2. Do not hold the work piece against your body while using a screwdriver.
3. Do not put your fingers near the blade of the screwdriver when tightening a screw.
4. Use an awl, drill or a nail to make a starting hole for screws.
5. Do not force a screwdriver by using a hammer or pliers on it.
6. Do not use a screwdriver as a punch, chisel, pry bar or nail puller.
7. Use a screwdriver that has an insulated handle for electrical work.
8. Do not use a screwdriver if your hands are wet, oily, or greasy.
9. Do not use a screwdriver to test the charge of a battery.
10. When using a spiral ratchet screwdriver, push down firmly and slowly.

Snips

1. Wear safety glasses or safety goggles when using snips to cut materials.
2. Wear work gloves when cutting materials with snips.
3. Do not use straight cut snips to cut curves.
4. Keep the blade aligned by tightening the nut and bolt on the snips.
5. Do not use snips as a hammer, screwdriver, or pry bar.
6. Use the locking clip on the snips after use.

Vises

1. When clamping a long work piece in a vise, support the far end of the work piece by using an adjustable pipe stand, sawhorse, or box.
2. Position the work piece in the vise so that the entire face of the jaw supports the work piece.
3. Do not use a vise that has worn or broken jaw inserts, or has cracks or fractures in the body of the vise.
4. Do not slip a pipe over the handle of a vise to gain extra leverage.

Electrical Powered Tools

1. Do not use power equipment or tools on which you have not been trained.

2. Keep power cords away from the path of drills, saws, vacuum cleaners, floor polishers, mowers, slicers, knives, grinders, irons, and presses.
3. Do not carry plugged-in equipment or tools with your finger on the switch.
4. Do not carry equipment or tools by the cord.
5. Disconnect the tool from the outlet by pulling on the plug, not the cord.
6. Turn the tool off before plugging or unplugging it.
7. Do not leave tools that are "On" unattended.
8. Do not handle or operate electrical tools when your hands are wet or when you are standing on wet floors.
9. Do not operate spark inducing tools such as grinders, drills, or saws near containers labeled "Flammable" or in an explosive atmosphere such as a paint spray booth.
10. Turn off electrical tools and disconnect the power source from the outlet before attempting repairs or service work. Tag the tool "Out of Service."
11. Do not connect multiple electrical tools into a single outlet.
12. Do not run extension cords through doorways, through holes in ceilings, walls, or floors.
13. Do not drive over, drag, step on or place objects on a cord.
14. Do not operate a power hand tool or portable appliance with a two-pronged adapter or a two-conductor extension cord.
15. Do not use a power hand tool while wearing wet cotton gloves or wet leather gloves.
16. Never operate electrical equipment barefooted. Wear rubber-soled or insulated work boots.
17. Do not operate a power hand tool or portable appliance while holding a part of the metal casing or holding the extension cord in your hand. Hold all portable power tools by the plastic handgrips or other nonconductive areas designed for gripping purposes.
18. Do not operate a power hand tool or portable appliance that has a frayed, worn, cut, improperly spliced, or damaged power cord.
19. Do not operate a power hand tool or portable appliance if the ground pin from the three-pronged power plug is missing or has been removed.

Power Saws

1. Wear safety goggles, protective gloves, a dust mask, and hearing protection when operating a power saw.
2. Do not wear loose clothing or jewelry.
3. Clean any residue from the blade or cutting head before making a new cut with the power saw.
4. Do not use a power saw that has cracked, broken, or loose guards or other visible damage.
5. Keep your hands away from the exposed blade.
6. Operate the saw at full cutting speed, with a sharp blade, to prevent kickbacks.
7. Do not alter the anti-kickback device or blade guard.
8. Do not perform cutting operations with the power saw while standing on a wet or slippery floor.
9. When using the power saw, do not reach across the cutting operation.
10. Cut away from your body and below your shoulder level when you are using a power saw.
11. If the saw becomes jammed, turn the power switch of the saw to "Off" before pulling out the incomplete cut.

Pneumatic Tools

1. Do not point a compressed air hose at bystanders or use it to clean your clothing.
2. Do not use tools that have handles with burrs or cracks.
3. Do not use compressors if their belt guards are missing. Replace belt guards before use.
4. Turn the tool "off" and let it come to a complete stop before leaving it unattended.
5. Disconnect the tool from the airline before making any adjustments or repairs to the tool.
6. Engage positive locks on hoses and attachments before use.
7. Shut off pressure valve and disconnect airline when not in use.
8. Tag damaged or defective pneumatic tools "Out of Service" to prevent usage of the tool by other employees.

Powder Actuated Tools

1. Only employer-authorized personnel, with a valid certification card may operate powder-actuated tools.
2. Wear safety glasses, goggles, or face shields when operating powder actuated tools.
3. Wear earplugs or earmuffs when making fastenings.

4. Do not permit bystanders in the area when using a powder-actuated tool.
5. Do not load tool until ready to make a fastening.
6. Keep tool pointed in a safe direction (away from personnel).
7. Post a sign alerting co-workers that a powder actuated tool is being used.
8. After use, lock powder actuated tools and powder loads in a container and store in a safe place such as a locker or the trunk of a car.

Stairways, Floors, and Openings

1. Do not work on open-sided floors, elevated walkways, or elevated platforms if there are no guardrails in place.
2. Stand clear of floor openings if guardrails or covers are removed or displaced.

ALL EXCAVATIONS

1. The contractor communicates with the local One-Call Service Center **AND** utility owners who are not members of the one-call center. This communication must take place 48 hours to 72 hours, but not more than 10 days (or per state regulations) prior to the start of the excavation.
2. The route of the excavation will be white lined (with white spray paint), flagged, staked, or a combination of these to mark the dig site before the locator arrives on the job.
3. The contractor hand digs within 18 inches or 24 inches (depending on state regulations) horizontally on either side of the marked facility.
4. The contractor requests new locates to again identify the underground facilities on all excavations incurring extended time requirements of 10 days or more and following inclement weather.
5. Photographs or videos are taken after the utility has been marked before the excavation begins.

CRITICAL/HIGH PRIORITY EXCAVATIONS

On numerous occasions contractors will be required to excavate on or near critical or high priority underground facilities. These utilities, if hit during the excavation, can result in death, severe injury, or extensive property damage causing major power outages to thousands of consumers. Examples would include high-pressure gas, petroleum lines (catastrophic explosions), and water lines (flooding and ground collapse), power transmission facilities, and fiber optic communication cables (service disruption to 30,000 customers or more for 30 minutes or more). For these reasons, before any excavation begins, the contractor must aggressively discuss this risk with the owner to identify if critical or high priority facilities are located at the excavation site.

If so, in addition to the 5 best practices defined above, the following 3 best practices also apply:

6. The contractor must request a pre-excavation meeting on site with the facility owner and prime contractor (if any).
7. The contractor potholes (hand digging, use of air knives or vacuum excavation techniques) to verify utility locates or mark-outs.
8. The contractor maps the coordinates of the locates in relation to a stationary object(s), such as a tree, fence, building, etc.

DOCUMENTATION REGARDING COMPLIANCE WITH BEST PRACTICES

Documentation will take many forms, but it must include certain information, signed and dated by the construction owner or senior manager. Ref. appendix 10.1.

Preplanning of excavation project

- Notify local One-Call Service Center: Federal O.S.H.A. rules and legislation in most states require contractors who plan to excavate to notify the local One Call Center and non-member facility owners 48 to 72 hours before the job begins. Additionally, there should be no excavating of any kind, mechanical or by hand, without first obtaining locates. If private lines exist, they too must be properly located. Property managers or owners of private facility systems can assist prior to calling for locates.
- The excavator must have a through knowledge of the jurisdictional regulations in which the dig site is located and planned for accordingly. For example, in some metropolitan areas it is unlawful for contractors to touch water valves or other utility control devices.

- To enhance the quality of the job-preplanning phase, the company must determine if the excavation involves critical or high priority facilities. The contractor should specifically ask the owner to identify these in their bid specifications, or at least discuss with the owner and document it. These accidents would be any dig up that could result in severe injury, death, or extensive property damage causing major power outages to thousands of customers. Some examples: high-pressure gas, petroleum (catastrophic explosion), water lines (flooding and ground collapse), power transmission facilities, and fiber optic communication cables producing an FCC reportable incident (service disruption to 30,000 or more customers for 30 minutes or more).

Identify Facilities - Large Projects

- Be sure to maintain documentation of the locate request number and a sketch of the locates. This documentation should be available at the site of excavation.
- Make sure the request numbers are valid and that they are issued in your company's name.
- The proposed dig area should be pre-marked with white paint prior to notifying the One Call Center for locates.
- Request a pre-construction meeting with facility owners and locators to review the excavation area. This is very important if the job involves a critical or high priority facility or the job is in a congested metropolitan area. The owner should be questioned concerning the need for Subsurface Utility Engineering.
- Make sure that all members and non-member facility owners of the one-call center have been contacted for locates.
- Photograph or videotape of dig area in relation to the locates in case of problems later on. An alternative would be to map the coordinates of the locates in relation to a stationary object(s) such as a tree, fence, building, etc.

Identify Facilities - Small Projects

- The proposed dig area should be pre-marked with white paint prior to notifying One Call for locates.
- Make sure that all utility owners (one-call members and non-member owners) have been contacted for locates.
- Be sure to maintain documentation of the locate request number and a sketch of the locates if supplied by the facility owner. This documentation should be available at the site of excavation.
- Make sure request numbers are valid and that they are issued in your company's name.
- If there is a critical or high priority facility line in dig area, make arrangements for the locator and the facility owner to be on the job site with you during the excavation. If the locator and/or facility owner refuses to be present, then document this response by appending it to the ticket request.

On the job site

- Once on the job site, begin job preparation by reviewing list of multiple non-members of your One-Call Service Center that are in your dig area and make sure that locate marks for all facilities are present. Consult your color chart if necessary to ensure all facilities have been located. If any underground system is not marked, contact your supervisor, call the owner immediately, and then document responses.
- Account for all feeds to houses or buildings before you excavate. You should be able to see them in the air or marked on the ground.
- Identify and/or have located all private facilities that have not already been located. This includes propane and private lines, sprinklers, etc. Look for sewer vents on the roof of the house, look for sprinkler heads and turn on the system if necessary. Look for physical evidence that facilities have not been located.
- Sketch the location and document the depth of all public and private facilities on your work order for future reference.
- If there is not a sketch of all other facilities, draw a sketch of locates with measurements to fixed objects for future reference.
- Expose all facilities that you will be crossing. All critical or high priority facilities should be exposed by pot holing or use of locating equipment every 100 feet if parallel within 5 feet of dig area.
- If there are no locates, if marks are incomplete, or if exposing indicates locates are not accurate, *DO NOT DIG*. Contact the facility owner to complete the locates.
- Request new locates if the job extends beyond 10 days and following inclement weather.
- Once you have verified the location of all lines and you have completed the Job Check List, you can begin to excavate. Remember to complete the sketch of your dig site before you start excavating.
- Photograph or video tape the dig site in relation to the locates before the excavation begins so that valid documentation can be presented in case of problems later on.

Excavating

- You should hand dig within 24 inches (or as your state requires) of any line, pedestal, closure, riser guard, pole (with riser), meter or other structure.
- If you must use mechanical equipment within 24 inches of a mark you should expose the line first.
- If you are paralleling a critical or high priority line, or working on one, you should pot hole every 100 feet, or as appropriate, to verify the location and depth of the line. If the locate is not accurate, the facility owner should be contacted immediately.
- If you are using a boring machine, you should try to bore away from all facilities. If you must cross a facility, expose the line to verify location and depth and change the bore route and/or depth to avoid the facility. Contact your supervisor to approve route changes.
- Do not place excavated dirt or street plates on top of locate marks. Every attempt should be made to keep marks visible and fresh at all times. When excavated soil must be placed on locate marks, ensure that a detailed sketch of the marks has been made and pictures taken to support the sketch.

Backfilling

- All lines exposed during excavation must be supported to prevent damage, stretching, kinking, etc.
- Before backfilling, extra caution must be taken to remove large rocks, sharp objects, and large chunks of hard packed clay or dirt.
- No trash or pieces of abandoned lines should be backfilled into the trench.

What to do if a utility strike occurs:

- Immediately call 811 on all utility strikes except for gas.
- In the event of a utility strike involving a gas line the first call goes to 911. The second call goes to 811.
- Evacuate the immediate area, barricade the area.
- Do not start any motorized vehicles within the barricaded area.
- Keep the general public away from the area until police and the fire department arrive on scene.

Employee Accountability

Be advised that failure to perform any of the following procedures may result in disciplinary action.

- Digging without obtaining locates.
- Smoking is not permitted in, or around, the excavation in case of gas leaks.
- Excavating, including hand digging, without locates for any or all facilities including private lines.
- Report any facility damage regardless of severity.
- Failure to check paperwork or equipment before leaving the shop.
- Failure to utilize the job checklist provided.

Obtain and learn the laws and regulations that pertain to excavating in your state.

Everyone will incorporate these procedures into their daily routine. By utilizing these procedures, it will increase your productivity and efficiency, not to mention the obvious safety benefits.

JOB SITE PERSONNEL

1. Do not start work until barricades, barrier logs, fill or other protection have been installed to isolate the work area from local traffic.
2. Reflective warning vests must be worn by traffic flagmen who are assigned to controlling traffic.
3. Do not walk under platforms that bridge a trench.
4. Do not enter a trench unless you have been given permission by the competent person. Seek out and identify the designated "Competent person" for the excavation site.

Access and Egress Safety

1. Use ladders, structural ramps, or stairways as a means of access or egress from excavations.

2. Do not use scrap lumber, excavation machinery, or other improvised devices for climbing.
3. Do not climb a ladder unless it extends at least three (3) feet or three (3) rungs beyond the edge of the trench.

Trench box Safety

1. Do not enter a trench box during its installation or removal.
2. Do not enter a trench box that is being moved.

Hot Line Safety

1. Clean all protective line equipment after each use, prior to storage.
2. Wear rubber gloves or use hot sticks when removing tree branches, limbs, or similar objects from contact with high voltage lines, panels, or equipment.
3. Do not wear rubber protective gloves while climbing or descending a pole.
4. Wear 100% cotton or flame resistant shirts or jumpers (with sleeves rolled down) and protective hats when working on or near live parts, lines, and panels or when climbing poles.
5. Wear body belts with straps or lanyards when working at an elevated position (poles, towers, etc.).
6. Visually inspect body belts and straps before use for defects, wear, and damage.
7. When working with lines of 600 volts or more:
   • Wear rubber gloves or use hot sticks when placing protective equipment on/around energized voltage conductors.
   • Do not work on the line that is removed from service until the line is cleared, tagged, tested, and grounded.
   • Treat bare wire communication conductors on structures as energized lines unless they are protected by insulated conductors.
8. Treat bare wire communication conductors on power poles and structures as energized lines (with voltages in excess of 600 volts) unless the conductors are protected by insulating materials.
9. Do not remove any ground until all employees are clear of the temporary grounded lines or equipment.
10. After a capacitor has been disconnected from its source of supply, wait five minutes before short-circuiting and grounding it.
11. Do not contact the terminals, jumpers, or line wires connected directly to capacitors until the capacitors have been short-circuited and/or grounded.
12. Visually inspect and wipe down all hot line tools each day before use.
13. Do not wear rubber gloves with protectors while using hot line tools.
14. Do not use defective hot line tools. Mark them as defective and turn them in for repair or replacement.

Stringing/Removing Deenergized Conductors

1. Keep conductors that are being strung in or removed under positive control to prevent accidental contact with energized circuits.
2. Do not exceed the load rating for stringing lines, pulling lines, sock connections or load-bearing hardware and accessories.
3. Do not use defective pulling lines or defective accessories. Mark the defective items and turn them in for repair or replacement.
4. Do not use conductor grips on wire ropes unless the grips are designed for that particular purpose.
5. If an existing line that crosses over a conductor is to be deenergized, ground the line on both sides of the crossing or treat the conductor being crossed as energized.

PPE PROGRAM

General

Provide protective equipment, including personal protective equipment (for head, eyes, face, and extremities), respiratory devices, protective clothing, and protective shields and barriers. This protective equipment must be used wherever injury or impairment of function of any body part (through absorption, inhalation or physical contact) is likely that because of process or environmental hazards, radiological hazards, chemical hazards, or mechanical irritants. All PPE shall be provided, used and maintained in a sanitary and reliable condition.

Employees are NOT allowed to use employee-owned equipment, except prescription safety glasses and safety footwear. Ensure that employee-owned safety glasses and footwear are adequate, and maintain and clean them.

Defective or damaged equipment shall not be used and must be tagged or destroyed and replaced.

All issued personal protective equipment will be cost-free to the employee. All employees must understand and follow the procedures identified in this program.

Eye Protection

When exposed to facial or eye hazards from flying fragments, chemicals, acids or caustic liquids, melted metal, or chemical gases or vapours, employees must use the required eye or face protection. PPE used to protect the eyes and face must be in compliance with ANSI Standard Z87.1-2003 (Z87+), *Occupational and Educational Personal Eye and Face Protective Devices.*

Safety Glasses

While on company property, employees, subcontractors, and visitors must at all times wear safety glasses with side shields that meet ANSI Z-87.1-2003 standards with "high Impact lenses". Requirements as described below:

1. In shops and warehouses, and at field locations, except in striped safety zones that have been designated and approved.

