Written Safety Program

General Safety Rules

The following general safety rules have been developed to provide a safe and healthy working environment for all employees. These apply to all work activities.

1. Report to work well rested and physically fit to be able to give full attention to your job.
2. Persons with physical or mental impairment shall not be assigned to tasks where their impairment has a potential to endanger themselves or others.
3. No person shall be permitted to remain on the premises while their ability to work is so affected by alcohol, drugs (prescription or non-prescription) or other substance, so as to endanger their health or safety or that of any other person.
4. Persons working alone shall be required to check-in regularly with Security or a supervisor to ensure that their well being is maintained.
5. Inappropriate behavior, such as horseplay, fighting and practical jokes are extremely dangerous and will not be tolerated.
6. Any unsafe conditions which are encountered shall be corrected or reported to your Supervisor or Safety Department.
7. Do not operate any machinery or equipment if it is known to be in an unsafe condition.
8. Machinery and equipment, including vehicles, are only to be operated by qualified persons and then only when adequately trained in the use of the equipment and authorized to operate it.
9. Unsafe Acts shall be reported to your Supervisor and/or the Safety Department.
10. Personal protective equipment (PPE) must be worn when performing specific duties that require its use to ensure worker safety. Persons refusing to wear PPE will be subject to disciplinary action. Selection of the correct PPE may require assistance, contact the Safety Department for guidance.
11. Employees and students must inform Supervisors when they are wearing contact lenses. This information is to be passed on to the Safety Department so that first aid personnel can be made aware of it.
12. Employees and students must inform Supervisors when they have significant allergies which might be encountered while at work (i.e. bee stings). This information is to be passed on to the Safety Department so that first aid personnel can be made aware of it. The person with the severe allergy should carry an "ANA Kit" or "Epi-pen" and be familiar with how to use it.
13. Avoid manual lifting of materials, articles or objects which are too heavy. Wherever possible, use mechanical lifting devices to move heavy objects.
14. Smoking is prohibited within the premises and vehicles at all times. Smoking is only permitted outside buildings. Where "NO SMOKING" signs are posted, (i.e. near flammable storage), persons shall observe those signs.
15. Avoid parking, even temporarily, in designated fire lanes.
16. Employees are responsible for reporting to their Supervisor and Safety department whenever they become sick or injured at work. All injuries, no matter how minor, must be reported immediately.
17. Always keep your work area clean and orderly. Poor housekeeping habits can be a serious safety hazard. Do not leave materials in aisles, walkways, stairways, roads or other points of egress.
18. Any damaged equipment or missing machine guards must be reported to your Supervisor.

19. All warning signs, signals and alarms shall be obeyed.
20. Employees/students shall not use unfamiliar tools or equipment without proper instruction and permission from their immediate Supervisor. Always use the correct tool for the job, do not improvise.
21. Loose or ragged clothing, dangling neckwear or bracelets shall not be worn around moving parts of machinery or electrically energized equipment.
22. Fire fighting equipment shall be maintained in accordance with the manufacturer's instructions and the requirements of the BC Fire Code.
23. Whenever mobile equipment or vehicles are equipped with seat belts, the operator and passengers shall use the belts whenever the equipment is moving. Failure to abide by this requirement will result in disciplinary action.
24. Flammable liquids are to be handled and stored only in approved safety containers. Proper lids and caps must always be used on storage containers. Cloth, paper, and other "make-shift" lids and caps are prohibited. Use bonding cables while filling containers holding flammable liquids.
25. Never dispense gasoline into a fuel tank while the engine is running, or the motor is hot.
26. Do not dispose of any hazardous materials or flammable liquids by pouring them down a sewer or drain. Guidance in proper disposal of hazardous materials is available from the Safety Department.
27. Compressed gas cylinders should be stored in an upright position and chained or otherwise secured. Where not connected to a service line or manifold system, the protective caps for these cylinders shall be in place.
28. Flash-back arrestors or reverse gas flow check valves must be in place on all oxy-acetylene fuel cutting equipment.
29. Compressed air shall not be used for cleaning clothing or to blow dust from your body.
30. Do not attempt to repair defective wiring or other electrical equipment. Report defective electrical equipment to your Supervisor. Electrical equipment can only be repaired or serviced by a qualified electrician.
31. Faulty or makeshift ladders must not be used.
32. When lifting, have a secure footing, bend your knees, keep your back straight, take a firm hold of the object being lifted and slowly straighten your legs. If you must turn with a load, turn your feet and whole body. DO NOT twist yourself. Avoid reaching while lifting or putting the object down. If the object is too heavy for you, get assistance.
33. Keep your work area safe, efficient and pleasant by keeping it clean and orderly.
34. Employees/students must inform Supervisors when they are wearing contact lenses.
35. If something looks unsafe it probably is ... IF YOU ARE IN DOUBT ... ASK !

Emergency Action Plan

29 CFR 1910.38

Overview

These Emergency Action and Fire Prevention Plans are prepared in compliance with Code of Federal Regulation, Title 29, Part 1910.38, which covers those designated actions employers and employees must take to ensure employee safety during medical, fires and other emergencies and steps to take for the prevention of fires within the facility.

_____ is responsible for implementation, training and maintenance of these Plans.

These Plans shall be maintained at the facility and be made available for review by employees.