2. In all yard work zones. Everyone in the vicinity of loading or unloading equipment. All employees who perform mechanic or maintenance work, operate equipment (e.g., forklift and welding), test stand operations, or do any work that may potentially cause an eye injury.

3. In a restroom, office, or any other building when performing work that may potentially cause an eye injury.

4. Provide with visitor glasses. If approved prescription safety glasses are not available for an individual, they must wear "Over the glass" type safety goggles or glasses over their regular prescription glasses until they obtain approved prescription safety glasses.

5. When assisting welders, employees must wear absorbent safety glasses to protect the assistant from ultra-violet (UV) and/or infrared rays (IR).

6. No employee is allowed to wear dark shaded lens (sunglasses) darker than # 1 shade unless welding or assisting a welder.

7. The requirement to wear safety eyewear will be exempt only based on a written "exceptions for medical reasons" from a doctor.

8. Employees are not required to wear safety glasses:

i. Inside an office.

ii. In parking lots when traveling to and from vehicles, or office buildings using main doors that do not enter shops.

Goggles

1. When handling or mixing liquid chemicals, solvents, paints, etc., employees must wear chemical splash proof goggles as recommended on the Material Safety Data Sheet for the material being handled.

2. When blowing equipment down with air the employee must wear dust proof goggles. They must also be worn when the employee is performing a job task where safety glasses do not do an adequate job of preventing airborne particles from entering the openings around the lenses and side shields.

Face Shields

- When operating a hand held or immobile grinder with a wire or abrasive wheel the employee must wear a full face shield over safety glasses. The full face shield must also be used when chipping paint or concrete. Also, when performing job tasks where flying objects may potentially strike the face, if safety glasses or goggles do not provide adequate protection, the employee must wear a full face shield over safety glasses.

Head Protection

When working in areas where a head injury is possible due to employee initiated impact, or impact from falling or other moving objects, employees must wear protective helmets. Helmets must be in compliance with ANSI Standard Z89.1-1997 Class E, *American National Standard for Industrial Head Protection* for Type II head protection, or must be equally effective.

1. Hardhats must be worn when working in areas where head injury is possible from falling objects.

2. Hardhats must be worn at all warehouse, field, and shop locations, or any location where it is determined to be necessary as per the location's PPE Hazard Assessment.

3. Never alter hardhats in any way.

4. Never paint or apply unauthorized stickers, name plates, etc. on hardhats.

5. Never drill, cut, bend, or apply heat to a hardhat.

6. Never alter the suspension system of a hardhat.

7. Employees must inspect hardhat regularly for chips, scratches, cracks, signs of heat exposure (sun cracks), etc.

8. Immediate replace any defective hardhats.

9. Never place a hardhat in the rear window of a vehicle (they will be exposed to the sun or may become a projectile in a vehicle accident).

10. Hardhats must be made available to visitors.

11. Provide hardhats.

12. Train employees in the use, care and maintenance of head protection equipment.

Hearing Protection

While in posted "High Noise" areas, all employees, subcontractors, and visitors must wear hearing protection.

All areas that are known, or suspected to have, noise levels in excess of 85 dBA (constantly or intermittently) must have warning signs posted.

When noise caused by machinery, tools, etc., prevents normal conversations to be clearly heard, employees shall wear hearing protection even if warning signs are not posted.

General rule of thumb: If you must yell to be heard, you require hearing protection.

Types

1. Preformed Inserts (ear plugs)
2. Canal Caps (head band type)
3. Muff, either headband or hard hat mounted
4. Supply ear muffs and ear plugs employees in sizes and configurations that are comfortable for the employee.

Care and Maintenance

1. Employees must inspect hearing protection before each use.
2. Keep hearing protection clean to prevent ear infections.
3. Discard disposable ear plugs when they become dirty, greasy, or cracked.
4. Replace any ear muffs that have cracked seals, deteriorated foam inserts, or are defective.

Fit

1. Because everyone is different, hearing protection must be selected for the individual. The employee must try a variety of styles to find one that is comfortable and provides adequate protection.
2. Instruct employees in how to obtain the proper fit.

Hand Protection

Gloves

1. When performing work tasks that may expose the hands to extreme temperatures, cuts and abrasions, or exposure to chemicals, employees must wear gloves.
2. Welding: When performing arc welding or oxy/gas cutting, employees must wear welding gloves made of leather or other heat resistant materials.
3. Chemical: When handling chemicals that specify gloves as PPE, the employee must impervious (chemical resistant) gloves.
4. To select the correct glove type, refer to the specific chemical's Material Safety Data Sheet.
5. Employees who work with chemicals, i.e., solvent vats, will be issued their own gloves for hygienic purposes.
6. Leather: When working with sharp materials, or when handling rigging equipment, employees must wear leather gloves.
7. Cloth: When handling objects or materials that could cause blisters, splinters, cuts, etc., the employee must wear cloth gloves.

8. Heat Resistant: When handling hot bearings, races, or other materials or objects (heated beyond room temperature), employees must wear heat resistant gloves.

9. Insulated: To prevent frostbite in extreme cold climates, employees must wear insulated gloves.

10. Glove Inspections

i. Prior to each use, inspect gloves for holes, tears, and worn areas.

ii. Periodically air test chemical gloves for pinholes by tightly twisting the cuff, expand the glove by applying low air pressure, and submersing the glove in water to check for bubbles.

iii. Immediately discard any defective gloves.

11. Exception: While working with rotating machinery, machinists are exempt from wearing gloves.

Foot Protection

All employees with regular duties at field locations, in shops and warehouses must wear safety footwear.

1. Visitors and office workers entering these areas infrequently are not required to wear foot protection as long as they stay away from the work being performed.

2. If visitors or office workers must be in the close proximity to the work, the work must be stopped while in the area or safety footwear must be worn.

3. When in shops, warehouses, field locations and parts departments, employees must wear leather or equivalent boots (lace up or pull up).

4. Boots must provide ankle protection, and have must have soles that are designed to protect the feet from punctures, and must have defined heels for climbing ladders.

5. When job tasks there is a risk of equipment or material crushing the foot, toe guards must be worn.

6. Safety footwear must comply with ANSI Z41-1999 standards.

7. Some client locations may require everyone to wear safety footwear. Before visiting field locations, check with the local supervisor for client requirements.

Fall Protection

When performing certain elevated jobs (over six feet), employees must use personal fall protection. Refer to Fall Protection Program.

Electrical Protection

Refer to Electrical Safety Program.

Worksite Hazard Assessment

Hazard assessments must be performed, signed and documented. If it is determined that a hazard exists or is likely to exist, a PPE must be used. Following are some hazard sources that may be identified:

1. High or low temperatures

2. Chemical exposure (see MSDS for guidance)

3. Flying fragments, melted metal or other face, eye, or skin hazards

4. Falling objects, or the possibility of dropping an object

5. Employee falling from a height in excess of 6’

6. Sharp objects

7. Rolling or pinching that could crush hands or feet

8. Electrical hazards

Anytime that these hazards may cause injury to employees, PPE must be selected to eliminate or substantially reduce the potential for injury. Employees will be notified for the selection and reason.

Each affected employee will be apprised of the results of this assessment, and a copy of the assessment will be kept at the local office.

Each affected employee must be fitted with the selected/identified PPE. The Training section of this program addresses fitting (including proper donning, and doffing), cleaning and maintenance of PPE. All PPE use exemptions must be supported by the PPE hazard assessment.

Monitoring
Site managers and supervisors must monitor worksite tasks to identify changes in hazards, or the introduction of new hazards. If the site manager or supervisor discovers a new hazard, they must advise the SAFETY Manager. The SAFETY Manager conducts a hazard assessment for appropriate PPE for the new hazard.
The SAFETY Manager monitors how effective the PPE Procedure is, and recommends improvements to management.

BLOODBORNE PATHOGENS

Exposure Control Plan Access

Employees shall have access to a copy of the exposure control plan by request from their supervisor or the safety manager who will supply it in a reasonable time, place and manner.

Procedure Reviews and Updates

The exposure control procedure must be reviewed on an annual basis and updated whenever a new procedure, activity or function with the potential to expose employees to biohazards is introduced into a worksite.

Universal Precautions

Your employees shall observe universal precautions by treating all human blood and certain human body fluids as if they are known to be infectious for HIV, HBV and other pathogens even under circumstances where exposure is highly unlikely.

Exposure Controls

Exposure controls are designed to reduce or eliminate employee exposure to blood or potentially infectious materials and should be re-evaluated and revised if necessary on a regular basis to maximize their effectiveness in controlling employee exposure. Therefore:

1. Hand washing facilities are readily available at all work locations except those that cannot support or simply do not have such facilities. In these cases, appropriate antiseptic solutions and / or towelettes are available for use.

2. All sharps containers shall have a biohazard-warning label or a specific color to identify it as a biohazard, shall be resistant to punctures and shall be leak proof. The same characteristics shall apply to all secondary sharps containers.

Safe Work Practices

Safe work practices are designed to support exposure controls and further minimize or eliminate occupational exposure. Therefore:

1. Employees must wash hands and other applicable body parts as soon as potentially contaminated gloves or other PPE are removed to further prevent contamination.
2. If any part of the body has contact with blood or any other infectious material, employees must wash hands and other exposed body parts with soap and water immediately.
3. Only trained and authorized personnel are allowed to handle sharps, sharps containers and any other potentially sharp and infectious needles or equipment.
4. Activities such as applying make up, handling contact lenses, smoking or any other hand and eye, mouth, nose, ear or other body part contact is prohibited in areas where exposure to biohazards is possible.
5. Storage areas such as pantries, freezers, refrigerators and others that may contain potentially infectious materials shall not contain food or drink.
6. All equipment and surfaces that have had contact with blood or other infectious materials must be properly cleaned and decontaminated.
7. All biological specimens must be contained in leak proof containers for handling, storage and transport to minimize potential contact with other surfaces and employees.
8. In cases where the exterior surface of the specimen container is contaminated; the container must be placed into another leak proof container, which shall be labeled as “for handling and storage”.
9. All emergency responder, first aid or other potentially infectious supplies must be disposed of immediately and appropriately after contamination.

Personal Protective Equipment (PPE)

PPE shall be provided by your company at no cost to the employee and must be of proper fit, adequate for the task at hand and readily available. Defective or damaged PPE must be discarded / replaced or repaired in order to ensure maximum effectiveness.

The following safe work practices shall be followed with regard to biohazards and PPE:

1. Protective garments that are penetrated by blood or other infectious materials must be removed and properly disposed of immediately.
2. PPE that may be contaminated must be removed and properly stored / contained before leaving the work area.
3. PPE such as protective gloves must be worn whenever contact with potentially infectious material exposure is anticipated.
4. Disposable PPE such as rubber gloves must be replaced as soon as practical when contamination has occurred or when they are rendered ineffective by a tear, puncture or other occurrence.
5. Masks and eye protection (such as goggles, face shields, etc.) are used whenever splashes or sprays may generate droplets of infectious materials.
6. Whenever infectious material splashes, sprays or other similar occurrences are possible, PPE such as face shields, goggles, head garments or other appropriate PPE shall be used to protect face, eyes etc.
7. Adequate PPE must be used unless temporarily declined by the employee and approved by the safety manager.
8. PPE should be cleaned, laundered & properly disposed of if contaminated.
9. All PPE must be cleaned, maintained, used, stored and disposed of properly when applicable.

Post-Exposure Requirements

All potential blood or infectious material exposure incidents shall be investigated by the employer thoroughly to ensure that hazards are abated and that affected employees receive the necessary treatment needed to minimize the impact of potential or actual exposure.

All reported exposure incidents shall be formally investigated by the exposure control officer / safety manager or supervisor when the safety manager cannot be present. A detailed report of the incident outlining root cause, corrective actions and the current status of affected employees is then completed and reviewed by employer to help prevent re-occurrence. Additionally, the following confidential information shall be provided to exposed employees:

1. All documentary reports and information of the exposure incident and its circumstances.
2. The identity of the exposure source individual unless applicable laws prevent such identification.

Upon completion of the above procedures, the exposed employee shall be appointed to a qualified healthcare professional who will evaluate the exposed employee, provide information to the employee about his or her medical status and initiate treatment where applicable.

Employer shall provide the following information to the healthcare professional:

1. A copy of the biohazards standard.
2. A detailed description of the exposure incident.
3. Additional information that is relevant to the healthcare professional.

The following information will be provided to the employer by the healthcare professional as a “written report” and copied to the exposed employee upon completion of the healthcare professional’s evaluation of exposed employee:

1. If a Hepatitis B vaccination is recommended for the exposed employee.

2. If the exposed employee has received the Hepatitis B vaccination since the incident.
3. Verification that the exposed employee has received results information of the medical evaluation.
4. Verification that the exposed employee was made aware of medical conditions caused by the exposure incident that require additional medical evaluation or treatment.

    1. All other medical information remains confidential and will not be a part of the written report.
    2. The Hepatitis B vaccine will be made available to all employees with occupational exposure at no cost.

HEAT ILLNESS AND PREVENTION

All managers and supervisors will implement and maintain the Heat Illness Program in their respective work areas. High heat procedures are to be followed when the temperature exceeds 95 degrees Fahrenheit. High heat procedures shall include, but are not limited to:

1. Effective communication by voice, observation or electronic means,
2. Will observe employees for alertness and signs/symptoms of heat illness often,
3. Reminding employees to drink water throughout the shift,
4. Closely supervise new employees for their first 14 days of employment,
5. The provisions of this procedure.

Provision of Water

Employees shall have access to potable drinking water. Where it is not plumbed or otherwise continuously supplied, it shall be provided in sufficient quantity at the beginning of the work shift.

Access to Shade

Employees must have access to shade. At or below 85 degrees Fahrenheit the employee shall have timely access to shade upon request. For temperatures at or above 85 degrees Fahrenheit, one or more areas with shade shall be provided at all times while employees are present. There should be enough shade for at least 25% of employees on the shift at any one time to use.

Employees suffering from heat illness or those who believe a preventative recovery period is needed shall be provided access to an area with shade that is either open to the air or provided with ventilation or cooling for a period of no less than five minutes. Such access to shade shall be permitted at all times. See definition of “Shade”.

Written Procedures

The heat prevention program/procedures shall be in writing and shall be made available to employees.

Each work site shall develop site specific procedures which shall include the minimum:

1. Make available at least 2 quarts of water per employee at the start of the shift. The supervisors or designated persons will monitor water containers every 30 minutes. Employees are encouraged to report to the supervisor/designated person water that is dirty or an inadequate water supply.
2. Supervisors will provide frequent reminders to employees to drink frequently.
3. Workers will be reminded every morning of the importance of frequent consumption of water throughout the shift during hot weather.
4. Place water containers as close as possible to the workers.
5. Water levels should not fall below the point that will provide adequate water for all employees during the time necessary to effect replenishment.
6. Disposable/single use drinking cups will be provided to employees or provisions will be made to supply employees their own cups.
7. Supervisors will set-up an adequate number of umbrellas, canopies or other portable devices at the start of the shift and will relocate them to be closer to the crew, as needed.
8. Non-agricultural employers can use other cooling measures if they demonstrate that these methods are as effective as shade.

Working hours will be modified to work during the cooler hours of the day, when possible.

More water and rest breaks will be provided when a modified or shorter work-shift is not possible.

Supervisors will continuously monitor all employees and stay alert to the presence of heat related symptoms.

Supervisors will carry cell phones or other means of communication, to ensure that emergency services can be called. They will check that all means of communication are functional at the work-site prior to each shift.

Every morning, workers will be reminded about the address and directions to their work-site so as to inform medical responders.

All newly hired workers will be assigned a buddy or experienced coworker to ensure they receive proper training and are following the company procedures in regards to heat illness prevention.

HAZARD IDENTIFICATION AND ASSESSMENT

To assist in the identification and correction of hazards, the company has developed the following procedures. These procedures are representative only and are not exhaustive of all the measures and methods that will be implemented to guard against injury from recognized and potential hazards in the workplace. As new hazards are identified or improved work procedures developed, they will be promptly incorporated into our Safety Manual. The following methods will be utilized to identify hazards in the workplace:

- Loss analysis of accident trends
- Accident investigation
- Employee observation
- Employee suggestions
- Regulatory requirements for our industry
- Outside agencies such as the fire department and insurance carriers
- Periodic safety inspections

Loss Analysis

Periodic loss analyses will be conducted by the safety program administrator. These will help identify areas of concern and potential job hazards. The results of these analyses will be communicated to management, supervision, and employees through safety meetings and other appropriate means.

Accident Investigations

All accidents and injuries will be investigated in accordance with the guidelines contained in this program. Accident investigations will focus on all causal factors and corrective action including the identification and correction of hazards that may have contributed to the accident.

Employee Observation

Superintendents and foremen shall be continually observing employees for unsafe actions and taking corrective action as necessary.

Employee Suggestions

Employees are encouraged to report any hazard they observe to their supervisor. No employee is to ever be disciplined or discharged for reporting any workplace hazard or unsafe condition. However, employees who do NOT report potential hazards or unsafe conditions that they are aware of will be subject to disciplinary action.

Regulatory Requirements

All industries are subject to government regulations relating to safety. Many of these regulations are specific to our type of business. Copies of pertinent regulations can be obtained from the Safety Program Administrator.

Outside Agencies

Several organizations may assist us in identifying hazards in our workplace. These include safety officers from other contractors, insurance carrier safety and health consultants, private industry consultants, the fire department, and State OSH Consultants.

Periodic Safety Inspections

Periodic safety inspections ensure that physical and mechanical hazards are under control and identify situations that may become potentially hazardous. Inspections shall include a review of the work habits of employees in all work areas. These inspections will be conducted by the Supervisor, Manager, Program Administrator or other designated individual.

Periodic safety inspections will be conducted:

- When new substances, process, procedures or equipment are used.
- When new or previously unrecognized hazards are identified.
- Periodically by the Supervisor.
- Periodically by the Safety Program Administrator.

These inspections will focus on both unsafe employee actions as well as unsafe conditions. The following is a partial list of items to be checked.

- The proper use, condition, maintenance and grounding of all electrically operated equipment.
- The proper use, condition, and maintenance of safeguards for all power-driven equipment.
- Compliance with the Code of Safe Practices.
- Housekeeping and personal protective equipment.
- Hazardous materials.
- Proper material storage.
- Provision of first aid equipment and emergency medical services.

Any and all hazards identified will be corrected as soon as practical in accordance with the company hazard correction policy.

If imminent or life threatening hazards are identified, which cannot be immediately corrected, all employees must be removed from the area, except those with special training required to correct the hazard, who will be provided necessary safeguards.

Documentation of Inspections

Safety inspections will be documented to include the following:

- Date on which the inspection was performed.
- The name and title of person who performed the inspection.
- Any hazardous conditions noted or discovered and the steps or procedures taken to correct them.
- Signature of the person who performed the inspection.

One copy of the completed form should be sent to the office. All reports shall be kept on file for a minimum of two (2) years.

HAZARD PREVENTION, CORRECTION, AND CONTROL

The following procedures will be used to evaluate, prioritize and correct identified safety hazards. Hazards will be corrected in order of priority: the most serious hazards will be corrected first.

Hazard Evaluation

Factors that will be considered when evaluating hazards include:

- Potential severity - The potential for serious injury, illness or fatality
- Likelihood of exposure - The probability of the employee coming into contact with the hazard
- Frequency of exposure - How often employees come into contact with the hazard
- Number of employees exposed
- Possible corrective actions - What can be done to minimize or eliminate the hazard
- Time necessary to correct - The time necessary to minimize or eliminate the hazard

Techniques for Correcting Hazards

1. Engineering Controls: Could include machine guarding, ventilation, noise reduction at the source, and provision of material handling equipment. These are the first and preferred methods of control.

2. Administrative Controls: The next most desirable method would include rotation of employees or limiting exposure time.

3. Personal Protective Equipment: Includes back support belts, hearing protection, respirators and safety glasses. These are often the least effective controls for hazards and should be relied upon only when other controls are impractical.

Documentation of Corrective Action

All corrective action taken to mitigate hazards should be documented. Depending on the circumstances, one of the following forms should be used:

- Safety Contact Report
- Safety Meeting Report
- Memo or letter
- Safety inspection form

All hazards noted on safety inspections will be rechecked on each subsequent inspection and notations made as to their status.

HAZARD COMMUNICATION PROGRAM

Purpose

The purpose of this program is to ensure that the hazards of all chemicals and substances identified and evaluated, and that the information concerning their hazards is communicated to employees, emergency response organizations, state and federal agencies, and other employers and contractors, as necessary. This hazard information will be clearly communicated, and displayed in accordance with this Hazard Communication Program.

Our company is firmly committed to providing each of its employees a safe and healthy work environment. It is recognized that workers may use chemicals or substances that have potentially hazardous properties. When using these substances, workers must be aware of the identity, toxicity or hazardous properties of a chemical or substance. We believe an informed employee is more likely to be a safe employee. To this end, we have established and implemented a written Hazard Communication Program.

Scope

This program is applicable to all employees who may come in contact with hazardous chemicals while working. This document is to be followed by all employees and contractors on company owned premises. In addition, this program is to be used in the event an operator program does not exist or is less stringent than our own.

Definitions

Chemical - any element, chemical compound, or mixture of elements and/or compounds.

Chemical Inventory List - a list of chemicals used at this facility, or by personnel that report to this facility.

Electronic Access – using electronic media (telephone, fax, internet, etc.) to obtain Material Safety Data Sheets or health information.

Facility - an establishment at one geographical location containing one or more work areas.

(GHS) Globally Harmonized System - The Globally Harmonized System (GHS) is an international approach to hazard communication, providing agreed criteria for classification of chemical hazards, and a standardized approach to label elements and safety data sheets. NOTE: Most new GHS requirements apply to substance manufacturers or distributors since they are responsible for including safety data sheets with purchased substances. However, all employers are still required to train each employee on the new label elements and safety data sheets format. Specific training information can be found at: https://www.osha.gov/dsg/hazcom/

Hazardous Chemical - any chemical that is a physical hazard, a health hazard, or has a Permissible Exposure Limit established for it.

Hazardous Substance - see hazardous chemical.

Hazard Communication Program Coordinator - the person who has overall responsibility at a facility for that facility's Hazard Communication Program.

Health Hazard - a substance for which there is statistically significant evidence based on at least one study conducted in accordance with established scientific principles that acute or chronic adverse health effects may occur in exposed employees.

IDLH - immediately dangerous to life and health.

Immediate Use - the chemical will be under the control of and used only by the person who transfers it from a labeled container and only within the work shift in which it is transferred.

Job Site - an area remote from a facility where hazardous chemicals are stored or used and employees are present for the purpose of business.

(MSDS) Material Safety Data Sheet - a written or printed document containing chemical hazard and safe handling information, prepared in accordance with the OSHA Occupational Safety & Health Standards, Section 1910.1200, paragraph (g). Recently referred to as (SDS) "Safety Data Sheets" under 2013 GHS HAZCOM update.

(NFPA) National Fire Protection Association Labeling - a common industry labeling method developed by the National Fire Protection Association to identify the hazards associated with a particular chemical.

(PEL) Permissible Exposure Limit - the maximum eight-hour time weighted average of any airborne contaminant to which an employee may be exposed.

Readily Available - when an employee has access during the course of his/her normal work shift.

(SDS) Safety Data Sheet – a written or printed document containing chemical hazard and safety handling info, prepared in accordance with the new HAZCOM GHS requirements.

Substance - see Chemical.

(TLV) Threshold Limit Value - the airborne concentration of a substance that represents conditions under which it is believed that nearly all normal workers may be repeatedly exposed day after day without adverse effect.

Work Area - a room or defined space in a facility where hazardous chemicals are stored or used and where one or more employees are present.

Workplace - see Facility.

Workplace Chemical List - see Facility Chemical List.

Responsibilities

A written hazard communication program shall be developed, implemented and maintained at each workplace. The program will describe how labels and other forms of warning, material safety data sheets and employee information will be kept, maintained, and disseminated.

The Safety Manager is responsible for developing and implementing the Hazard Communications Program. Managers are responsible for maintaining Material Safety Data Sheets and the Chemical Inventory List for their respective locations. The Safety Manager reviews the MSDS files and Chemical Inventory List at each location at least annually to ensure they are current and complete.

The Safety Manager is also responsible for ensuring that all containers from manufacturers or distributors have the correct and updated labels per the new GHS requirements and for ensuring that all applicable employees are trained on the new label elements and safety data sheets format. Training info can be found here: https://www.osha.gov/dsg/hazcom/

Employees are responsible for following the requirements set forth in the Hazard Communication Program, to use proper personal protective equipment, to report containers without labels immediately to their supervisor and to never deface any label.

Any employee who transfers any material from one container to another is responsible for labeling the new container with all required information.

All employees are responsible for learning the requirements of this section and for applying them to their daily work routine.

Requirements

Introduction
This Hazard Communication Program was prepared for use by your company to explain how we meet the requirements of the federal Occupational Safety and Health Administration's (OSHA's) Hazard Communication Standard (29 CFR 1910.1200). It spells out how we inventory chemicals stored and used, how we obtain and use material safety data sheets, how we maintain labels on chemical substances, and how we train employees about the hazards of chemicals they are likely to come in contact with on the job.

Preparation of this program indicates our continuing commitment to safety among our employees in all of our locations.

- Each facility is expected to follow this program and maintain its work areas in accordance with these requirements.
- Employees, their designated representatives, and government officials must be provided copies of this program upon request.
- As part of our ongoing hazard communication effort, we will make available other information in addition to the program to any worker requesting it.
- Asking to see this information is an employee's right,
- Using this information is part of our shared commitment to a safe, healthy workplace.

List of Hazardous Chemicals
Maintains a listing of all known hazardous chemicals known to be present at each job site by using the identity it is referenced by on the appropriate material safety data sheet (MSDS). This identity is often a common name, such as the product or trade name (i.e., Lime-A-Way).

The Chemical Inventory List is updated annually by the Hazard Communication Program Coordinator or their designee with additional updates being made when necessary.

The facility Chemical Inventory List must be available for review upon request. Additionally, a written hazard communication program must be developed, implemented & maintained at each workplace.

Material Safety Data Sheets | Now “Safety Data Sheets” due to the new GHS requirements.
Chemical manufacturers are responsible for developing MSDS's, now SDS’s. Company shall have an SDS for each chemical used with the exception of consumer products. SDS’s must be obtained for each required chemical from the chemical manufacturer, supplier, or vendor. The purchasing of any potentially hazardous chemical products from any supplier that does not provide an appropriate Material Safety Data Sheet in a timely fashion is strictly prohibited.

MSDS's now known as SDS’s shall be maintained and readily accessible in each workplace. SDS’s can be maintained at the primary work site, however, they should be immediately available in case of emergency. SDS’s must be made available upon request to employees, their designated representatives, the Assistant Secretary of Labor, and to the Director of OSHA.

Safety Data Sheets are filed alphabetically, and by material classification, in the SDS Book. A Chemical Inventory List is provided in the front of the MSDS Book, listing all MSDS' contained therein. This inventory serves as the index of the MSDS Book. The SDS Book shall be displayed in a prominent location in the work area where it is accessible to all employees.

A copy of a SDS request form is located in the first section of the SDS Book. An employee may use a copy of this form to request an SDS or he may ask the Manager for one. In either case, the requested SDS must be given to the employee within 24 hours of being requested.

The Safety Data Sheet must be kept in the SDS library for as long as the chemical is used by the facility.

Electronic access (telephone, fax, Internet, etc.) may be used in the acquisition of any needed SDS and to maintain SDS libraries and archives.

The Manager is responsible for seeing that the Chemical Inventory List inventory is maintained, is current, and is complete. He will review and update the inventory and the SDS Book at least annually. When a hazardous material has been permanently removed from the work place, its SDS is to be removed from the SDS's Book and the Chemical Inventory List. The SDS is then placed in a "dead file" in case it is needed in the future.

SDS's for hazardous materials to which employees have been exposed must be maintained after the employee leaves your employment.

Employees will be advised of all special instructions, PPE, and the hazards associated with chemicals-including chemicals contained in unlabeled pipes-in their work areas. The Manager will inform employees of the hazards of non-routine tasks by presenting a copy of the site specific hazardous materials list, ensuring that the employee is aware of their presence should a non-routine task with unfamiliar materials present itself.

Employees have the right to request MSDS on any chemical, which must then be provided without any issues.

Labels, Labeling and Warnings:
The Manager will ensure that all hazardous chemicals used or stored in the facility are properly labeled.

- Damaged labels or labels with incomplete information shall be reported immediately,
- Damaged labels on incoming containers of chemicals will not be removed,
- New labels shall be provided as needed so that all containers are labeled correctly,
- Only containers into which an employee transfers a chemical for their own immediate use will not require labeling,
- Employees who are unsure of the contents of any container, vessel, or piping must contact their supervisor for information regarding the substance including:
    - The name of the substance,
    - The hazards associated with the substance,
    - The safety precautions required for working with the substance.

Labels, tags, or markings on containers shall use the following 16-section (GHS) formatting convention and headings:

- Identification
- Hazard(s) identification
- Composition/information on ingredients
- First-Aid measures
- Fire-fighting measures
- Accidental release measures
- Handling & Storage
- Exposure controls/personal protection
- Physical and chemical properties
- Stability and reactivity
- Toxicological information
- Ecological information
- Disposal considerations
- Transport information
- Regulatory information
- Other information, including date of preparation or last revision

All containers must be labeled correctly under the new GHS HAZCOM standard (this responsibility usually falls upon the manufacturers shoulders. However, if labels are not present for any reason, employers are responsible for labeling containers. Upon transferring the content of one container to another, the employee must label the new container with all required information. This information can be obtained from the labeling of the original container or from the material's SDS. Any container of a potentially hazardous material that will not be emptied during one shift must be labeled, without exception.

Personnel in the Shipping and Receiving Departments are responsible for the proper labeling of all containers shipped by company and for the inspection of all incoming materials for correct labeling. Chemicals received from vendors that are improperly labeled must be rejected.

NFPA Standard 704 labels shall be the preferred hazard identification method used in company facilities and on materials containers used on client sites. All employees, clients, subcontractors, and visitors who may come in contact with a hazardous substance must be briefed to ensure understanding of the NFPA 704 labeling system.

Training
Employees shall be provided with appropriate, effective information and training on the hazardous chemicals in their work area at the time of their initial assignment, and upon the introduction of a new physical or health hazard into their work area. Information and training may be designed to cover categories of hazards (e.g., flammability, carcinogenics) or specific chemicals. However, chemical-specific information must always be available through labels and safety data sheets.

Additional training will be provided whenever a new chemical hazard is introduced into the work area. Supervisors will conduct supplementary training when deemed necessary in order to reinforce the importance of the proper use and handling of chemicals.

Only facility employees and individuals knowledgeable with company Hazard Communication program will conduct training sessions.

The Manager shall ensure records of employee training are maintained properly.

When an outside contractor, such as a pest control worker or a carpenter, enters a company site in order to perform a service for company, they must first present MSDS' for any and all hazardous chemicals which will be used. These MSDS' will be treated with the same training requirements as the MSDS' kept on site for regularly used chemicals and materials. The Manager will be responsible for contacting each contractor prior to work commencing, in order to gather and disseminate any information concerning chemical hazards the contractor is bringing into the work place.

The Hazard Communication Program documented training shall, as a minimum, include:

- Requirements, details, and rights of the employee as contained in the Hazard Communication regulation,
- Operations and work areas where hazardous chemicals are present,
- Location of the written Hazard Communication Program, SDS's and the Chemical Inventory List,
- How to access SDS's or SDS information,
- How to read labels and Material Safety Data Sheets for pertinent hazard information,
- How employees can obtain and use the appropriate hazard information,
- Methods and observations that may be used to detect the presence or release of hazardous chemicals by use of monitoring devices, visual appearance or odor,
- The physical & health hazards of chemicals in the immediate work area,
- Protection measures utilized for the prevention of hazards related to exposure,
- Appropriate work practices,
- Emergency procedures,
- The use of proper PPE.

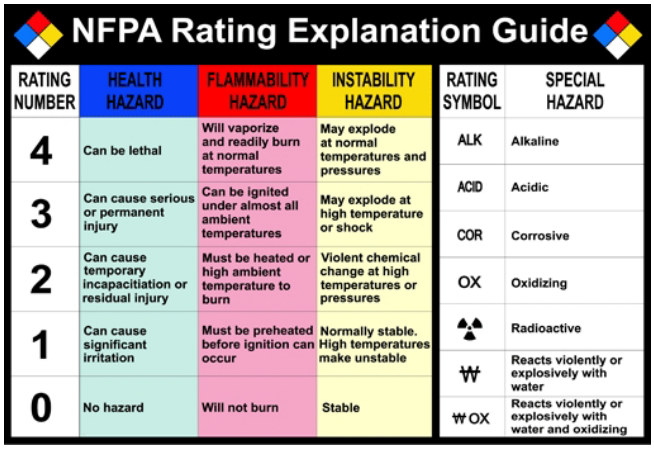
Multiple Work Sites
Where employees must travel between work places during a work shift, the written HAZCOM Program shall be kept at a primary job site. If there is no primary job site, then the program shall be sent with employees.

The program shall be made available, upon request, to employees, their designated representatives, the Assistant Secretary, and the Director in accordance with requirements of 29 CFR 1910.1020(e).

Multiple Employer Job Sites
A pre-job briefing shall be conducted with the contractor before work commences on site.

- During this pre-job briefing, contractors shall provide to company current copies of all Safety Data Sheets along with the label information for every hazardous substance brought on-site.
- Must notify and provide required MSDS and label information for all hazardous materials the contractor may encounter on the job,
- Labeling systems and precautionary measures to be taken by the contractor during both normal conditions and emergencies shall be addressed,
- By providing such information to other employers, company does not assume any obligations that other employers have for the safety of their employees,
- In this regard, other employers working on company property, or for company on client's property, remain fully responsible for developing and implementing their own compliant hazard communication programs.