Elements

- Emergency escape route will be conspicuously posted and emergency exits clearly marked.
    - In the event of an emergency requiring the evacuation of the premises, evacuation instructions will be given via the _____ *(means of instructing)* by _____ *(person making the decision).*
- Procedures to account for all employees after emergency evacuation has been completed:
    - In the event of an evacuation, all employees will assemble as soon as practical in the _____ *(location).*
    - Once all employees have congregated at the meeting place, there will be an accounting of employees, to ensure everyone has been evacuated.
- Preferred means of reporting fires and other emergencies:
    - Employees will be alerted to a fire by the activation of a Fire Alarm located in the facility.
    - In addition, 9-1-1 will be called to notify the Fire Department.
    - Any additional emergency numbers will be posted by each telephone.
- The employer shall advise each employee of his or her responsibility under the plan:
    - Initially when the plan is developed;
    - Whenever the employee's responsibilities or designated actions under the plan change; and
    - Whenever the plan is changed.
    - The employer shall review with each employee upon initial assignment those parts of the plan which the employee must know to protect himself or herself in the event of an emergency, including alarm systems.

Fire Emergencies

- All employees shall be familiar with fire evacuation procedures.
- A floor plan identifying escape routes and locations of fire extinguishers will be placed conspicuously.
- _____ *(person's name)* will discuss fire evacuation procedures as frequently as necessary, but at least once per quarter.

If you discover a fire:

- Stay calm and above all do not jeopardize your personal safety.
- Activate the nearest fire alarm and alert employees in the immediate area about the fire.
- Call the fire department at 9-1-1 if applicable.
- Remove anyone in immediate danger.
- Confine the fire by closing windows and doors, as much as possible.
- Very small fires (incipient stage) can be put out with a fire extinguisher. Use water for paper fires and extinguishers for electrical, paper or chemical fires.

Evacuation due to Fire

- If the fire cannot be immediately contained, evacuate the facility. Consider the possibility of toxic fumes or explosions from burning materials and especially from compressed gas.
- Stay low when moving through smoke.
- When passing through an exit, move quickly away from the exit to avoid creating a bottleneck that slows the escape of others.
- If you are trapped inside a room, keep the doors closed and seal any cracks with wet towels, if possible.
    - Open a window for air and call for help. Do not break the glass unless absolutely necessary (outside smoke could be drawn into the room).
    - Do not panic or jump.
    - Close as many doors between you and the fire as possible.
- Do not reenter the building after you have exited, but proceed directly to the designated assembly area at _____ *(location)*.
- Follow the directions of the supervisors present and the emergency personnel at the scene.
- If someone is missing, do not attempt to reenter the building. Notify the firefighters or emergency personnel at the scene, and describe where the person was last seen.

Tornadoes

Tornadoes occur more frequently in the spring and early summer months, although they can occur at any time. Supervisors should pay close attention to weather reports during tornado "season" and be prepared to implement appropriate emergency procedures when notified by local authorities or the sounding of tornado sirens.

If you are inside:

- Proceed to a central hallway of the building, if possible.
- If there is no time, crouch under a desk or table, away from windows or glass dividers.
- Stay away from tall objects, such as file cabinets.

If you are outside:

- Seek cover in low lying depressions away from buildings, trees, telephones and electric lines.

Earthquakes

Although earthquakes do not often occur in many parts of the United States, than *can* occur anywhere. Employees should know the appropriate actions to take.

- Earthquakes strike without warning and may range in intensity from slight tremors to major shocks. They may last only a few seconds or several minutes. After a major earthquake, "aftershocks," generally less violent, should be anticipated. The great majority of injuries experienced in earthquakes are the result of people being hit by falling objects. Therefore, it is extremely dangerous to rush outside immediately, where considerable falling debris may be encountered.

If you are inside:

- Stand in a doorway, or crouch under a desk or table, away from windows or glass dividers.
- Stay away from tall objects, such as file cabinets.

If you are outside:

- Stand away from buildings, trees, telephones and electric lines.

Medical Services and First Aid

29 CFR 1910.151

A written plan to cover these circumstances is not required. However, the need for medical and first aid must still be addressed as indicated below.

> *(b) In the absence of an infirmary, clinic or hospital in near proximity to the workplace which is used for the treatment of all injured employees, a person or persons shall be adequately trained to render first aid. Adequate first aid supplies shall be readily available.*

- The above paragraph (b) of the standard requires training in first aid ***only*** if employees are required to give first aid should an emergency arise in which first aid is necessary.
    - If this obligation can be met by calling emergency services (i.e., 9-1-1), employees need not be trained in first aid.
    - Many health care facilities meet this obligation through the healthcare providers employed in the facility.

> *(c) Where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body shall be provided within the work area for immediate emergency use.*

- If the conditions of the above paragraph (c) exist and an eyewash or shower is required, then employees must be trained on the use and maintenance of eyewashes and showers.
    - It is generally considered good safety practice to ensure that the eyewash/shower station is regularly maintained.
    - A form for this is included in the ***Sample Forms Section*** of this program.

Anti-Violence/Security

Overview

Workplace violence has emerged as an important safety and health issue in the workplace. Although a specific workplace violence rule has not been adapted, we recognize the impact workplace violence can have on our employees. This plan is intended to provide guidance for protecting employees from potential violence.

_____ is responsible for periodically reviewing this plan, updating it as necessary and implementing any changes where appropriate.

A copy of this plan shall be kept _____ and be available for review by all employees.

Categories of Violence

Type I Violence Events

- The person committing the violent acts has no legitimate business relationship to the workplace and usually enters the affected workplace to commit a robbery or other criminal act.

Type II Violence Events

- The person committing the violent act is either the recipient or the object of a service provided by the affected workplace, e.g., the assailant is a current or former client or customer.

Type III Violence Events

- The person committing the violent act has some employment-related involvement with the affected workplace.

- Usually this involves an assault by a current or former employee, supervisor or manager; by a current/former spouse or lover; by a relative or friend; or by some other person who has a dispute with an employee of the affected workplace.