Hazard Warnings / NFPA 704
The NFPA 704 Diamond is a means of disseminating hazard warning and information for a specific material. The diamond is divided into four sections. Each of the first three colored sections has a number in it associated with a particular hazard. The higher the number is, the more hazardous a material is for that particular characteristic. The fourth section includes special hazard information. The four sections and an explanation of the numbers in them are provided as a reference below:



NFPA Rating Explanation Guide

RATING NUMBER	HEALTH HAZARD	FLAMMABILITY HAZARD	INSTABILITY HAZARD
4	Can be lethal	Will vaporize and readily burn at normal temperatures	May explode at normal temperatures and pressures
3	Can cause serious or permanent injury	Can be ignited under almost all ambient temperatures	May explode at high temperature or shock
2	Can cause temporary incapacitiation or residual injury	Must be heated or high ambient temperature to burn	Violent chemical change at high temperatures or pressures
1	Can cause significant irritation	Must be preheated before ignition can occur	Normally stable. High temperatures make unstable
0	No hazard	Will not burn	Stable

RATING SYMBOL	SPECIAL HAZARD
ALK	Alkaline
ACID	Acidic
COR	Corrosive
OX	Oxidizing
	Radioactive
W	Reacts violently or explosively with water
W OX	Reacts violently or explosively with water and oxidizing

FIRST AID AND MEDICAL EMERGENCY PROCEDURES

The company will ensure the availability of emergency medical services for its employees at all times. We will also ensure the availability of a suitable number of appropriately trained persons to render first aid. The Safety Program Administrator will maintain a list of trained individuals and take steps to provide training for those that desire it.

First-Aid Kits

Every work site shall have access to at least one first-aid kit in a weatherproof container. The first-aid kit will be inspected regularly to ensure that it is well stocked, in sanitary condition, and any used items are promptly replaced. The contents of the first-aid kit shall be arranged to be quickly found and remain sanitary. First-aid dressings shall be sterile and in individually sealed packages.

Drugs, antiseptics, eye irrigation solutions, inhalants, medicines, or proprietary preparations shall not be included in first-aid kits unless specifically approved, in writing, by an employer-authorized, licensed physician. Other supplies and equipment, if provided, shall be in accordance with the documented recommendations of an employer-authorized licensed physician upon consideration of the extent and type of emergency care to be given based upon the anticipated incidence and nature of injuries and illnesses and availability of transportation to medical care.

First Aid

The designated first aid person on each site will be available at all times to render appropriate first aid for injuries and illnesses. Proper equipment for the prompt transportation of the injured or ill person to a physician or hospital where emergency care is provided, or an effective communication system for contacting hospitals or other emergency medical facilities, physicians, ambulance and fire services, shall also be provided. The telephone numbers of the following emergency services in the area shall be posted near the job telephone, or otherwise made available to the employees where no job site telephone exists:

1. A company authorized physician or medical clinic, and at least one alternate if available.
2. Hospitals.
3. Ambulance services.
4. Fire-protection services.

Prior to the commencement of work at any site, the Supervisor or Manager shall locate the nearest preferred medical facility and establish that transportation or communication methods are available in the event of an employee injury.

Each employee shall be informed of the procedures to follow in case of injury or illness through our new employee orientation program, Code of Safe Practices, and safety meetings.

Where the eyes or body of any person may be exposed to injurious or corrosive materials, suitable facilities for drenching the body or flushing the eyes with clean water shall be conspicuously and readily accessible.

Accident Procedures

These procedures are to be followed in the event of an employee injury in the course of employment.

1. For severe accidents call 911 and request the Paramedics.

2. Employees must report all work related injuries to their Supervisor immediately. Even if they do not feel that it requires medical attention. Failure to do so may result in a delay of Workers' Compensation benefits and disciplinary action.

3. The Supervisor, employee, and first aid person, should determine whether or not outside medical attention is needed. When uncertainty exists on the part of any individual, the employee should be sent for professional medical care.

4. If medical attention is not desired or the employee refuses treatment, you must still fill out a company "Accident Report" in case complications arise later.

5. In all cases, if the employee cannot transport himself or herself for any reason, transportation should be provided.

6. In the event of a serious accident involving hospitalization for more than 24 hours, amputation, permanent disfigurement, loss of consciousness or death, phone contact should be made with the main office. Contact must also be made with the nearest Federal or State (if applicable) OSHA office.

ACCIDENT / EXPOSURE INVESTIGATION

The Supervisor, Manager, or other designated individual will investigate all work-related accidents in a timely manner. This includes minor incidents and "near accidents", serious injuries and utility strikes. An accident is defined as any unexpected occurrence that results in injury to personnel, damage to equipment, facilities, or material, or interruption of normal operations.

Responsibility for Accident Investigation

Immediately upon being notified of an accident, the Supervisor, Manager, or other designated individual shall conduct an investigation. The purpose of the investigation is to determine the cause of the accident and corrective action to prevent future reoccurrence; not to fix blame or find fault. An unbiased approach is necessary in order to obtain objective findings.

The Purpose of Accident Investigations:

- To prevent or decrease the likelihood of similar accidents.
- To identify and correct unsafe work practices and physical hazards. Accidents are often caused by a combination of these two factors.
- To identify training needs. This makes training more effective by focusing on factors that are most likely to cause accidents.

What Types of Incidents Do We Investigate?

- Fatalities
- Serious injuries
- Minor injuries
- Property damage
- Near misses
- Utility strikes

Procedures for Investigation of Accidents

Immediately upon being notified of an accident the Supervisor, Manager, or other designated individual will:

1. Visit the accident/incident scene, as soon as possible, while facts and evidence are still fresh and before witnesses forget important details and to make sure hazardous conditions to which other employees or customers could be exposed are corrected or have been removed.

2. Provide for needed first aid or call 911 emergency for the injured employee(s).

3. Call 911 emergency if needed depending on the severity of the utility strike.

4. If possible, interview the injured worker at the scene of the accident and verbally "walk" him or her through a re-enactment. All interviews should be conducted as privately as possible. Interview all witnesses individually and talk with anyone who has knowledge of the accident, even if they did not actually witness it.

5. Report the accident/incident to the main office. Accidents will be reported by the office to the insurance carrier within 24 hours. All serious accidents will be reported to the carrier as soon as possible.

6. Consider taking signed statements in cases where facts are unclear or there is an element of controversy.

7. Thoroughly investigate the accident to identify all accident causes and contributing factors. Document details graphically. Use sketches, diagrams and photos as needed. Take measurements when appropriate.

8. All accidents involving death, disfigurement, amputation, loss of consciousness or hospitalization for more than 24 hours must be reported to Federal or State (if applicable) OSHA immediately.

9. Focus on causes and hazards. Develop an analysis of what happened, how it happened, and how it could have been prevented. Determine what caused the accident /incident itself, not just the injury.

10. Every investigation must also include an action plan. How can such accidents/incidents be prevented in the future?

11. In the event a third party or defective product contributed to the accident, save any evidence as it could be critical to the recovery of claim costs.

<u>Accurate & Prompt Investigations</u>

- Ensures information is available
- Causes can be quickly corrected
- Helps identify all contributing factors
- Reflects management concern
- Reduces chance of recurrence

<u>Investigation Tips</u>

- Avoid placing blame
- Document with photos and diagrams, if needed
- Be objective, get the facts
- Reconstruct the event
- Use open-ended questions

<u>Questions to Ask</u>

When investigating accidents/incidents, open-ended questions such as who?, what?, when?, where?, why?, and how? will provide more information than closed-ended questions such as "Were you wearing gloves?"

Examples include:

- How did it happen?
- Why did it happen?
- How could it have been prevented?
- Who was involved?
- Who witnessed the incident?
- Where were the witnesses at the time of the incident?
- What was the injured worker doing?
- What was the employee working on?
- When did it happen?
- When was the accident reported?

- Where did it happen?
- Why was the employee assigned to do the job?

The single, most important question that must be answered as the result of any investigation is:

"What do you recommend be done (or have you done) to prevent this type of incident from recurring?"

Once the Accident/Incident Investigation is Completed

- Take or recommend corrective action (i.e. employee suspension, re-training)
- Document corrective action
- Management and the Safety Program Administrator will review the results of all investigations
- Consider safety program modifications

Information obtained through accident investigations can be used to update and improve our current program.

TRAINING AND INSTRUCTION

Every new employee will be given instruction by their Supervisor in the general safety requirements of their job. A copy of our Code of Safe Practices shall also be provided to each employee.

Managers, Supervisors, and employees will be trained at least twice per year on various accident prevention topics.

Training provides the following benefits:

- Makes employees aware of job hazards
- Teaches employees to perform jobs safely
- Promotes two way communication
- Encourages safety suggestions
- Creates interest in the safety program
- Fulfills Federal or State (if applicable) OSHA requirements

Employee training will be provided at the following times:

1. All new employees will receive a safety orientation their first day on the job.

2. All new employees will be given a copy of the Code of Safe Practices and required to read and sign for it.

3. All employees given a new job assignment for which training has not been previously provided will be trained before beginning the new assignment.

4. Whenever new substances, processes, procedures or equipment that represent a new hazard are introduced into the workplace.

5. Whenever the company is made aware of a new or previously unrecognized hazard.

6. Whenever management believes that additional training is necessary.

7. After all serious accidents.

8. After all utility strikes.

9. When employees are not following safe work rules or procedures.

Training topics will include, but not be limited to:

- Employee's safety responsibility
- General safety rules
- Code of Safe Practices
- Safe job procedures
- Ergonomics
- Use of hazardous materials
- Use of equipment
- Emergency procedures
- Safe lifting and material handling practices
- Contents of safety program

Documentation of Training

All training will be documented on one of the following three forms.

New Employee Safety Orientation
Employee Safety Contact Form
Safety Meeting Report

The following training method should be used. Actual demonstrations of the proper way to perform a task are very helpful in most cases.

- Tell them how to do the job safely
- Show them how to do the job safely
- Have them tell you how to do the job safely
- Have them show you how to do the job safely
- Follow up to ensure they are still performing the job safely

FIRE PREVENTION AND EMERGENCY ACTION PLAN

The company has developed the following emergency plan to cover those designated actions that must be taken to ensure employee safety from fire and during other emergencies. Any questions about this plan should be directed to The Safety Program Administrator.

Facility Emergency Evacuation and Fire Prevention

The Safety Program Administrator is responsible for ensuring the following:

1. That all required emergency exits are clearly identified in the office, shop, and warehouse and that all required fire fighting and emergency equipment is available and in good condition.

   The following items will be maintained:

   - First aid kit
   - Drinking water
   - Flashlight
   - Portable battery powered radio and batteries
   - Fire extinguishers
   - Wrench to shut off the main gas valve
   - Pry bars, axes, saws, tools or similar devices for employee rescue

2. Creating a facility map designating all emergency evacuation routes and the locations of all fire fighting equipment and emergency supplies and equipment. These maps will be posted in at least two locations in the facility.

3. Training all exposed employees on the procedures to be followed in the event of fire, earthquake or other emergency including how to properly notify other affected employees.

4. Identifying potential fire hazards in the office, shop and warehouse and ensuring that adequate steps are taken to prevent fires.

5. Ensuring that combustible trash and materials are removed promptly from the facility, and that all flammable and combustible liquids are properly stored and handled.

During an Emergency

In the event of an emergency such as earthquake or fire, all employees are expected to evacuate the premises immediately. The Safety Program Manager or Safety Committee members may assign some employees the task of shutting off the gas or electricity, if needed. At no time will any employee be expected to jeopardize their own safety to do this.

Employees will be notified of emergencies through one of the following:

- Fire alarm
- Intercom
- Emergency horn
- Direct voice communication

After the emergency evacuation has been completed, a head count will be taken to ensure everyone is out of the building.

If necessary, the Safety Program Administrator or Safety Committee members may assign some employees to rescue trapped employees.

Fire Prevention in Shops and Warehouses

The following procedures will be used to prevent fires in shops and warehouses.

1. All accumulated combustible trash and debris will be removed as soon as practical.

2. Flammable liquids will only be stored and dispensed from UL approved safety containers designed for that purpose.

3. All rags soaked with flammable or combustible liquids will be properly stored in closed metal containers.

4. Appropriate precautions will be taken to prevent fires when torch cutting, welding or soldering.

5. Compressed gas cylinders containing flammable or explosive gasses will be properly stored in the upright position with their caps on and protected from heat or puncture. Fuel gas and oxygen shall be separated at least 20 feet when stored.

6. Smoking or open lights are prohibited within 50 feet of flammable liquid or gas storage and dispensing areas.

7. Flammable solvents will not be used for cleaning purposes.

8. A fire extinguisher, rated not less than 2A, shall be provided for each 3,000 square feet of the floor area, or fraction thereof. Where the floor area is less than 3,000 square feet, at least one extinguisher shall be provided.

9. Travel distance from any point of the protected area to the nearest fire extinguisher shall not exceed 75 feet.

10. At least one fire extinguisher, rated not less than 2A, shall be provided on each floor. In multi-story buildings, at least one fire extinguisher shall be located adjacent to the stairway at each floor level.

11. A fire extinguisher, rated not less than 10B, shall be provided within 50 feet of wherever more than 5 gallons of flammable or combustible liquids or 5 pounds of flammable gas are being used on the job site. This requirement does not apply to the integral fuel tanks of motor vehicles.

12. Portable fire extinguishers shall be inspected monthly, or at more frequent intervals by the employer, and serviced at least annually by a person licensed or registered by the State Fire Marshal. NOTE: Inspection is a "quick check" that an extinguisher is available and will operate. It is intended to give reasonable assurance that the extinguisher is fully charged and operable. This is done by seeing that it is in its designated place, that it has not been actuated or tampered with, and that there is no obvious or physical damage or condition to prevent operation.

13. Suitable fire control devices, such as portable fire extinguishers, shall be available at locations where flammable or combustible liquids are stored.

14. At least one portable fire extinguisher, having a rating of not less than 20-B units, shall be located outside of, but not more than 10 feet from, the door opening into any room used for flammable liquid storage.

15. At least one portable fire extinguisher, having a rating of not less than 20-B units, shall be located not less than 25 feet, nor more than 75 feet, from any flammable liquid storage area located outside.

RESPIRATORY PROTECTION

Occasionally our work may necessitate the use of respirators to protect against air contaminants. Due to the limitations of respirators and their uncomfortable nature, the company will make every effort to provide other means of protection, such as local exhaust ventilation, or substitution of less hazardous material, prior to requiring employees to wear them.

When it is clearly impractical to remove harmful dusts, fumes, mists, vapors, or gases at their source, or where emergency protection against occasional and/or relatively brief exposure is needed, the company will provide, and the employee exposed to such hazard shall use, approved respiratory equipment.

Whenever respirators are required to be used to control harmful exposures, only respiratory equipment approved for that purpose shall be used and such equipment shall be approved by the National Institute for Occupational Safety and Health (NIOSH). Only parts approved for the specific respirator system shall be used for replacement.

General Respiratory Protection Guidelines:

1. Atmospheric contamination will be prevented wherever feasible through engineering controls such as enclosure or confinement of the operation, general and local exhaust ventilation, or substitution of less toxic materials. When effective engineering controls are not feasible, or while they are being instituted, appropriate respirators shall be used.

2. The company shall identify and evaluate the respiratory hazard(s) in the workplace; this evaluation shall include a reasonable estimate of employee exposures to respiratory hazard(s) and an identification of the contaminant's chemical state and physical form. Where we cannot identify or reasonably estimate the employee exposure, the atmosphere shall be considered to be immediately dangerous to life or health (IDLH).

3. Respirators shall be provided when such equipment is necessary to protect the health of the employee.

4. Only NIOSH-certified respirators shall be used. The respirator shall be used in compliance with the conditions of its certification.

5. The company will provide respirators that are applicable and suitable for the purpose intended. We shall select and provide an appropriate respirator based on the respiratory hazard(s) to which the worker is exposed and workplace and user factors that affect respirator performance and reliability.

6. Respirators shall be selected from a sufficient number of respirator models and sizes so that the respirator is acceptable to, and correctly fits, the user.

7. The safety program administrator is qualified by appropriate training or experience that is commensurate with the complexity of the program to administer or oversee the respiratory protection program and conduct the required evaluations of program effectiveness.

8. The company will provide respirators, training, and medical evaluations at no cost to the employee.

9. The company will provide a medical evaluation to determine the employee's ability to use a respirator, before the employee is fit tested or required to use the respirator in the workplace. We may discontinue an employee's medical evaluations when the employee is no longer required to use a respirator.

10. The company will ensure that employees using a tight-fitting facepiece respirator pass an appropriate qualitative fit test (QLFT) or quantitative fit test (QNFT).

11. The company will establish and implement procedures for the proper use of respirators. These requirements include prohibiting conditions that may result in facepiece seal leakage, preventing employees from removing respirators in hazardous environments, taking actions to ensure continued effective respirator operation throughout the work shift, and establishing procedures for the use of respirators in IDLH atmospheres.

12. We shall provide each respirator user with a respirator that is clean, sanitary, and in good working order. The Supervisor or Manager shall ensure that respirators are cleaned and disinfected.

13. All filters, cartridges and canisters used in the workplace must be legibly labeled and color-coded with the NIOSH approval label that must not be removed.

14. Training and information will be provided to employees who are required to use respirators. The training will be comprehensive, understandable, and recur annually, or more often if necessary.

15. The safety program administrator shall conduct evaluations of the workplace to ensure that the written respiratory protection program is being properly implemented, and to consult with employees to ensure that they are using the respirators properly.

16. Written information regarding medical evaluations, fit testing, and the respirator program shall be retained indefinitely. This information will facilitate employee involvement in the respirator program, assist us in auditing the adequacy of the program, and provide a record for compliance determinations by OSHA.

17. Where respirator use is not required by a particular standard or hazard, the company may provide respirators at the request of employees or permit employees to use their own respirators, if we determine that such respirator use will not in itself create a hazard. If voluntary respirator use is permissible, we shall provide the respirator users with the information contained in Appendix D of section 5144 8CCR. ("Information for Employees Using Respirators When Not Required Under the Standard.")

Respirator Selection Requirements

The proper respirator for the job and hazard shall be selected. This selection will be made in accordance with ANSI Z88.2-1980 standards. The correct respirator shall be specified for each job. The individual issuing them shall be adequately instructed to insure that the correct respirator is used.

The manufacturers' recommendations and literature will also be reviewed to determine if the respirator provides protection against the expected contaminants. For instance, dust masks do not provide protection against gasses or vapors.

The safety program administrator or another qualified individual shall review and approve all breathing air compressors and installations for compliance with appropriate OSHA regulations and safety procedures prior to use.

Respirators for IDLH atmospheres.

We shall provide the following respirators for employee use in IDLH atmospheres:

- A full face piece pressure demand SCBA certified by NIOSH for a minimum service life of thirty minutes, or
- A combination full face piece pressure demand supplied-air respirator (SAR) with auxiliary self-contained air supply.
- Respirators provided only for escape from IDLH atmospheres shall be NIOSH-certified for escape from the atmosphere in which they will be used.
- All oxygen-deficient atmospheres shall be considered IDLH.

Respirators for atmospheres that are not IDLH.

The company shall provide a respirator that is adequate to protect the health of the employee and ensure compliance with all other OSHA statutory and regulatory requirements, under routine and reasonably foreseeable emergency situations. The respirator selected shall be appropriate for the chemical state and physical form of the contaminant.

For protection against gases and vapors:

- An atmosphere-supplying respirator, or
- An air-purifying respirator, provided that the respirator is equipped with an end-of-service-life indicator (ESLI) certified by NIOSH for the contaminant; or if there is no ESLI appropriate for conditions in the workplace, we will implement a change schedule for canisters and cartridges that is based on objective information or data that will ensure that canisters and cartridges are changed before the end of their service life.

For protection against particulates:

- An atmosphere-supplying respirator; or
- An air-purifying respirator equipped with a filter certified by NIOSH under 30 CFR part 11 as a high efficiency particulate air (HEPA) filter, or an air-purifying respirator equipped with a filter certified for particulates by NIOSH under 42 CFR part 84; or
- For contaminants consisting primarily of particles with mass median aerodynamic diameters (MMAD) of at least 2 micrometers, an air-purifying respirator equipped with any filter certified for particulates by NIOSH.

Medical Evaluation Procedures

1. Employees shall not be assigned to tasks requiring the use of respirators unless it has been determined that they are physically able to perform the work while using the required respiratory equipment.

2. The company shall identify a physician or other licensed health care professional (PLHCP) to perform medical evaluations.

3. The medical evaluation shall include any medical tests, consultations, or diagnostic procedures that the PLHCP deems necessary to make a final determination.

4. Medical questionnaires and examinations shall be administered confidentially during the employee's normal working hours or at a time and place convenient to the employee.

5. The employee shall have an opportunity to discuss the examination results with the PLHCP.

6. The following information must be provided to the PLHCP before the PLHCP makes a recommendation concerning an employee's ability to use a respirator:

    - The type and weight of the respirator to be used by the employee;
    - The duration and frequency of respirator use (including use for rescue and escape);
    - The expected physical work effort;
    - Additional protective clothing and equipment to be worn; and
    - Temperature and humidity extremes that may be encountered.

7. The company shall provide the PLHCP with a copy of this written respiratory protection program and a copy of the OSHA regulations if they do not already have them.

8. In determining the employee's ability to use a respirator, the company shall obtain a written recommendation regarding the employee's ability to use the respirator from the PLHCP. The recommendation shall provide only the following information:

- Any limitations on respirator use related to the medical condition of the employee, or relating to the workplace conditions in which the respirator will be used, including whether or not the employee is medically able to use the respirator;
- The need, if any, for follow-up medical evaluations; and
- A statement that the PLHCP has provided the employee with a copy of the PLHCP's written recommendation.

9. If the respirator is a negative pressure respirator and the PLHCP finds a medical condition that may place the employee's health at increased risk if the respirator is used, the company shall provide a powered air purifying respirator (PAPR) if the PLHCP's medical evaluation finds that the employee can use such a respirator; if a subsequent medical evaluation finds that the employee is medically able to use a negative pressure respirator, then we are no longer required to provide a PAPR.

10. The company shall provide additional medical evaluations that comply with the requirements of this section if:

    - An employee reports medical signs or symptoms that are related to ability to use a respirator;
    - A PLHCP, supervisor, or the respirator program administrator informs the employer that an employee needs to be reevaluated;
    - Information from the respiratory protection program, including observations made during fit testing and program evaluation, indicates a need for employee reevaluation; or
    - A change occurs in workplace conditions (e.g., physical work effort, protective clothing, temperature) that may result in a substantial increase in the physiological burden placed on an employee.

<u>Fit Testing</u>

1. The company shall ensure that an employee using a tight-fitting face piece respirator is fit tested prior to initial use of the respirator, whenever a different respirator face piece (size, style, model or make) is used, and at least annually thereafter.

2. We shall conduct an additional fit test whenever the employee reports, or the employer, PLHCP, supervisor, or program administrator makes visual observations of, changes in the employee's physical condition that could affect respirator fit. Such conditions include, but are not limited to, facial scarring, dental changes, cosmetic surgery, or an obvious change in body weight.

3. If after passing a QLFT or QNFT, the employee subsequently notifies the program administrator, supervisor, or PLHCP that the fit of the respirator is unacceptable, the employee shall be given a reasonable opportunity to select a different respirator face piece and to be retested.

4. The fit test shall be administered using an OSHA-accepted QLFT or QNFT protocol.

<u>Usage Rules</u>

1. The company shall not permit respirators with tight-fitting face pieces to be worn by employees who have:

    - Facial hair that comes between the sealing surface of the face piece and the face or that interferes with valve function; or
    - Any condition that interferes with the face-to-face piece seal or valve function.

2. If an employee wears corrective glasses or goggles or other personal protective equipment, we shall ensure that such equipment is worn in a manner that does not interfere with the seal of the face piece to the face of the user.

3. For all tight-fitting respirators, we shall ensure that employees perform a user seal check each time they put on the respirator.

4. Appropriate surveillance shall be maintained of work area conditions and degree of employee exposure or stress. When there is a change in work area conditions or degree of employee exposure or stress that may affect respirator effectiveness, we shall reevaluate the continued effectiveness of the respirator.

5. Respiratory equipment shall not be passed on from one person to another until it has been cleaned and sanitized. Respirators individually assigned should be marked to indicate to whom it was assigned. This mark shall not affect the respirator performance in any way. The date of issuance should be recorded.

6. When not in use, respirators shall be stored to protect against dust, sunlight, extreme temperatures, excessive moisture, or damaging chemicals. Plastic zip lock bags are suitable for storage.

7. The company shall ensure that employees leave the respirator use area:

    - To wash their faces and respirator facepieces as necessary to prevent eye or skin irritation associated with respirator use; or
    - If they detect vapor or gas breakthrough, changes in breathing resistance, or leakage of the facepiece; or
    - To replace the respirator or the filter, cartridge, or canister elements.

8. If the employee detects vapor or gas breakthrough, changes in breathing resistance, or leakage of the facepiece, we will replace or repair the respirator before allowing the employee to return to the work area.

9. For all IDLH atmospheres, the company shall ensure that:

    - One employee or, when needed, more than one employee is located outside the IDLH atmosphere;
    - Visual, voice, or signal line communication is maintained between the employee(s) in the IDLH atmosphere and the employee(s) located outside the IDLH atmosphere;
    - The employee(s) located outside the IDLH atmosphere are trained and equipped to provide effective emergency rescue;
    - The Supervisor or designee is notified before the employee(s) located outside the IDLH atmosphere enter the IDLH atmosphere to provide emergency rescue;
    - The Supervisor or designee authorized to do so by the company, once notified, provides necessary assistance appropriate to the situation;
    - Employee(s) located outside the IDLH atmospheres are equipped with pressure demand or other positive pressure SCBAs, or a pressure demand or other positive pressure supplied-air respirator with auxiliary SCBA; and either appropriate retrieval equipment for removing the employee(s) who enter(s) these hazardous atmospheres where retrieval equipment would contribute to the rescue of the employee(s) and would not increase the overall risk resulting from entry; or equivalent means for rescue where retrieval equipment is not required.

<u>Maintenance, Inspection and Care of Respirators.</u>

1. The company shall ensure that respirators are cleaned and disinfected using procedures recommended by the respirator manufacturer, provided that such procedures are of equivalent effectiveness to OSHA regulations. The respirators shall be cleaned and disinfected at the following intervals:

    - Respirators issued for the exclusive use of an employee shall be cleaned and disinfected as often as necessary to be maintained in a sanitary condition;
    - Respirators issued to more than one employee shall be cleaned and disinfected before being worn by different individuals;

- Respirators maintained for emergency use shall be cleaned and disinfected after each use; and
- Respirators used in fit testing and training shall be cleaned and disinfected after each use.

2. All respirators shall be stored to protect them from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture, and damaging chemicals, and they shall be packed or stored to prevent deformation of the facepiece and exhalation valve.

3. Emergency respirators shall be:

    - Kept accessible to the work area;
    - Stored in compartments or in covers that are clearly marked as containing emergency respirators; and
    - Stored in accordance with any applicable manufacturer instructions.

4. All respirators used in routine situations shall be inspected before each use and during cleaning;

5. All respirators maintained for use in emergency situations shall be inspected at least monthly and in accordance with the manufacturer's recommendations, and shall be checked for proper function before and after each use; and

6. Emergency escape-only respirators shall be inspected before being carried into the workplace for use.

7. The company shall ensure that respirator inspections include the following:

    - A check of respirator function, tightness of connections, and the condition of the various parts including, but not limited to, the facepiece, head straps, valves, connecting tube, and cartridges, canisters or filters; and
    - A check of elastomeric parts for pliability and signs of deterioration.

8. In addition to the requirements above, self-contained breathing apparatus shall be inspected monthly.

9. Air and oxygen cylinders shall be maintained in a fully charged state and shall be recharged when the pressure falls to 90% of the manufacturer's recommended pressure level. The employer shall determine that the regulator and warning devices function properly.

10. For respirators maintained for emergency use, the company shall:

    - Certify the respirator by documenting the date the inspection was performed, the name (or signature) of the person who made the inspection, the findings, required remedial action, and a serial number or other means of identifying the inspected respirator; and
    - Provide this information on a tag or label that is attached to the storage compartment for the respirator, is kept with the respirator, or is included in inspection reports stored as paper or electronic files. This information shall be maintained until replaced following a subsequent certification.

11. Repairs. The company shall ensure that respirators that fail an inspection or are otherwise found to be defective are removed from service, and are discarded or repaired or adjusted in accordance with the following procedures:

    - Repairs or adjustments to respirators are to be made only by persons appropriately trained to perform such operations and shall use only the respirator manufacturer's NIOSH-approved parts designed for the respirator;
    - Repairs shall be made according to the manufacturer's recommendations and specifications for the type and extent of repairs to be performed; and
    - Reducing and admission valves, regulators, and alarms shall be adjusted or repaired only by the manufacturer or a technician trained by the manufacturer.

Training

1. The company shall ensure that each employee required to use a respirator can demonstrate knowledge of at least the following:

    - Why the respirator is necessary and how improper fit, usage, or maintenance can compromise the protective effect of the respirator;
    - What the limitations and capabilities of the respirator are;
    - How to use the respirator effectively in emergency situations, including situations in which the respirator malfunctions;
    - How to inspect, put on and remove, use, and check the seals of the respirator;
    - What the procedures are for maintenance and storage of the respirator;
    - How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators; and

2. The training shall be conducted in a manner that is understandable to the employee.

3. The training shall be provided prior to requiring the employee to use a respirator in the workplace.

4. Retraining shall be administered annually, and when the following situations occur:

    - Changes in the workplace or the type of respirator render previous training obsolete;
    - Inadequacies in the employee's knowledge or use of the respirator indicate that the employee has not retained the requisite understanding or skill; or
    - Any other situation arises in which retraining appears necessary to ensure safe respirator use.

Program Evaluation

1. The safety program administrator shall conduct evaluations of the workplace as necessary to ensure that the provisions of the current written program are being effectively implemented and that it continues to be effective.

2. The safety program administrator shall regularly consult employees required to use respirators to assess the employees' views on program effectiveness and to identify any problems. Any problems that are identified during this assessment shall be corrected. Factors to be assessed include, but are not limited to:

    - Respirator fit (including the ability to use the respirator without interfering with effective workplace performance);
    - Appropriate respirator selection for the hazards to which the employee is exposed;
    - Proper respirator use under the workplace conditions the employee encounters; and
    - Proper respirator maintenance.

Recordkeeping

1. Records of medical evaluations must be retained and made available to regulatory agencies.

2. The company shall establish a record of the qualitative and quantitative fit tests administered to an employee including:

    - The name or identification of the employee tested;
    - Type of fit test performed;
    - Specific make, model, style, and size of respirator tested;
    - Date of test; and

- The pass/fail results for QLFTs or the fit factor and strip chart recording or other recording of the test results for QNFTs.
- Fit test records shall be retained for respirator users until the next fit test is administered.

3. Program records shall be made available upon request to affected employees and to governing or regulatory agencies for examination and copying.

Procedures for Cleaning Respirators.

1. Remove filters, cartridges, or canisters. Disassemble facepieces by removing speaking diaphragms, demand and pressure-demand valve assemblies, hoses, or any components recommended by the manufacturer. Discard and replace any defective parts.

2. Wash components in warm (43 deg. C [110 deg. F] maximum) water with a mild detergent or with a cleaner recommended by the manufacturer. A stiff bristle (not wire) brush may be used to facilitate the removal of dirt.

3. Rinse components thoroughly in clean, warm (43 deg. C [110 deg. F] maximum), preferably running water. Drain.

4. When the cleaner used does not contain a disinfecting agent, respirator components should be immersed for two minutes in one of the following:

    - Hypochlorite solution (50 ppm of chlorine) made by adding approximately one milliliter of laundry bleach to one liter of water at 43 deg. C (110 deg. F); or,
    - Aqueous solution of iodine (50 ppm iodine) made by adding approximately 0.8 milliliters of tincture of iodine (6-8 grams ammonium and/or potassium iodide/100 cc of 45% alcohol) to one liter of water at 43 deg. C (110 deg. F); or,
    - Other commercially available cleansers of equivalent disinfectant quality when used as directed, if their use is recommended or approved by the respirator manufacturer.

5. Rinse components thoroughly in clean, warm (43 deg. C [110 deg. F] maximum), preferably running water. Drain. The importance of thorough rinsing cannot be overemphasized. Detergents or disinfectants that dry on facepieces may result in dermatitis. In addition, some disinfectants may cause deterioration of rubber or corrosion of metal parts if not completely removed.

6. Components should be hand-dried with a clean lint-free cloth or air-dried.

7. Reassemble facepiece, replacing filters, cartridges, and canisters where necessary.

8. Test the respirator to ensure that all components work properly.

Mandatory Information for Employees Using Respirators When Not Required

Respirators are an effective method of protection against designated hazards when properly selected and worn. Respirator use is encouraged, even when exposures are below the exposure limit, to provide an additional level of comfort and protection for workers. However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to the worker. Sometimes, workers may wear respirators to avoid exposures to hazards, even if the amount of hazardous substance does not exceed the limits set by OSHA standards. If your employer provides respirators for your voluntary use, or if you provide your own respirator, you need to take certain precautions to be sure that the respirator itself does not present a hazard.

You should do the following:

1. Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirators limitations.

2. Choose respirators certified for use to protect against the contaminant of concern. NIOSH, the National Institute for Occupational Safety and Health of the U.S. Department of Health and Human Services, certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will tell you what the respirator is designed for and how much it will protect you.

3. Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke.

4. Keep track of your respirator so that you do not mistakenly use someone else's respirator.

ELECTRICAL & LOCK-OUT / TAG-OUT PROGRAM

The company has developed the following procedures to protect our employees and reduce the risk of accidents. We will also conduct a periodic review of electrical safety, energy control procedures, and lock-out / tag-out, at least annually, to ensure that the procedure and the requirements of this section are being followed.

This procedure is binding upon all employees. All employees will be instructed in the significance of electrical safety, energy control procedures, and lock-out / tag-out. Each new employee shall be instructed by their Supervisor in the purpose and use of these procedures.

All Equipment and Installations

1. Only trained, qualified, and authorized employees will be allowed to make electrical repairs or work on electrical equipment or installations.

2. All electrical equipment and systems shall be treated as energized until tested or otherwise proven to be de-energized.

3. All energized equipment and installations will be de-energized prior to the commencement of any work. If the equipment or installation must be energized for test or other purposes, special precautions will be taken to protect against the hazards of electric shock.

4. All equipment shall be locked out to protect against accidental or inadvertent operation when such operation could cause injury to personnel. Do not attempt to operate any switch, valve, or other energy-isolating device bearing a lock.

5. Safety grounds shall always be used where there is a danger of shock from back feeding or other hazards.

6. Polyester clothing or other flammable types of clothing shall not be worn near electrical circuits. Cotton clothing is much less likely to ignite from arc blast. Employees working on live circuits shall be provided Nomex or equivalent fire resistant clothing.

7. Suitable eye protection must be worn at all times while working on electrical equipment.

8. Always exercise caution when energizing electrical equipment or installations. Take steps to protect employees from arc blast and exploding equipment in the event of a fault.