Prevention Strategy

Securing the Facility

- Be aware of who is in the facility and their purpose for being there.

- Secure all entry points as is appropriate to the business situation.

Entering and Exiting the Building

- Outside lighting should be adequate to enable employees to pass to and from the building in a relatively safe manner.
- As much as possible, employees should pass to and from the building in groups.

Monitoring Potentially Violent Situations

- Management will endeavor to maintain effective communications with employees and handle all employees in a considerate and respectful manner.
- All employees shall be aware of acts of aggression that may indicate risk.
  - Disorderly conduct, such as shouting, pushing, throwing objects, slamming doors, etc.
  - Verbal threats to inflict bodily harm.
  - Fascination with guns or other weapons.
  - Intimidating presence.
  - Harassment of any nature.

Reporting of Aggressive Acts

- Any acts of aggression will be reported to the supervisor, who will, in turn, inform the _____. If the supervisor is the aggressor, the _____ should be informed directly.

Personal Protective Equipment

Overview

Part 29 of OSHA 29 CFR 1910.132(d) sets forth the requirements and guidelines for job hazard assessment and the selection of the proper PPE. It requires the employers to assess the workplace and determine the appropriate PPE for the job performed. Once the assessment is complete, employees shall be trained in the selection and use of PPE.

Hazard Assessment

- Assess the workplace to determine if hazards are present. Hazards of the job may include, but not be limited to:
  - Sources of motion
  - Extreme temperatures
  - Chemicals
  - Biohazards
  - Harmful dust
  - Light radiation
  - Falling objects
  - Sharp objects

- Rolling or pinching objects
- Noise
- Electrical hazards

Note: **A Job Hazard Analysis form is available in the forms section of this CD.**

- Additionally, note the workplace layout and placement of co-workers.
- Evaluate the degree of risk of the specific hazard, including the seriousness of the injury that could occur.
  - Job activities with greater risk should be further evaluated for secondary risks and to ensure the most serious hazards are minimized

Training

- All employees who use personal protective equipment, as well as their supervisors, shall be trained in the use of PPE. This training shall include:
  - When PPE is necessary
  - What types of PPE are necessary
  - Limitation of PPE
  - Proper care, maintenance, useful life and disposal of PPE
- Employees shall be retrained when:
  - There is evidence that the employee is not using the PPE appropriately
  - When the required PPE has changed due to operational changes
  - When the required PPE has changed

PPE Equipment

Eye/Face

- Employees shall wear eye/face protection when they are exposed to eye or face hazards from flying particles, molten metal, liquid chemicals, biologic hazards, acids or caustic liquids, chemical gases or vapors or potentially injurious light radiation.
- Employees will use only eye protection built under ANSI specifications Z87.1-1989 or as amended and recognized by OSHA and DOSH.

Hearing

- Refer to the Noise Control and Hearing Conservation Program for requirements on the use of hearing protection.

Head

- Employees shall wear head protection when they are exposed to areas where there is a potential for injury to the head from falling objects or when they are exposed to electrical conductors that could contact the head.
- Protective helmets must comply with ANSI Z89.1-1986 or other equipment demonstrated

to be equally effective.

Foot

- Employees shall wear protective footwear when working in areas where there is a danger of foot injuries due to falling or rolling objects, objects piercing the sole of the foot or where the employee's feet are exposed to electrical hazards.
- Protective footwear must comply with ANSI Z41-1991.

Hand

- Employees shall wear appropriate hand protection when their hands are exposed to hazards such as those from chemical absorption, severe cuts or lacerations, severe abrasions, chemical burns, thermal burns and harmful temperature extremes.
- Selection of hand protection will be based on the tasks performed, the conditions present, duration of use and other potential hazards that may exist.
- When employees are exposed to chemical hazards, the appropriate MSDS will be used as the primary means to determine correct hand protection.

Note: **Several regulations require Personal Protective Equipment. Those regulations should be reviewed and appropriately applied to specific situations in your facility.**

Machine Guarding Policy

Purpose and Application

This policy document is designed to ensure that Company employees follow procedures which assure that equipment or machines are operated safely and meet state, federal, and industry machine guarding standards.

This applies to all employees who may work with, or adjacent to, equipment or machines that may pose a safety hazard.

"Machines" include, but are not limited to, fans, compressors, bench grinders, fuel pumps, dumpsters, trash compactors, and table saws. Any machine part, function, or process that may cause injury, must be safeguarded. When the operation of a machine or accidental contact with it can injure the operator or others in the vicinity, the hazards must be either controlled or eliminated.

A "machine hazard" occurs at the point of operation where the actual work is performed, and can be created by:

- components which transmit energy, such as pulleys, belts, chains, gears, couplings, or flywheels; or
- other parts which move while the machine is working, including reciprocating, rotating, and transverse parts.

Roles and Responsibility

The Safety Department is responsible for ensuring guards on facility equipment and machines operated by Company personnel are kept in place and used as originally designed.

The Safety Department periodically prepares and updates the written Machine Guarding Program and responds to any employee machine guarding concern or question.

All affected employees should report any unguarded machine hazard to their supervisor immediately.

All employees should forward any concerns or observations regarding the lack of machine guarding to their supervisor.

Procedures

Written Plans
The Company has a written machine guarding plan, which includes an inventory of guarded equipment and the procedure to be followed to minimize the risk of accidents

Hierarchy of Guarding
Machine guarding decisions should be made in the following order of preference:

- Design out or eliminate the hazard
- Physically “engineer out” the exposure to the hazard
- Guard the hazard · Require personal protective equipment
- Use warning devices, or make the danger “manifest”
- Use warning signs
- Use safe working practices and procedures

Inspections and Audits
Machines that require guarding will be inspected regularly by Safety Department personnel. Based on the results of these inspections, maintenance or replacement of guards will be conducted as necessary. The Safety Department will audit the program periodically and recommend appropriate corrective actions.