9. All power tools will be grounded or double insulated. Tools with defective cords or wiring shall not be used.

10. Suitable temporary barriers or barricades shall be installed when access to open enclosures containing exposed energized equipment is not under the control of an authorized person.

Energized Equipment or Systems

Work shall not be performed on exposed energized parts of equipment or systems until the following conditions are met:

1. Responsible supervision has determined that the work is to be performed while the equipment or systems are energized.

2. Involved personnel have received instructions on the work techniques and hazards involved in working on energized equipment and appropriate equipment to perform the job has been provided.

3. Suitable personal protective equipment has been provided and is used. Suitable insulated gloves shall be worn for voltages in excess of 300 volts, nominal.

4. Suitable eye protection, including face shield and safety glasses or goggles, has been provided and is used.

5. Fire resistant clothing such as Nomex suits is worn.

6. Where required, suitable barriers, barricades, tags, or signs are in place for personnel protection.

After the required work on an energized system or equipment has been completed, an authorized person shall be responsible for:

1. Removing from the work area any personnel and protective equipment.

2. Reinstalling all permanent barriers or covers.

De-energized Equipment or Systems

A qualified person shall be responsible for completing the following before working on de-energized electrical equipment or systems, unless the equipment is physically removed from the wiring system:

1. Notifying all involved personnel.

2. Locking the disconnecting means in the "open" position with the use of lockable devices, such as padlocks, combination locks or disconnecting of the conductor(s) or other positive methods or procedures which will effectively prevent unexpected or inadvertent energizing of a designated circuit, equipment or appliance.

3. Tagging the disconnecting means with suitable accident prevention tags.

4. Effectively blocking the operation or dissipating the energy of all stored energy devices which present a hazard, such as capacitors or pneumatic, spring-loaded and like mechanisms. This may require the installation of safety grounds.

5. Testing the equipment to ensure it is de-energized.

Energizing (or Re-energizing) Equipment or Systems

A qualified and authorized person shall be responsible for completing the following before energizing equipment or systems that have been de-energized:

1. Determining that all persons are clear from hazards which might result from the equipment or systems being energized including arc blast or explosions caused by unexpected faults.

2. Removing locking devices and tags. Only the employee who placed them may remove locking devices and tags. Locking devices and tags shall be removed upon completion of the work and after the installation of the protective guards and/or safety interlock systems.

Accident Prevention Tags

Suitable accident prevention tags shall be used to control a specific hazard. Such tags shall provide the following minimum information:

1. Reason for placing tag.

2. Name of person placing the tag and how that person may be contacted.

3. Date tag was placed.

Lock-out / Tag-out

Machinery or equipment capable of movement shall be stopped and the power source de-energized or disengaged, and locked out. If necessary, the moveable parts shall be mechanically blocked or secured to prevent inadvertent movement during cleaning, servicing or adjusting operations unless the machinery or equipment must be capable of movement during this period in order to perform the specific task. If so, the hazard of movement shall be minimized.

Equipment or power driven machines equipped with lockable controls, or readily adaptable to lockable controls, shall be locked out or positively sealed in the "off" position during repair work and setting-up operations. In all cases, accident prevention signs and/or tags shall be placed on the controls of the equipment or machines during repair work.

The company will provide a sufficient number of accident prevention signs or tags and padlocks, seals or other similarly effective means that may be required by any reasonably foreseeable repair.

Sequence of Lockout Procedure

1. Notify all affected employees that a lockout is required and the reason therefore.

2. If the equipment is operating, shut it down by the normal stopping procedure (such as: depress stop button, open toggle switch).

3. Operate the switch, valve, or other energy isolating devices so that the energy source(s) (electrical, mechanical, hydraulic, other) is disconnected or isolated from the equipment.

4. Stored energy, such as that in capacitors, springs, elevated machine members, rotating fly wheels, hydraulic systems, and air, gas, steam or water pressure, must also be dissipated or restrained by methods such as grounding, repositioning, blocking, bleeding down.

5. Lockout energy isolating devices with an assigned individual lock.

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

Procedure Involving More Than One Person

If more than one individual is required to lock out equipment, each shall place his/her own personal lock on the energy isolating device(s). One designated individual of a work crew or a Supervisor, with the knowledge of the crew, may lock out equipment for the whole crew. In such cases, it may be the responsibility of the individual to carry out all steps of the lockout procedure

and inform the crew when it is safe to work on the equipment. Additionally, the designated individual shall not remove a crew lock until it has been verified that all individuals are clear.

Testing Equipment during Lockout

In many maintenance and repair operations, machinery may need to be tested, and for that purpose energized, before additional maintenance work can be performed. This procedure must be followed:

1. Clear all personnel to safety.

2. Clear away tools and materials from equipment.

3. Remove lockout devices and re-energize systems, following the established safe procedure.

4. Proceed with tryout or test.

5. Neutralize all energy sources once again, purge all systems, and lockout prior to continuing work.

Equipment design and performance limitations may dictate that effective alternative worker protection be provided when the established lock-out procedure is not feasible.

Restoring Equipment to Service

After the work is completed and the equipment is ready to be returned to normal operation, this procedure must be followed:

1. Remove all non-essential items.

2. See that all equipment components are operationally intact, including guards and safety devices. Repair or replace defective guards before removing lockouts.

3. Remove each lockout device using the correct removal sequence.

4. Make a visual check before restoring energy to ensure that everyone is physically clear of the equipment.

CONFINED SPACE OPERATIONS

Occasionally in our work, we may encounter confined spaces. Confined space work requires special safety precautions to ensure that employees are not overcome by dangerous air contaminants or oxygen deficiency. In some cases, there may be fire or explosion hazards in confined spaces that do not exist in open areas. Many workers have been killed or seriously injured in confined spaces. To avoid this, employees must adhere to the following rules. This section prescribes minimum standards for preventing employee exposure to dangerous air contamination and/or oxygen deficiency in confined spaces. In some cases, extra precautions may be necessary. As always, if you are unsure, ask for assistance.

Definitions

A confined space has the following properties:

1. Existing ventilation is insufficient to remove dangerous air contamination and/or oxygen deficiency that may exist or develop.

2. Ready access or egress for the removal of a suddenly disabled employee is difficult due to the location and/or size of the opening(s).

3. The area is not designed for continuous human occupancy.

Dangerous air contamination means an atmosphere presenting a threat of causing death, injury, acute illness, or disablement due to the presence of flammable and/or explosive, toxic, or otherwise injurious or incapacitating substances.

Dangerous air contamination due to the flammability of a gas or vapor is defined as an atmosphere containing the gas or vapor at a concentration greater than 20 percent of its lower explosive (lower flammable) limit.

Dangerous air contamination due to a combustible particulate is defined as a concentration greater than 20 percent of the minimum explosive concentration of the particulate.

Dangerous air contamination due to the toxicity of a substance is defined as the atmospheric concentration immediately hazardous to life or health. This definition of dangerous air contamination due to the toxicity of a substance does not preclude the requirement to control harmful exposures to toxic substances at concentrations less than those immediately hazardous to life or health.

Oxygen deficiency. An atmosphere containing oxygen at a concentration of less than 19.5 percent by volume.

Oxygen rich. An atmosphere containing oxygen at a concentration of more than 22 percent by volume. This creates additional fire hazards.

Typical Confined Spaces:

- Vaults
- Pits
- Tubs
- Vats
- Ducts
- Boilers
- Silos
- Sewers

- Compartments

Prior to Confined Space Entry:

1. Written, understandable operating and rescue procedures shall be developed and shall be provided to affected employees. The operating procedures shall include provision for the surveillance of the surrounding area to avoid hazards such as drifting vapors from tanks, piping and sewers.

2. All employees, including standby persons if needed, will be trained in the operating and rescue procedures, including instructions as to the hazards they may encounter.

3. Any lines, pipes or hoses which may convey flammable, injurious, or incapacitating substances into the space shall be disconnected, blinded, or blocked off by other positive means to prevent the development of dangerous air contamination and/or oxygen deficiency within the space. The disconnection or blind shall be so located or done in such a manner that inadvertent reconnection of the line or removal of the blind are effectively prevented.

4. The space shall be emptied, flushed, or otherwise purged of flammable, injurious or incapacitating substances to the extent feasible.

5. The air shall be tested with an appropriate device or method to determine whether dangerous air contamination and/or an oxygen deficiency exists and a written record of such testing results shall be made and kept at the work site for the duration of the work. Affected employees and/or their representative shall be afforded an opportunity to review and record the testing results.

6. Where interconnected spaces are blinded off as a unit, each space shall be tested and the results recorded. The most hazardous condition found shall govern the entry procedures to be followed.

Confined Space Entry if Tests Show No Hazard

If dangerous air contamination and/or oxygen deficiency does not exist within the space, as demonstrated by tests performed in accordance with the pre-entry procedures, entry into and work within the space may proceed subject to the following provisions:

1. Air testing, in accordance with the pre-entry procedures, shall be conducted with sufficient frequency to ensure that the development of dangerous air contamination and/or oxygen deficiency does not occur during the performance of any operation.

2. Work stops, employees exit, and additional precautions are taken if dangerous air contamination and/or oxygen deficiency does develop.

Confined Space Entry if Tests Show Hazards are Present or are Likely to Develop

Where the existence of dangerous air contamination and/or oxygen deficiency is demonstrated by tests performed in accordance with the pre-entry procedures or if the development of dangerous air contamination and/or an oxygen deficiency is imminent, the following requirements shall also apply:

1. Existing ventilation shall be augmented by appropriate means.

2. When additional ventilation has removed dangerous air contamination and/or oxygen deficiency as demonstrated by additional testing conducted (and recorded), entry into and work within the space may proceed.

3. No source of ignition shall be introduced until the implementation of appropriate provisions of this section have ensured that dangerous air contamination due to flammable and/or explosive substances does not exist.

4. Whenever oxygen-consuming equipment such as welding torches, furnaces and the like are to be used, measures shall be taken to ensure adequate combustion air and exhaust gas venting.

5. To the extent feasible, provision shall be made to permit ready entry and exit.

6. Where it is not feasible to provide for ready exit from spaces equipped with automatic fire suppression systems employing harmful design concentrations of toxic or oxygen-displacing gases, or total foam flooding, such systems shall be deactivated. Where it is not practical or safe to deactivate such systems, the use of respiratory protective equipment, such as SCBA, shall apply during entry into and work within such spaces.

<u>Confined Spaces Where Dangerous Air Contamination Cannot be Removed by Ventilation</u>

It is the policy of the company to only work in a confined space if it can be made safe by the means listed above. We will not work in confined spaces where there is an ongoing hazard of air contamination or oxygen deficiency. These operations require extra measures and precautions beyond our immediate ability to perform. If such work does become necessary, a separate program will be developed.

FLEET AND DRIVER SAFETY

The company has established the following guidelines and procedures for our drivers and vehicles to protect the safety of individuals operating any motor vehicle on company business. Protecting our employee drivers, their passengers, and the public is of the highest priority. The commitment of management and employees is critical to the success of this program. Clear communication of, and strict adherence to, the program's guidelines and procedures are essential.

Our primary goal is to maintain a high level of safety awareness and foster responsible driving behavior. Driver safety awareness and responsible driving behavior will significantly decrease the frequency of motor vehicle accidents and reduce the severity of personal injuries and property damage.

Drivers must follow the requirements outlined in this program. Violations of this program may result in disciplinary action up to, and including, suspension of driving privileges or dismissal.

Our program consists of the following elements:

- Driver selection
- Driver training
- Vehicle use policy
- Vehicle inspection & preventive maintenance
- Accident investigation

Driver Selection

Only company authorized and assigned employees are allowed to drive company vehicles at any time. Prior to being authorized and assigned, the company will check the following items. Drivers must have:

- A valid un-restricted drivers license.
- A current MVR driving record with no more than 2 points and no serious or major violations.

The company will also check driving records of all employees authorized to drive on company business on an annual basis.

Employees that do not meet these requirements are not authorized or allowed to drive company vehicles or drive their own vehicle on company business.

Driver Training

All employees driving company vehicles, and personal vehicles on company business, will be given a copy of the Driving Safety Rules and Company Vehicle Use Policy and required to read and sign for them. Safe driving will also be periodically covered at company safety meetings.

Company Vehicle Use Policy

The company has established the following policies pertaining to company vehicles:

1. Personal and off duty use of company vehicles is prohibited.

2. Only authorized employees may drive company vehicles. No other family members may drive company vehicles.

3. Non-employee passengers are not permitted in company vehicles at any time, unless they are business related.

4. Seat belts must be worn in company vehicles at all times.

5. No employee is permitted to drive company vehicles while impaired by alcohol, illegal or prescription drugs, or over the counter medications.

6. All accidents involving company vehicles must be reported to the office immediately.

7. Employees with two or more preventable accidents in a three year period, or that obtain three points on their driving record, will be subject to a loss of their driving privileges or have their driving privileges restricted.

Vehicle Inspection & Preventive Maintenance

All company vehicles must be inspected by the driver prior to each use. Mechanical defects will be repaired immediately. The Safety Program Administrator will periodically spot check company vehicles to determine their condition.

Vehicle inspections will include:

- Lights
- Turn signals
- Emergency flashers
- Tires
- Horn
- Brakes
- Fluids
- Windshield condition and wiper condition
- Mirrors

All vehicles will also be maintained in accordance with the manufacturers' recommendations. It is the responsibility of the individual assigned the vehicle to ensure proper maintenance and repairs are performed. If your vehicle is not safe, do not drive.

Accident Investigation

All accidents in company vehicles will be investigated by the Supervisor, Manager and / or the Safety Program Administrator. Where possible, witness's statements will be obtained and photos used to document the scene of the accident and the damage. Police reports will also be obtained whenever possible. The following guidelines will be used to help determine preventability.

Auto Accident Preventability Guide

This guide will assist in determining whether our driver could have prevented the accident. An accident is preventable if the driver could have done something to avoid it. Drivers are expected to drive defensively. Which driver was primarily at fault, which received a traffic citation, or whether a claim was paid has no bearing on preventability. If there was anything our driver could have done to avoid the collision, then the accident was preventable.

An accident was non preventable when the vehicle was legally and properly parked, or when properly stopped because of a highway patrol officer, a signal, stop sign, or traffic condition. When judging accident preventability, here are some general questions to consider:

1. Does the investigation indicate that the driver considers the rights of others, or is there evidence of poor driving habits that need to be changed?

2. Does the investigation indicate driver awareness? Such phrases as "I did not see," "I didn't think," "I didn't expect," or "I thought" are signals indicating there probably was a lack of awareness, and the accident was preventable. An aware driver should think, expect, and see hazardous situations in time to avoid collisions.

3. Was the driver under any physical stresses that could have been contributory? Did the accident happen near the end of a long day or long drive? Did overeating contribute to fatigue? Did the driver get prior sufficient sleep? Is the driver's vision faulty? Was the driver feeling ill?

4. Was the vehicle defective without the driver's knowledge? Was a pre-trip inspection done, and would it have discovered the defect? A car that pulls to the left or right when the driver applies the brakes, faulty windshield wipers, and similar items are excuses, and a driver using them is trying to evade responsibility. Sudden brake failure, loss of steering, or a blowout might be defects beyond the driver's ability to predict. However, pre-trip inspections and regularly scheduled maintenance should prevent most of these problems. If either of these are the cause of the accident, then the accident was probably preventable by the driver.

5. Could the driver have exercised better judgment by taking an alternate route through less congested areas to reduce the hazardous situations encountered?

6. Could the driver have done anything to avoid the accident?

7. Was the driver's speed safe for conditions?

8. Did the driver obey all traffic signals?

9. Was the driver's vehicle under control?

Intersection Collisions

Failure of our driver to yield the right-of-way, regardless of who has the right of way, as indicated by stop signs or lights, is preventable. The only exception to this is when the driver is properly proceeding through an intersection protected by lights or stop signs and the driver's vehicle is struck in the extreme rear side of the vehicle. Regardless of stop signs, stoplights, or right-of-way, a defensive driver recognizes that the right-of-way belongs to anyone who assumes it and should yield accordingly.

Questions to consider:

1. Did the driver approach the intersection at a speed safe for conditions?
2. Was the driver prepared to stop before entering the intersection?
3. At a blind corner, did the driver pull out slowly, ready to apply the brakes?
4. Did the driver look both ways before proceeding through the intersection?

Sideswipes

Sideswipes are often preventable. Defensive drivers do not get into a position where they can be forced into another vehicle or another vehicle can be forced into them. Defensive drivers continuously check for escape routes to avoid sideswipes. For two lane roads, this means a driver should pass another vehicle only when absolutely certain that he or she can safely complete the pass. A driver should also be ready to slow down and let a passing vehicle that has failed to judge safe passing distance back into the lane. A driver should make no sudden moves that may force another vehicle to swerve. If a driver sideswipes a stationary object while taking evasive action to avoid striking another car or a pedestrian, such an accident may not be

preventable. However, you should consider what the driver could have done or failed to do immediately preceding the evasive action to be in the position of no other options.

A driver is also expected to anticipate the actions of an oncoming vehicle. Sideswiping an oncoming vehicle is often preventable. Again, evasive action, including leaving the roadway, may be necessary if an oncoming vehicle crosses into the driver's lane. Drivers are expected to allow merging vehicles to merge smoothly with them, and to merge smoothly on controlled access highways. Drivers are expected to be able to gauge distances properly when leaving a parking place and enter traffic smoothly.