Training

Any person who works near, or adjacent to, any sort of machine will receive “affected employee” training during initial orientation and every two years thereafter. Affected employees receive machine guarding training specific to the hazards being controlled on the piece of equipment. Employees performing maintenance related activities will receive machine guarding training on a periodic basis.

Record Keeping
The Company maintains records of the machine guarding inventory. The Safety Department maintains records of machine guarding training and copies of the annual inspections.

Key References and Resources

The documents listed below may be obtained from the Safety Department office.

- OSHA Machine Guarding Standard—29 CFR 1910.212
- DOSH Machine Guarding – 296-806

Control of Hazardous Energy (Lockout/Tagout)

Overview

The Lockout/Tagout program establishes practices and procedures for the control of hazardous energy. All equipment with the potential for unexpected start-up during routine adjustment or maintenance is subject to the requirements of this program. This program is called Lockout/Tagout or LOTO.

Implementation of this procedure shall ensure that all energy sources are completely isolated and locked out prior to the servicing of equipment. All potential sources of hazardous energy shall be identified prior to working on the subject equipment. This program is established to comply with the requirements of the Occupational Safety and Health Administration (OSHA) Standard 1910.147, The Control of Hazardous Energy and the Division of Safety and Health (DOSH)

State and local requirements which may be more stringent must also be observed.

Definitions

Authorized employee: A person who locks out or tags out machines or equipment in order to perform servicing or maintenance on that machine or equipment. An affected employee becomes an authorized employee when that employee's duties include performing servicing or maintenance covered by this program.

Capable of being locked out: An energy isolating device is capable of being locked out if it has a hasp or other means of attachment to which, or through which, a lock can be affixed, or it has a locking mechanism built into it. Other energy isolating devices are capable of being locked out if lockout can be achieved without the need to dismantle, rebuild or replace the energy isolating device or permanently alter its energy control capability.

Energized: Connected to an energy source or containing residual or stored energy.

Energy isolating device: A mechanical device that physically prevents the transmission or release of energy, including but not limited to the following:

- A manually operated electrical circuit breaker;
- A disconnect switch;
- A manually operated switch by which the conductors of a circuit can be disconnected from all ungrounded supply conductors and, in addition, no pole can be operated independently;
- A line valve;
- A block;
- Any similar device used to block or isolate energy.

Push buttons, selector switches and other control circuit type devices are not energy isolating devices.

Energy source: Any source for electrical, mechanical, hydraulic, pneumatic, chemical, thermal or other energy.

Hot tap: A procedure used in the repair maintenance and services activities which involves welding on a piece of equipment (pipelines, vessels or tanks) under pressure in order to install connections or appurtenances. It is commonly used to replace or add sections of pipeline without the interruption of service for air, gas, water, steam and petrochemical distribution systems.

Live-Dead-Live rule: A test for zero energy state where the operator tries to start the equipment, then shuts it down, then tries to start it again.

Lockout: The placement of a lockout device on an energy isolating device in accordance with an established procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

Lockout device: A device that utilizes a positive means such as a lock—either key or combination type—to hold an energy isolating device in the safe position and prevent the energizing of machines or equipment. Included are blank flanges and bolted slip blinds.

Normal production operations: The utilization of a machine or equipment to perform its intended production function.

Qualified Person: One familiar with construction, the operation of equipment and the hazards involved. A qualified person has the skills and the techniques to distinguish live parts from other parts of electric equipment. This person can determine the nominal voltage of exposed live parts and can maintain the clearance distances that will be specified for the voltages on which they will be working.

Servicing and/or maintenance: Workplace activities such as constructing, installing, setting up, adjusting, inspecting, modifying and maintaining or servicing machines or equipment. These activities include lubrication, cleaning or unjamming of machines or equipment and making adjustments or tool changes, where the employee may be exposed to the unexpected energization or start-up of the equipment or release of hazardous energy.

Tagout: The placement of a tagout device on an energy isolating device in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

Tagout device: A prominent warning device, such as a tag and a means of attachment, which can be securely fastened to an energy isolating device in accordance with an

established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

Responsibilities and Authorities

Supervisors Shall:

- Ensure that employees de-energize equipment prior to working on it when the potential for unexpected release of energy which may cause injury exists.
- Ensure that employees are aware of the lockout/tagout procedures for equipment relative to the project on which they are working.
- Inform employees in their area of responsibility when equipment is being locked out/tagged out for repair.
- Ensure that no employees attempt to restart equipment until it is verified that it is safe to do so following repair of the equipment using lockout/tagout procedures.
- Verify that all qualified persons in their area have had the appropriate lockout/tagout training.

The Safety Officer Shall:

- Ensure that all employees involved in the lockout/tagout program have had appropriate training.
- Review the lockout/tagout program for compliance on an annual basis as a minimum.
- Maintain and revise the LOTO program as required.
- Administer appropriate disciplinary action for employees who violate the lockout/tagout procedures.
- Direct the LOTO training program.
- Revise the written LOTO program as required.

Qualified Persons Shall:

- Repair or service equipment as needed.
- Ensure, where feasible, that all energy sources are locked out on a piece of equipment during repair or service.
- Test equipment to verify that no residual energy exists following lockout and prior to working on the subject equipment.
- Place a “Danger—Do Not Operate” tag on the energy source and/or control panel prior to working on the subject equipment.

- Obtain assistance when necessary to properly repair or service a piece of equipment.
- Remove locks and/or tags following the repair or servicing of subject equipment.
- Coordinate multi-shift repair with the next shift to work on the equipment.

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Program Elements

De-Energizing Equipment

- Safe procedures that address de-energizing circuits and equipment must be used in LOTO.
- The electricians performing LOTO will use the appropriate testing devices on the circuits according to the voltage level.
  - **STOP"** buttons, interlocks or other devices on equipment **are not** acceptable LOTO devices.
- Stored electrical energy will be dissipated to ensure workers are not endangered.
  - Capacitors will be discharged. High capacitance elements need to be short-circuited and grounded if they pose hazards to personnel.
  - Stored non-electrical energy that could re-energize the electrical circuits shall be blocked or relieved to the extent possible..

Application of Locks and Tags

- Locks and tags will be placed on equipment used to de-energize circuits and equipment on which the work is to be performed.
- The lock will be attached to assure that unauthorized personnel cannot re-open the circuit.
  - The tag *("DANGER—DO NOT OPERATE")* must state that unauthorized use is forbidden and the tag cannot be removed.
- Only the person who applied the lock(s) and tag(s) may remove the LOTO devices. The only instance in which a LOTO device may be removed exists when:
  - The employee is not at work to remove it ***and*** the "qualified person" contacts the employee to assure it is all right to remove his or her LOTO device.
  - The qualified person then must verify that all employees are clear of the circuits and equipment when it is re-energized.
- Equipment that was not designed to accept locks must be tagged out of service.
  - This can only be done when you can demonstrate that tagging will provide an equivalent means of safety.
  - Equivalent means of safety can be removal of an isolating circuit element, opening of

an extra disconnecting device or blocking a controlling switch.

- "Locks Only" can be used under the following conditions:
  - When one circuit or piece of equipment is de-energized;
  - When the work does not extend beyond the work shift; and
  - When employees working around the circuit are familiar with the procedure.

Verifying De-Energized Conditions

- The qualified person must verify that the equipment or controls cannot be restarted by testing the equipment, controls or circuits with appropriate testing devices.

- Testing procedures shall also verify that equipment that is backfed or has induced voltages has indeed been de-energized.
  - The qualified person shall verify any alternate sources of power that could be introduced into the electrical circuit.
  - The qualified person shall check voltage systems greater than 600 v, nominal, immediately after testing.

Re-Energizing Equipment

- The qualified person must perform tests and visual inspections that assure that the re-energization can take place.
  - All electrical jumpers, grounds, shorts and other devices must be removed before re-energization.
  - Employees who are present at the re-energization shall be informed of any hazards and warned to stay clear of the process.

Training

- Qualified personnel shall be trained initially and at least annually thereafter on LOTO per the requirements of 29 CFR 1910.147.

- Qualified personnel will receive retraining whenever changes are made to their job classification or a change in job, machines, assignments and/or energy control procedures occur.

- Additional retraining will also be conducted when a periodic inspection reveals deviations from or inadequacies in the employee's knowledge or use for the energy control procedures.

Lockout/Tagout (LOTO) Application

Lockout/Tagout under the General Industry standard may be required on designated projects. Should employees perform work around existing equipment subject to the LOTO requirements under 1910.147, the following information shall be referenced to ensure the work is done safely.

When LOTO Applies

- LOTO applies—and must occur—when servicing takes place during production operations and when any of the following conditions exist:
  - The employee must bypass guards or interlocks to perform the repair at the point of operation;
  - The employee must place part of his or her body in contact with the point of operation source; or
  - The employee has to place any part of his or her body into a danger zone.

- DOSH realizes that some work, such as troubleshooting, must occur on the job. When it does, provisions for employee safety must be made.

Energy Control Programs

- LOTO or energy control programs must be developed by the employer to ensure that procedures are in place, that employee training has occurred, that procedures are inspected and that inadvertent startup of equipment is not possible.
  - This will ensure that there will be no unexpected releases of energy or injuries.

- Energy Control Procedures must address how hazardous energy will be controlled. This includes:
  - How the procedure will be used and procedures needed to shut down, isolate, block and secure machines and equipment.
  - The steps designating the safe placement, removal and transfer of LOTO devices.
  - Who has responsibility for LOTO devices and the specific requirements for testing the machines or equipment to determine the effectiveness of LOTO and other energy control devices.

Energy Isolating Devices

- Energy Isolating Devices (those which can be locked out and those which cannot)

- When the device cannot be locked out, the employer may use tags, providing the following:
  - They are not bypass tags.
  - Tags are legible and understandable by all employees.
  - Tags can withstand the work environment.

- Tags are securely attached to the equipment.
- Be careful, as tags may evoke a false sense of security.
- Tags can only be used when the employer can guarantee full employee protection by using a tagout system.
- Remember, tags are only warning devices. Be careful they don't evoke a false sense of security.

LOTO Devices

- LOTO devices must be durable.
- LOTO devices must be standardized by color, shape or size.
- Tag LOTO devices according to print and format.
- LOTO devices must be substantial—they must not be able to be accidentally removed—they have to be removed by force and be identifiable.

Employee Training

- There are basically three types of employees: *authorized, affected* and *all*. LOTO training is based on the relationship of the equipment being de-energized and the degree of knowledge that employees possess with regards to hazardous energy.
  - **"Authorized"** employees perform the actual energy control procedure. They know the details and how the hazards will be controlled and isolated. These are usually electricians or other maintenance crafts.
  - **"Affected"** employees are those who use the equipment that is undergoing repair. They will be in the area during the repair.
  - **"All"** employees refers to any employee on the job site. They need to understand the importance of LOTO.
- Training includes the initial training, retraining and certification. Authorized or affected employees will be retrained:
  - When job assignments change;
  - When new hazards are introduced into the work environment;
  - When energy control procedures change; and
  - When periodic inspections reveal any deficiencies in the program.