Questions to consider:

1. Did the driver look to front and rear for approaching and overtaking traffic immediately before starting to pull away from the curb?
2. Did the driver signal before pulling away from the curb?
3. Did the driver look back rather than depend only upon rear-view mirrors?
4. Did the driver start into traffic only when this action would not require traffic to change its speed or direction in order to avoid his or her vehicle?

Head-on Collisions

A head-on collision with a vehicle traveling in the wrong lane may be preventable if the driver could have pulled off the road or taken other evasive action to prevent a collision. However, the driver should never drive into the other lane to avoid the oncoming vehicle. If the driver swerved off the road to avoid a head-on collision, the accident is non-preventable. The driver in this case made a good defensive driving decision, taking the lesser of two evils.

Many skidding conditions are caused by rain, freezing rain, fog, and snow, which all increase the hazard of travel. Oily road film, which builds up during a period of good weather, causes an especially treacherous condition during the first minutes of a rainfall. Loss of traction can be anticipated, and these accidents usually are preventable. Driving too fast for conditions is the most common reason why these types of accidents are preventable.

Questions to consider:

1. Was the driver operating at a safe speed considering weather and road conditions?
2. During inclement weather, was the driver keeping at least twice the safe following distance used for dry pavement?
3. Were all actions gradual?
4. Was the driver anticipating ice on bridges, in gutter, ruts, and near the curb?
5. Was the driver alert for water, ice or snow in shaded areas, loose gravel, sand, ruts, etc?

If a driver goes off the road or strikes another vehicle because of skidding, the accident is preventable.

Pedestrian Accidents

All types of pedestrian accidents, including collisions with pedestrians coming from between parked cars, are usually considered preventable. There are few instances where the action of pedestrians is so unreasonable that the operator could not be expected to anticipate such an occurrence.

Questions to consider:

1. Did the driver go through congested areas expecting that pedestrians would step in front of the vehicle?
2. Was the driver prepared to stop?
3. Did the driver keep as much clearance between his or her vehicle and parked vehicles, as safety permitted?
4. Did the driver stop when other vehicles had stopped to allow pedestrians to cross?
5. Did the driver wait for the green light or stop for the caution light?

6. Was the driver aware of children and prepared to stop if one ran into the street?
7. Did the driver give all pedestrians the right-of-way?
8. Did the driver stop for a school bus that was stopped and properly signaling that passengers were loading or unloading?

Backing Accidents

Backing a vehicle into another vehicle, an overhead obstruction, or a stationary object is normally preventable. The fact that someone was directing the driver in backing does not relieve the driver of the responsibility to back safely.

Questions to consider:

1. Was it necessary to back?
2. Did the driver plan ahead so that he or she could have pulled forward out of the parking space instead of backing?
3. Was it necessary to drive into the narrow street, dead-end alley, or driveway from which he or she backed?
4. If the driver could not see where he or she was backing: Did the driver try to get someone to guide him or her?
5. Did the driver look all around the vehicle before backing? Did the driver back immediately after looking?
6. Did the driver use the horn while backing? Were the back-up lights working?
7. Did the driver look to the rear without relying totally on the rear-view mirror?
8. If the distance was long, did the driver stop, get out, and look around occasionally?
9. Did the driver back slowly?
10. Did the driver judge clearances accurately?

Parking Accidents

Doors on our driver's parked vehicle that are damaged when opened on the traffic side are considered preventable accidents. The driver is responsible to see that the traffic side is clear of traffic, before any doors on that side are opened.

In most cases, if our driver, while driving, strikes a parked vehicle's opening door it is considered preventable. Usually our driver can see from a sufficient distance that the parked vehicle is occupied, and should therefore, be prepared to stop, should move closer to the center line or change lanes.

It is a driver's responsibility to park the vehicle so that it will remain stationary. A runaway type accident is preventable and blaming such a collision on defective parking brakes or other holding devices are inadequate excuses. A good pre-trip inspection and maintenance program will eliminate most opportunities for this type of accident being the result of mechanical failure.

Accidents occurring when vehicles are properly and legally parked are considered non preventable. Accidents occurring while the vehicle was double-parked or in a "No Parking" zone are preventable.

Questions to consider:

1. Was the vehicle parked on the proper side of the road?
2. Was it necessary to park there or was there a safer, only slightly less convenient place nearby?
3. Did the driver have to park on the traveled part of the highway, on the curve, or on the hill?
4. When required, did the driver warn traffic by emergency warning devices?
5. Did the driver park parallel to the curb?
6. Was it necessary to park so close to an alley or directly across from a driveway?

Collision with Obstructions

Obstructions can be avoided if the driver knows the height and width of the vehicle, pays attention to posted clearances, and takes the time to properly judge clearances.

Cargo Accidents

The accident should be considered preventable if the investigation shows a mechanical defect of which the driver was aware, a defect the driver should have found by inspecting the vehicle, or the driver caused the accident by rough and abusive handling. It is a driver's responsibility to secure cargo properly to prevent shifting, loss, or damage. Cargo should be safely stowed to prevent flying objects that can strike or distract the driver.

TRENCHING AND SHORING PROCEDURES

Purpose

The purpose of this program is to ensure the safety of employees during work in trenches and excavations.

Scope

If an employee performs work on a site other than your company's site, the facility owner's plan should be used if it exists and is as strict (or more strict) than this plan. In cases where the other facility's plan does not exist or is less strict than this plan, company employees will operate under this plan.

Definitions

Accepted engineering practice - the standard of practice that is required by a registered professional engineer.

Aluminum Hydraulic Shoring - a manufactured system that consists of aluminum hydraulic cylinders (cross braces) used in conjunction with vertical rails (uprights) or horizontal rails (wales).

Bell-bottom pier hole - a type of footing excavation in which the bottom cross-section is larger than the shaft above, forming a bell shape.

Benching (Benching system) - a method to prevent cave-ins by excavating to form one or more horizontal steps on the sides of an excavation (usually with vertical or near-vertical surfaces between levels).

Cave-in - the unanticipated movement of soil or rock into an excavation, or the movement of soil from under a trench shield or support system in quantities large enough to bury, trap, or injure and immobilize a person.

Cross brace - a horizontal member of a shoring system that is installed from side to side in an excavation. Cross braces contact either uprights or wales.

Excavation – a man-made cavity, trench, cut, or depression in the earth surface that is formed by removing earth.

Faces (sides) - the vertical or inclined earth surfaces that are formed as a result of excavation work.

Failure - the damage or movement of a structural component that compromises its ability to support loads.

Hazardous atmosphere - an atmosphere that is poisonous, explosive, flammable, irritating, toxic, oxygen deficient, corrosive, oxidizing, or otherwise harmful, which may cause illness, injury, or death.

Health Safety Officer – the employee responsible to develop and implement this program, conduct unannounced work site inspections, and ensure that company departments comply with program requirements.

Kickout - the accidental failure or movement of a cross brace.

Protective system - a way to protect employees from cave-ins, material falling or rolling into an excavation, or the collapse of adjacent structures. This includes sloping and benching systems, support systems, shield systems, and other systems that protect the employee.

Ramp - an inclined walking or working surface used to access one point from another. A ramp may be fashioned from earth, or from structural materials such as wood or steel.

Sheeting - the components of a shoring system that keep the earth in position, and are supported by other components of the shoring system.

Shield (Shield system) - a structure that protects employees by withstanding cave-ins. These may be permanent or potable units are move along as work progresses. Shields that are used in trenches are usually termed "trench shields" or "trench boxes".

Shoring (Shoring system) - a structure that supports the sides of an excavation to prevent cave-ins. It is built or put in place.

Sides. See "Faces."

Sloping (Sloping system) –protects employees from cave-ins by sloping the sides of the excavation away from the excavation. The soil type, weather, and surface or nearby surface loads (may affect the soil in the area of the trench – e.g. adjacent buildings, vehicles near the edge of the trench etc.) will affect the required slope.

Stable rock – rock (natural solid mineral material) that can have vertical sides in the excavation (they will remain intact while exposed).

Structural ramp - a ramp that is constructed of wood or steel, and usually is used for vehicle access. Ramps that are constructed out of soil or rock are not considered structural ramps.

Support system means a structure such as underpinning, bracing, or shoring, which provides support to an adjacent structure, underground installation, or the sides of an excavation.

Tabulated data - tables and charts used to design and construct a protective system that are approved by a registered professional engineer.

Trench (Trench excavation) – an excavation below the earth's surface that is narrow (in relation to its length).

Trench box or Trench shield. See "Shield".

Uprights - the vertical components of a trench shoring system that are placed on the earth. They are usually positioned so that uprights do not touch one another. If uprights are in touching or interconnected with each other, or are closely spaced, they are often called "sheeting."

Wales - horizontal components of a shoring system that are placed parallel to the excavation face, and whose sides touch the vertical components (uprights or sheeting) of the shoring system or earth.

Key Responsibilities

Management in each region will determine whether this program is required for regulatory compliance. If it is required, management will decide which employees are required to be trained. Management will choose a training facility or use a qualified in-house trainer to conduct the training.

All personnel involved in working in trenches or excavations must be trained. DO NOT initiate trenching.

Procedure

Duties of the Safety Manager (Competent Person):

Protective Systems or Equipment

1. Monitor water removal operations and equipment.
2. Remove workers if the circumstances warrant it.
3. Atmospheric testing.
4. Inspect excavations that are likely to receive runoff from heavy rains to determine whether diversion ditches, dikes, or other suitable protection are required.

5. Determine if there is a potential for cave-in to assess whether shoring or other protective system is required.
6. Examine damaged material or equipment used for protective systems to determine whether it is suitable for continued use.
7. Classify soil and rock deposits (visually and testing) to determine appropriate protection; if conditions change, re-classify.
8. Determine the appropriate excavation slope to prevent cave-ins due to surplus loads from equipment or stored material, adjacent structures, operating equipment, or traffic, and ensure that the slope is achieved.

Inspecting Trench and Protective Systems

- Prior to entry, inspect for evidence of failure of protective systems, a possible cave-in, hazardous atmospheres, or other hazardous conditions, and authorize the immediate removal of employees from the hazardous area.

Unsafe Access/Egress

- Design structural ramps to be used solely by employees to enter or exit the excavation. Any structural ramps that are used for equipment must be designed by someone with structural design qualifications.

Utilities and Pre-work Site Inspection

Determine the location of underground utilities before excavating and contact utility companies where applicable.

If utility companies or owners are unable to respond within 24 hours to a request to locate underground utility installations, or are unable to establish the exact location of these installations, your company is allowed to proceed but must do so cautiously, and must use detection equipment or another acceptable means to locate utility installations.

Excavations shall be conducted such that they do not endanger underground installations or employees involved in the work. If utilities are left in place, they must be protected by shoring, barricades, suspension or other means to protect employees.

Protection of the Public

Prior to beginning excavation operations, barricades, walkways, lighting and posting must be in place for the protection of the public.

Excavations that are adjacent to walkways, driveways and other pedestrian or vehicle thoroughfares must have guardrails, fences, or barricades installed. During the period between sunset and sunrise, warning lights or other lighting must be maintained as required for the safety of the public and employees.

Hazardous excavations (including wells, holes, pits, shafts) must be effectively barricaded, or covered and posted to prevent unauthorized access. These types of temporary excavations must be backfilled as soon as possible.

Protection Against Falls

Where employees and the general public are permitted to cross over excavations, walkways or crossings must have standard guardrails or railings installed. If workers in the excavation pass under these walkways or bridges, the walkway or bridge must have a standard guardrail and toe board installed.

Protection of Workers in Excavations

Access and Means of Egress

Where employees must enter trench excavations over 4 feet deep, a ladder, ramp or stairs must be provided. An employee must not have to travel more than 25 feet laterally; or along the length of the trench before reaching a means of egress. In other words, egress shall not exceed 25ft of lateral travel.

Structural Ramps

A competent person must design any structural ramps used solely by employees as a means of entering or exiting the excavation. All structural ramps that are used for equipment entering or exiting the excavation must be designed by a person with structural design qualifications, and must be constructed according to the design.

All ramps and runways that have two or more structural components must have the structural components connected together to prevent displacement or movement.

The structural components of ramps and runways must be of uniform thickness.

Runway structural component connections (cleats or other appropriate means) must be attached to the bottom of the runway or attached such that they do not pose a tripping hazard.

All structural ramps that are used instead of steps must have cleats or other top surface treatment to prevent slipping.

Ladders
If using portable ladders, the ladder side rails must extend at least 3 feet above the upper surface of the excavation.

If performing work near exposed energized equipment or systems, ladders must have nonconductive side rails.

Where ladders serve two-way traffic, or where ladders serve as the primary means of exiting and 25 or more employees are working in the excavation, you must provide two or more ladders, or a double-cleated ladder.

Prior to use, inspect ladders for signs of damage or defects. Any damaged or defective ladders must be removed from service and marked with "Do Not Use" until they are repaired.

Only use ladders on stable and level surfaces unless the ladder is secured. If placing a ladder in a location where it can be displaced by workplace activities or traffic, you must secure it use barricades to keep these activities away from the ladder.

Ladders that are not self-supporting must be positioned so the foot of the ladder is one foot away from the support for every four feet of height.

Never allow employees on ladders to carry any object or load that could cause them to lose their balance and fall.

Exposure to Vehicular Traffic
When employees are exposed to vehicular traffic they must be provided with, and must wear vests or other suitable clothing that is marked with or made of reflective or highly-visible material. Flagmen must wear warning vests that are red or orange, and must be made from reflective material if worn during night work. Engineering controls such as barriers are preferable over PPE.

Employee Exposure to Falling Loads
Employees are never allowed under loads being handled by lifting or digging equipment, or where loads may fall. When a vehicle is being loaded or unloaded, employees must stand away to avoid being struck by any spillage or falling materials. If a vehicle provides adequate protection for the operator, they may remain in the cab of a vehicle being loaded or unloaded.

Warning System for Mobile Equipment
When mobile equipment is operated ear the edge of an excavation, if the operator does not have a clear and direct view of the edge of the excavation, a warning system must be used. The warning system will include barricades, hand or mechanical signals, or stop logs. If possible, the grading should be sloped away from the excavation.

Hazardous Atmospheres
In excavations over 4 feet deep, or if a hazardous atmosphere exists or could reasonably be expected to exist, you must test the atmosphere for air contaminants (oxygen, flammable gases, etc.). Hazardous atmospheres may be expected in excavations: near or containing gas pipelines; in landfills; or in areas where hazardous substances are stored nearby.

Precautions must be taken to prevent exposing employees to atmospheres with less than 19.5 percent oxygen and other hazardous atmospheres. These precautions include proper respiratory protection, or forced ventilation of the workspace.

Where necessary, forced ventilation must be provided to ensure the atmosphere is safe.

If controls are used to reduce the level of atmospheric contaminants to acceptable levels, you must perform continuous air monitoring. The atmospheric monitoring must be equipped with an audible and visual alarm.

You must use a properly calibrated direct reading gas monitor to test the atmosphere. When testing potentially toxic atmospheres, you may use direct reading gas detector tubes or other acceptable means.

Personal Protective Equipment
Employees working in trenches or excavations must wear approved hard-hats and steel toed boots shoes or.

Employees, who are exposed to flying particles, dust, or other materials resulting from sanding, grinding, drilling, sawing, and other similar operations must wear approved safety glasses with side shields.

Employees who perform, or are exposed to hazards produced by, cutting, welding, or brazing operations must wear approved glasses or a welding face shield or helmet.

Employees who enter deep and confined footing excavations (e.g., bell-bottom pier holes) must wear a harness with a secure lifeline. The lifeline must be distinct from any line used to handle materials, and must be monitored separately all the time that the employee wearing the lifeline is in the excavation.

Employees must wear suitable hand protection (e.g., approved gloves).

Employees who use or work near, masonry saws, hammer drills, jackhammers or similar noisy equipment must wear suitable hearing protection.

When working near the edge of an excavation 6 feet or more deep, employees must be protected from falling. Fall protection may be provided by barricades, guardrail systems, or fences.

Where hazardous atmospheric conditions exist or may develop during work in an excavation, you must have emergency rescue equipment (e.g., a safety harness and line, breathing apparatus, and a basket stretcher) readily available. When it is being used, this equipment must be attended. Only trained, qualified employees who have appropriate equipment should attempt retrieval that requires entry into a hazardous atmosphere.

Protection from Hazards Associated with Water Accumulation
Do not work in excavations with accumulated water, or that are accumulating water, unless employees have been protected and precautions taken against the hazards posed by water accumulation. Precautions must include inspection by a competent person prior to beginning work, special shield or support systems to protect from cave-ins, water pumps to control the level of water or safety harnesses and lifelines.

If using water removal equipment to control or prevent water from accumulating, the equipment and operation must be monitored by a competent person who is trained in using the equipment.

Diversion ditches, dikes, or other suitable means must be used to prevent surface water from entering the excavation the work interrupts the natural drainage of surface water (such as streams). You must take precautions to provide adequate drainage of the area next to the excavation.

The competent person must inform employees of the precautions or procedures that must be followed if water accumulates, or is accumulating in an excavation.

Stability of Adjacent Structures
A competent person must determine if the stability of adjoining buildings, walls, sidewalks or other structures is affected by the excavation work.

Where excavation operations could affect the stability of adjoining buildings, walls, or other structures, you must use support systems (e.g., shoring, bracing, or underpinning) to ensure structures are stable and employees are protected.