LOTO Application

- Prepare for shutdown.
- Shut down the equipment or circuitry.

- Apply the LOTO device.
- Render safe any stored or residual energy.
- Verify isolation and de-energization.

Group LOTO

- Group LOTO needs to be tailored to each specific situation.
- This usually involves a group LOTO box or multi-hasp box.
- The qualified person of the group is the last one to take off the lock and tag off the hasp or group LOTO box.

Head Protection Policy

Safety headgear (i.e. hard hats) shall be worn by employees in any area in which there is a potential hazard to the head from falling, flying or thrown objects, or from other harmful contacts (i.e. electrical). Some examples of this hazard would include, but not be limited to:

1. any industrial operation where hard hats are mandatory (i.e. construction site, sawmill operation
2. when working in high-level warehousing operations;
3. confined space entry activities;
4. working below a scaffolding;
5. when working below other workers;
6. when electrical contact with the head is a possibility;
7. when working in or around helicopters;
8. Any other operation where an employee could be struck by a falling overhead object.

Safety headgear (hard hats) shall meet the requirements of:

1. CSA Standard Z94.1-M1977
2. CAN/CSA Standard Z94.1-92
3. ANSI Z89.1-1969
4. ANSI Z89.2-1971
5. ANSI Z89.1-1981
6. ANSI Z89.1-1986
7. Federal OSHA regulations 29 CFR 1910.135, Head Protection

Where persons are exposed to the potential of any electrical hazard, the hard hats shall be of a non-conductive type which is rated as "Class B". Painting of hard hats and/or drilling of hard hat shells to affix attachments are prohibited.

Where there is a possibility of the hard hat being dislodged due to high winds or because of an awkward work position (i.e. bent over) hard hats are to be fitted with chin straps or other means of ensuring that the safety headgear remains attached to the wearer.

Persons engaged in operating or riding on snow machines, all terrain vehicles or motorcycles shall wear safety helmets, approved by a recognized agency. Where such machines are used to transport workers to a work point where any work away from the machines will expose the workers to a hazard of head injury, then hard hats shall be carried and worn at the worksite. The use of hard hats for protection while operating or riding a snow machine, all terrain vehicle or motorcycle is prohibited.

Persons working around helicopters shall wear either hard hats equipped with chin straps or safety helmets, approved by a recognized agency.

Persons wearing safety headgear are to inspect the shell and suspension for any visible signs of damage prior to use. Where damage or defects are detected, the safety headgear shall be discarded and replaced with a new unit.

Safety headgear will deteriorate over time from exposure to sunlight or other chemicals. The normal service life of a hard hat shell is considered to be a maximum of 5 years from the date of manufacture (which can be found permanently marked on the inside surface of the hard hat shell). The service life of the suspension is considered to be 1 year of regular use. Where use is intermittent, the suspension may last longer. Replacement suspension harnesses shall be from the same manufacturer and for the same model of hard hat. Mixing different manufacture suspension types and hard hat shells is prohibited.

EYE AND FACE PROTECTION PLAN

Introduction

Sight is one of our most valuable senses. Partial or complete loss of sight would present a challenge to all of us.

Hazards to the eyes can take a variety of forms, such as flying particles, biohazards, electromagnetic radiation and corrosive liquids or vapors. A 10-year study of eye injuries on the main campus revealed that most eye injuries are not serious; however, this fact does not mean that eye protection should be taken lightly.

The primary focus of this document is the proper selection, use and care of eye and face protection. The intent of this publication is educational, preventive and has been prepared to supplement the Occupational Safety and Health Act (OSHA) 29 CFR 1910.133. A copy of the OSHA Eye and Face Protection standards is included at the end of this publication in Appendix A. A copy of this written plan shall be made available upon request to any Facility employee, student, or visitor to the Facility. **Employees may be denied benefits under the Workers' Compensation program if they experience an eye injury and were not wearing the required eye protection at the time of the injury.**

Scope

The content of this written program applies to employees, visitors and students of the Facility. Eye and face protection shall be provided to employees and visitors of the Facility. Consult the radiation safety officer for eye and face hazards involving ionizing radiation.

Responsibilities

Central Administration

1. Endorsement of the written plan.
2. Delegation of sufficient authority to the respective department heads needed to implement the plan.
3. Appropriate the necessary resources required to implement the plan.

Department Heads of Employees Who Are Covered by the Eye and Face Protection Plan

1. Assure that employees using eye protection receive the necessary training.
2. Assure that all eye and face protection equipment necessary is provided and maintained in a good state of repair.
3. Enforce the Eye and Face Protection program.
4. Identify the activities and locations requiring eye and face protection.

Department of Environmental Health and Safety

1. Develop a written control plan and perform a periodic review to determine if revisions are necessary.
2. Monitor compliance of the respective departments' compliance.
3. Provide guidance and technical assistance to departments regarding eye and face protection equipment and use.
4. Serve as a campus liaison to the System-Wide Safety Office.
5. Promote campus compliance with the OSHA and DOSH Standards.
6. Provide a means by which employees can direct suggestions, complaints, and concerns regarding the campus Eye and Face Protection Program.
7. Maintain a data base of all reported campus eye injuries involving staff, students and visitors. Investigate eye and face injuries where necessary.

Employee

1. Participate willingly in all training programs offered by the Facility and learn as much as possible about the Eye and Face Protection Program.
2. Abide by all rules and apply to the fullest extent possible the safety and health precautions specified by the Facility.
3. Report any problems that are observed which could compromise health and safety to the Facility administration through the immediate supervisor.
4. Maintain his or her eye and/or face protection equipment in a safe and sanitary condition.
5. Ensure that no other individuals are exposed to eye or face hazards based on the operations being conducted.

Failure To Use Eye Protection

All employees who fail to don the necessary, provided eye and face protection may be subject to disciplinary action. Each department shall determine what disciplinary action is necessary.

Equipment Selection

Eye and face protection fall under a broad category known as personal protective equipment, or as it is sometimes called, safety equipment. The Facility is obligated to provide most personal protective equipment to employees without charge for recognized hazard. Employees may choose to provide their own eye and face protective equipment if it meets or exceeds the requirements necessary for the activity. Regular prescription glasses are manufactured to safety standards meeting the requirements of the Food and Drug Administration. Although the lenses in prescription glasses are referred to as "safety glass," these lenses do not meet the requirements for workplace safety. Prescription safety glasses are available. Personal protective equipment is considered the last means of protecting an employee from on-the-job hazards. However, in many cases personal protective is the only means of protection, or may be necessary in combination with other controls. Engineering and administrative controls should always be considered first. Examples of engineering controls include:

1. Substitution of substances or processes which eliminate or decrease the possibility of an eye injury.
2. Enclosure of a process or equipment that generates a hazard of the eyes or face.
3. Installation of shields.

Administrative controls generally involve work procedures, warning signs, and training. The first step in selecting eye and face protection is recognition of the hazard. If you are unsure if a substance could be injurious to the eyes, consult the product's label or its material safety data sheet (MSDS). A MSDS should be available for each chemical used in the workplace. If a MSDS is not available for a specific substance, the Facility is obligated to provide one. All eye protection shall be provided with side-shields. Note that clip-on side shields are available for prescription safety glasses. Appendix B in the back of this publication is a reprint of the Eye and Face Protection Selection Chart from 29 CFR 1910.133. This chart should be used to select appropriate eye protection.
Eye and Face hazards fall into four main categories:

1. Flying particles and materials
2. Electromagnetic radiation
3. Chemicals that can be accidently splashed in the eye(s) or chemical vapors that can cause eye injury.
4. Biological hazard

Appendix C in the back of this program contains a list of areas, operations, and equipment that require eye and or face protection. This list is not meant to be all-encompassing. If you have a specific question regarding eye and face protection that is not adequately answered by the written program, consult Environmental Health and Safety Services at 974-5084.

Approved Equipment

Equipment used to protect the eyes and face shall be approved by the American National Standards Institute (ANSI). New eye protection shall comply with Z 87.1 - 1989 "American National Standards Practice for Occupation and Educational Eye and Face Protection," or later edition. Equipment currently in use may remain in use provided it complies with ANSI Z87.1 - 1968 or later edition and is serviceable. Damaged eye and face protection equipment shall not be used and shall be discarded.

Posting of Hazards

Signs shall be posted in areas requiring eye and/or face protection. The signs may be posted on entry doors to areas where eye hazards routinely exist. Examples of areas requiring eye protection include shops (wood, machine), construction sites, and chemical laboratories.

Face shields

Face shields function as protection for the eyes and face and can be used to supplement eye protection. A face shield should never be used alone for eye protection.

As a general rule, face shields should be worn in combination with other eye protection. There are three basic types, which include provision for crown (head) protection, crown and chin protection, and neither crown nor chin protection.

Goggles

There are three basic types of goggles. The first type is designed to withstand impact only and is generally vented through the sides of the goggles to prevent fogging. The second type, which have indirect vents, is designed to prevent splashes or particles from reaching the eyes and impact. The vents are capped and limit air flow. Fogging of the goggles could be a problem with this type of eye protection. The third type of goggles is non-vented and is designed only to exclude vapors and fumes. An anti-fogging treatment is required with this type of eye protection.

Eye Wash Facilities

Eye wash facilities shall be provided in the immediate vicinity of locations where corrosive chemicals are routinely used, mixed, handled, or stored. New eye wash facilities shall comply with the latest edition of ANSI Z 358.1 to the extent possible. Where use or handling of corrosive chemical is transient or where an approved water supply is not available, consideration should be given to portable eye wash facilities.

Visitors

Visitors to the Facility may be exposed to eye hazards. Each department head shall ensure that visitors to the Facility are provided with appropriate eye protection when a hazard exists. To provide ready access to eye protection for visitors, the department head should provide visitor safety glasses in the main office or outside the area which contains an eye hazard. Consideration should be given to providing visitors safety glasses that can fit over prescription glasses.

Eye Protection for Off-Site Activities

Facility students and employees are engaged in various projects in other locations around the state and world. Each department head should scrutinize the need to provide personal protective equipment, including eye protection, for employees under their supervision when engaged in Facility sponsored activities off campus.

Training

The Occupational Safety and Health Administration requires employees be trained in proper eye protection. The training shall cover the following information:

1. When eye protection is necessary;
2. What type of eye protection is required;
3. The possible injuries that can occur as the result of failure to wear the provided eye protection;
4. How to properly don, doff, adjust, and wear the eye protection;
5. The limitation of the eye protection; and,
6. The proper care, maintenance, useful life and disposal of the eye protection.

Training should be provided for each new employee. Refresher training shall be provided when:

1. The employee demonstrates a lack of knowledge;
2. Different eye protection is provided to the employee;
3. Periodically as deemed necessary by the supervision.

Each department shall verify that employees who have been trained understand the training. A written test, quiz or survey shall be conducted at the end of the training session and shall serve as certification that the employee understands the information

provided. Training can be obtained through a self-study training programs available through Environmental Health and Safety or other sources.