Do not allow excavation below the level of the footing or base of a foundation or retaining wall that could reasonably pose a hazard to employees.

Protection of Employees from Falling Objects and Loose Rocks or Soil
Employees must be adequately protected from loose rock or soil that could pose a hazard by falling or rolling from an excavation face. This will include:

1. Removing loose material;
2. Installing protective barricades, such as wire mesh or timber, on the face of the slope (at reasonable intervals) to stop and contain falling material; or
3. Sufficient benching to contain falling material.

Excavation works are not be permitted to work above one another where there is a danger of falling rock or earth.

Employees must be protected from equipment, excavated materials, or other materials are a hazard by falling or rolling into excavations.

You must keep such materials or equipment at least 2 feet from the edge of excavations, or use restraining devices to prevent materials or equipment from falling or rolling into excavations, or use a combination of both if necessary.

If determined by the competent person, materials and equipment may need to be stored more than 2 feet from the edge of the excavation if it poses a hazardous loading condition on the face of the excavation.

All materials that are piled, grouped or stacked near the edge of an excavation must be self-supporting and stable.

Soil is classified into different types (using the following categories). This determines the type of cave-in protection required. A competent and trained person must determine the soil type using these classifications.

1. Grain size is usually classified into four types: gravel, sand, silt, clay (gravel is the least stable, and clay is the most stable).
2. Saturation is how much water the soil is currently holding. Soil that is completely saturated is much less stable than soil that is slightly damp. However, completely dry soil (no water content) is unstable.
3. Cohesiveness determines how well the soil sticks together. The more the soil sticks together, the more stable the trench walls will be. The field test for cohesiveness usually involves rolling soil in your hand into the shape of a worm and noting how and when it separates.
4. Unconfined compressive strength defines the weight per square foot the soil can withstand. This determines how easily the soil will shear and cave in.

Soil Types
Soil classifications must be determined by testing. Then, a protective system is designed according to the soil classifications.

- Type A is the most stable type of soil. It is heavy, dense and consists mostly of clay.
- Type B has a medium level of stability. It is made of soils such as silt, sandy loam, and medium clay.
- Type C is the least stable soil. It usually consists of gravel, loamy sand, and soft clay.

To determine timber shoring or aluminum hydraulic shoring, you must refer to the appendixes A & C of 29 CFR 1926 (Excavations).

All devices must be in good repair, and well maintained in order to be used. If a device is damaged it must be inspected.

Employees must be protected from falling, rolling or sliding materials or equipment. Never subject shields to excessive forces. Install shields to protect employees from lateral loads. Restrict employees from being in the shield when it is being installed or removed. Shields must be designed to resist the calculated trench forces.

Daily Inspection

On a daily basis, the competent person must inspect excavations, adjacent areas, and protective systems for evidence of a circumstance that could result in a cave-in, failure of the protective system, hazardous atmosphere or other hazardous conditions. The competent person conducts an inspection prior to work starting, and throughout the shift as necessary. They will also inspect after every rainstorm or other occurrence that increases the hazard. This is only required if the trench will be, or is, occupied by employees.

If the competent person finds evidence of a circumstance that could result in a cave-in, failure of protective system, hazardous atmosphere, or other hazardous conditions, all exposed employees must be immediately removed from the area until precautions have been taken to ensure their safety.

All inspections will have a written log. This log will include the date, location of the work site, inspection results, and a summary of any action taken to correct existing hazards.

RECORDKEEPING

The program administrator will ensure the maintenance of all Safety Program records, for the listed periods, including:

1.	New Employee Safety Orientation forms	length of employment
2.	Code of Safe Practices Receipt	length of employment
3.	Disciplinary actions for safety	1 year
4.	Safety inspections	2 years
5.	Safety meeting reports	2 years
6.	Safety Contact Reports	2 years
7.	Accident investigations	5 years
8.	Federal or State OSHA log of injuries	5 years
9.	Inventory of Hazardous Materials (if any)	forever
10.	Employee exposure or medical records	forever

Records are available for review at the main office.

APPENDIXES

1. HAZARD ASSESSMENT AND CORRECTION RECORD

2. ACCIDENT / EXPOSURE INVESTIGATION FORM

3. WORKER TRAINING AND INSTRUCTION RECORD

4. EMPLOYEE SAFETY CONTACT REPORT

5. NEW EMPLOYEE SAFETY ORIENTATION

6. CODE OF SAFE WORK PRACTICES RECEIPT

7. COMPANY VEHICLE POLICY RECEIPT

8. SAFETY COMMITTEE MEETING MINUTES

9. SAFETY MEETING MINUTES

10. VEHICLE INSPECTION CHECKLIST

11. FACILITY INSPECTION CHECKLISTS

12. TRENCH INSPECTION AND ENTRY AUTHORIZATION FORM

HAZARD ASSESSMENT AND CORRECTION RECORD

Date of Inspection: _____ Person Conducting Inspection: _____

Unsafe Condition or Work Practice:
Corrective Action Taken:

Date of Inspection: _____ Person Conducting Inspection: _____

Unsafe Condition or Work Practice:
Corrective Action Taken:

Date of Inspection: _____ Person Conducting Inspection: _____

Unsafe Condition or Work Practice:
Corrective Action Taken:

ACCIDENT / EXPOSURE INVESTIGATION REPORT

Date & Time of Accident:
Location:
Accident Description:
Workers Involved:
Preventive Action Recommendations:
Corrective Actions Taken:

Manager Responsible: Date Completed

WORKER TRAINING AND INSTRUCTION RECORD

Worker's Name:	Training Dates	Type of Training	Trainers

EMPLOYEE SAFETY CONTACT REPORT

Work site: _____

Manager / Supervisor: _____
Employee name _____
Date _____
Job title _____

Safety concern:

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Corrective action:

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Signed: _____
Employee

Signed: _____
Manager / Supervisor

NEW EMPLOYEE SAFETY ORIENTATION

The Supervisor will verbally cover the following items with each new employee on the first day of their employment.

Employee Name: _____
Start Date: _____
Job Title / Position: _____

Instruction has been received in the following areas.

- ☐ 1. Code of Safe Practices.*
- ☐ 2. Hazard Communication (chemicals) Employee Training Handbook.*
- ☐ 3. Driving Safety Rules.*
- ☐ 4. Safety rule enforcement procedures.
- ☐ 5. Necessity of reporting ALL injuries, no matter how minor, IMMEDIATELY.
- ☐ 6. Proper method of reporting safety hazards.
- ☐ 7. Emergency procedures and First Aid.
- ☐ 8. Proper work clothing & required personal protective equipment.
- ☐ 9. List all special equipment, such as lifts, employee is trained and authorized to use.
- ☐ 10. Emergency Exits and Fire Extinguishers.

_____

_____

---

* Give a copy of these items to the employee.

I agree to abide by all company safety polices and the Code of Safe Practices. I also understand that failure to do so may result in disciplinary action and possible termination.

Signed_____Date_____
Employee

Signed_____Date_____ Supervisor
Supervisor

CODE OF SAFE PRACTICES RECEIPT

This is to certify that I have received a copy of the Code of Safe Practices. I have read these instructions, understand them, and will comply with them while working for the company.

I understand that failure to abide by these rules may result in disciplinary action and possible termination of my employment with the company.

I also understand that I am to report any injury to my Supervisor or Manager immediately and report all safety hazards.

I further understand that I have the following rights.

- I am not required to work in any area I feel is not safe.
- I am entitled to information on any hazardous material or chemical I am exposed to while working.
- I am entitled to see a copy of the Safety Manual and Injury and Illness Prevention Program.
- I will not be discriminated against for reporting safety concerns.

_____

Print Name

_____

Sign Name Date

Copy: Employee
File

COMPANY VEHICLE POLICY RECEIPT

This is to certify that I have received a copy of the Driving Safety Rules and Company Vehicle Policy. I have read these instructions, understand them, and will comply with them while driving company vehicles.

I understand that failure to abide by these rules will result in disciplinary action and possible suspension of my driving privileges.

I also understand that I am to report any accident to the office immediately.

_____

Print Name

_____

Sign Name Date

Copy: Employee File

SAFETY COMMITTEE MEETING MINUTES

*Date of Committee Meeting:*_____*Location:*_____

Minutes prepared by: _____*Date:*_____

Review of Safety Inspection and Plan of Correction:

_____

_____

_____

_____

Previous Business: _____

_____

New Business: _____

_____

Review of Accidents: _____

_____

Plan of Correction: _____

_____

_____

Employee Suggestions: _____

_____

_____

Recommended Safety Training: _____

_____

_____

Additional Comments: _____

_____

_____

Safety Committee Meeting Attendance:

1._____ 2._____

3._____ 4._____

5._____ 6._____

7._____ 8._____

9._____ 10._____

11._____ 12._____

13._____ 14._____

15._____ 16._____

17.______________________________ 18.____________________________

19.______________________________ 20.____________________________

SAFETY MEETING MINUTES

Company: _____ *Department:* _____

Presenter: _____ *Date:* _____

Safety Topic Discussed:

_____

_____

_____

Additional items addressed other than topic:

_____

_____

_____

_____

Suggestions and Comments:

_____

_____

_____

_____

Safety Meeting Attendance:

1. _____ 2. _____
3. _____ 4. _____
5. _____ 6. _____
7. _____ 8. _____
9. _____ 10. _____
11. _____ 12. _____
13. _____ 14. _____
15. _____ 16. _____
17. _____ 18. _____

Vehicle Inspection Checklist

Driver_____ Date_____
Vehicle_____ Mileage_____

The items on this inspection sheet should be checked daily. A separate sheet should be filled out for each vehicle driven. Example: If you drive vehicle #3614 and swap to #7659 during the day, 2 inspection sheets should be filled out for that day. These forms are due daily. Place an X by any item that needs attention. Place a check mark by the rest. Any discrepancies should detailed on the bottom of this sheet.

_____Ignition Key
_____Fuel Key
_____Check Radio (Two way check)
_____Visual Inspection for Exterior Damage/Leaks under vehicle
_____Check inside Engine compartment for Leaks/loose items
_____Oil Level
_____Washer Fluid Level
_____Coolant Level
_____Power Steering Fluid Level
_____Start Engine and check Transmission Fluid Level (Fluid should be hot)
_____Check for Air Gauge
_____Check Tires for wear and pressure **(70 PSI COLD)** LF_____LR_____RF_____RR_____
_____Check Horn
_____Check Heater/Defroster
_____Check Windshield Wipers/Washers
_____Check Highlight/Signal lights/4way flashes/Tail lights/Backup lights/Horn
_____Check Lift, run one Complete Cycle
_____Check Interior lights
_____Check Mirrors for damage and adjustments
_____Check fuel level (**Should Not be Less Than ½ Tank)**
_____Check First Aide Kit on Board and full
_____Check Fire Extinguisher on board/Gauge showing charged, proper seal & pin
_____Check Adequate tie-downs/Tie-down Tracks (must be clean)
_____Check BIOHAZ KIT (Seal)
_____As you drive, continually check for any strange smells, sounds, vibrations, or anything that does not feel right.

*Form to be completed and turned in to Operations Manager DAILY.

The following discrepancies were noted:_____

_____

Driver's Signature:_____

Corrective action taken:_____

_____

FACILITY INSPECTION CHECKLIST

Department/Division: _____
Date Of Inspection: _____
Location: _____
Inspector: _____

Criteria	Check One Yes	No	Comments
• Are work areas properly illuminated?	☐	☐	
• Is the ventilation system appropriated for the work performed?	☐	☐	
• Are restrooms and washrooms kept clean and sanitary?	☐	☐	
• Is potable water provided for drinking and washing?	☐	☐	
• Are outlets for water not suitable for drinking clearly identified?	☐	☐	
• Where heat stress is a problem, do all fixed work areas have air conditioning?	☐	☐	
• Is the work area clean and orderly?	☐	☐	
• Are floors kept clean and dry or have you taken appropriate measures to make floors slip resistant?	☐	☐	
• Are floors free from protruding nails, splinters, holes, etc.?	☐	☐	
• Are permanent aisles and passageways clearly marked?	☐	☐	
• Are aisles and passageways kept clear?	☐	☐	
• Are pits and floor openings covered or guarded?	☐	☐	
• Is combustible trash removed from the worksite daily?	☐	☐	
• Are spilled materials or liquids cleaned up immediately?	☐	☐	
• Is there safe clearance in aisles where motorized or mechanical handling equipment travel?	☐	☐	
FLOOR AND WALL OPENINGS, STAIRS AND STAIRWAYS			
• Are floor openings guarded by covers or guardrails on all sides?	☐	☐	
• Do skylights have screens or fixed railings that would prevent someone on the roof from falling through?	☐	☐	
• Are open pits and trap doors guarded?	☐	☐	
• Are grates or similar type covers over floor openings such as floor drains, designed so that foot traffic or rolling equipment are not affected by grate spacing?	☐	☐	
• Are open-sided floors, platforms and runways having a drop of more than 4 feet guarded by a standard railing or toe board?	☐	☐	
• Are standard stair rails or handrails on all stairways having four or more risers?	☐	☐	
• Are all stairways at least 22 inches wide?	☐	☐	
• Do stairs have at least a 6-½ foot overhead clearance?	☐	☐	

• Are step risers on stairs uniform from top to bottom?	☐	☐	
• Are steps on stairs and stairways designed or provided with a slip-resistant surface?	☐	☐	
• Are stairway handrails located between 30 and 34 inches above the leading edge of stair treads?	☐	☐	

GENERAL WORK ENVIRONMENT

Criteria	Check One Yes	No	Comments
• Are stairway handrails capable of withstanding a load of 200 pounds, applied in any direction?	☐	☐	
ELEVATED SURFACES			
• Is the vertical distance between stairway landings limited to 12 feet or less?	☐	☐	
• Are stairways adequately illuminated?	☐	☐	
• Are signs posted showing the elevated surface load capacity?	☐	☐	
• Do elevated work areas have a permanent means of access and egress?	☐	☐	
• Are materials on elevated surfaces piled, stacked or racked in a manner to prevent tipping, falling, collapsing, rolling or spreading?	☐	☐	
EXITS AND EXIT DOORS			
• Are all exits marked with an exit sign and illuminated by a reliable light source?	☐	☐	
• Are exit routes clearly marked?	☐	☐	
• Are doors, passageways or stairways that are neither exits nor access to exits, appropriately marked “NOT AN EXIT” or “STOREROOM” etc.?	☐	☐	
• Are all exits kept free of obstructions?	☐	☐	
• Are there sufficient exits to permit prompt escape in case of emergency?	☐	☐	
• Do exit doors open in the direction of exit travel?	☐	☐	
• Are doors that swing in both directions provided with viewing panels in each door?	☐	☐	
• Are exits and exit routes equipped with emergency lighting?	☐	☐	
ADDITIONAL REMARKS:			

TRENCH INSPECTION AND ENTRY AUTHORIZATION FORM				
LOCATION:				**DATE:**
TIME OF INSPECTION(S)				
WEATHER CONDITIONS:				**APPROX. TEMP.:**
CREW LEADER:				**SUPERVISOR:**
DIMENTIONS:	**DEPTH =**			Yes No **HAZARDOUS CONDITIONS**
	TOP =	W	L	❑ ❑ .....Saturated soil / standing or seeping water
	BOTTOM =	W	L	❑ ❑ .....Cracked or fissured wall(s)
SOIL TYPE:		**TESTED:**		❑ ❑ .....Bulging wall(s)
❑ Solid rock (most stable)		❑ Yes		❑ ❑ .....Floor heaving
❑ Average soil		❑ No		❑ ❑ .....Frozen soil
❑ Fill material				❑ ❑ .....Super-imposed loads
❑ Loose sand				❑ ❑ .....Vibration
				❑ ❑ .....Depth greater than 10’
PROTECTION METHODS:				**PLACEMENT OF SOILS & EQUIPMENT**
(Walls MUST be vertical—NO voids)				❑ ❑ .....Soils at least 2 feet from edge of trench
SHORING				❑ ❑ .....Equipment at least 2 feet from edge
❑ Timber				❑ ❑ .....Backhoe at end of trench
❑ Pneumatic				❑ ❑ .....Compressor, etc. at remote location
❑ Hydraulic				**LADDER LOCATION**
❑ Screw Jacks				❑ ❑ .....Located in protected area
❑ Trench Shield				❑ ❑ .....Within 25 feet of safe travel
UNEVEN, IRREGULAR WALLS				❑ ❑ .....Secured
❑ Trench Box				❑ ❑ .....Extends 36 inches above the landing
Sloping: **q 1:1 (45°)** **q 1 ½:1 (34°)**				❑ ❑ .....Leads to safe landing
Yes No **ENVIRONMENTAL CONDITIONS:**				**OTHER:**
❑ ❑ Gas detector used?				❑ ❑ Shoring equip. & matls inspected prior to use?
❑ ❑ Confined space permit issued?				❑ ❑ Is trench SAFE to enter?
COMMENTS:				

		Work Order #
N O T E	All unsafe conditions must be corrected prior to trench entry. If any hazardous conditions are observed, the trench must be immediately evacuated and no one allowed to re-enter until corrective action has been taken.	**TO BE FILLED OUT BY EHS PERSONNEL** **Excavation Entry Authorized By: _____** **EHS Inspector**

Additional information regarding this safety program manual can be obtained through the safety program administrator or safety committee.