Care, Maintenance, and Storage of Eye Protection

Eye and face protection must be properly maintained in order to be effective. Employees must report damaged eye protection and face shields to their immediate supervisor. Eye wear with lens that have extensive scratches should be replaced. Broken or cracked welding goggles can permit ultraviolet light to penetrate and should be discarded. Eye protection should be inspected periodically for signs of wear and tear and should be stored in a location where it is not subject to physical damage, harmful chemicals, dust, excessive heat or theft. Eye protection should be kept in the immediate vicinity of the fixed equipment requiring eye protection. Fogging may occur with any type of eye protection. Anti-fogging agents are available and should be used when fogging occurs. It may be necessary to apply the anti-fogging compound every few days under heavy fogging conditions. In addition, some eye protection comes from the manufacturer with an anti-fogging coating.

Selection of Eye Protection for Welding

Consult Appendix A for the appropriate shades of eye protection for specific welding operations. When referring to eye protection for electromagnetic radiation (infrared, visible, ultraviolet) the term "tint" should not be confused with "shade." Tinted eye protection is designed to offer minimal (lower level) protection against visible light and ultraviolet radiation. Filter shades are designed for welding operations and offer a much higher degree of protection.

Foot Protection Policy

Policy

Each affected employee shall wear protective footwear when working in areas where there is a danger of foot injuries due to falling or rolling objects, or objects piercing the sole, and where such employee's feet are exposed to electrical hazards.

This policy incorporates the requirements of the U.S. OSHA Regulations 1910.136, Occupational Foot Protection and ANSI Z41-1991, "American National Standard for Personal Protection - Protective Footwear."

Purpose

To select, and have each affected employee use appropriate foot protection at [Insert Company Name Here], in order to minimize the risk of foot injuries.

Responsibility

It is the responsibility of [Insert Name Here] to perform a job hazard analysis to determine the need for specific foot protection and to ensure that appropriate foot protection is being worn.

Employees are responsible for their own safe use of foot protection. They shall wear the approved foot protection as part of their daily uniform.

Management/Supervisors are responsible for implementing an appropriate foot protection program for individuals, work, and areas under their direction. They shall:

- Evaluate all their work areas and tasks and assess the risk for foot injuries, plus slips and falls and electrical shock where footwear may have an impact.
- Determine the need for specific foot protection.

- Ensure appropriate, approved foot protection is being worn
- Provide adequate storage and care capability.
- Ensure foot protection requirements are being followed.

The **Safety Department** shall:

- Provide professional consultation and guidance to management for all foot protection program elements.
- Audit the foot protection program and assist management in developing effective strategies for indicated improvement.
- Perform job hazard safety analysis to determine the need for and type of foot protection.
- Ensure appropriate, approved foot protection is selected and ensure that it fits properly.

All protective footwear shall meet the requirements of ANSI Standard Z41-1991: Protective footwear is intended to provide protection for the toes against external forces through the use of a protective toe box. Compression and Impact resistant protective footwear shall be rated no less than C/75 and I/75, respectively.
Electrical Hazard Safety footwear shall provide protection against open circuits of 600 volts or less under dry conditions. No metal parts shall be incorporated in the sole or heel of the shoe.

Sole Puncture resistant footwear shall include a protective device that will provide protection against puncture wounds of the sole of the foot for the life of the footwear. The identification of all protective footwear certified as meeting the requirements of this standard shall follow a consistent pattern. One shoe of each pair shall be clearly and legibly identified in letters and numbers by stitched-in labels, stamping, and/or pressure-sensitized labels. The labels shall identify the shoe as complying with the standard, the year of the standard, gender, and which sections of the standard the shoe complies with.

No affected employee may work without safety shoes where there is a danger of the above-mentioned hazards. If anyone needs information on what type of foot protection is appropriate, please contact the Safety Department.

Hand Protection Policy

Hand Protection

Hand protection shall be worn when hands are exposed to hazards such as those from skin absorption of harmful substances, severe cuts or lacerations, severe abrasions, punctures, chemical burns, thermal burns and harmful temperature extremes. The basis for this policy is to prevent all hand injuries and to comply with the Federal OSHA Standard, 29 CFR1910.138—Hand Protection.

The type of hand protection used shall be based on the performance characteristics of the hand protection relative to the task(s) to be performed, conditions present, duration of use, and the hazards or potential hazards identified.

The Safety Department is charged with the responsibility to perform the appropriate hazard analysis initiatives to identify all hand hazards and to ensure employees' hands are protected while performing duties in the workplace. Questions employees might have relative to hand protection should be directed to the Safety Department.

With respect to selection of gloves for protection against chemical hazards:

1. The toxic properties of the chemical(s) must be determined; in particular, the ability of the chemical to cause local effects on the skin and/or to pass through the skin and cause systemic effects;
2. Generally, any "chemical resistant" glove can be used for dry powders;
3. For mixtures and formulated products (unless specific test data are available), a glove shall be selected on the basis of the chemical component with the shortest breakthrough time, since it is possible for solvents to carry active ingredients through polymeric (a chemical compound or mixture of compounds formed by polymerization and consisting essentially of repeating structural units) materials; and
4. Employees shall be able to remove the gloves in such a manner as to prevent skin contamination.
5. Employees should report to the Safety Department all hand injuries so appropriate post-accident evaluations can be made to help ensure repeat accidents don't reoccur.

Note: Employees should be reminded that not all gloves provide protection for cut injuries. Make sure you use the correct gloves for this hazard, which may include Kevlar or metal mesh.

Hazard Communication Plan

Overview

The purpose of CFR, Title 29, Part 1910.1200, Hazard Communication Standard (HCS) is to ensure that the hazards of all produced or incorporated chemicals are evaluated and the information concerning these hazards is transmitted to both employers and employees.

The standard mandates the evaluation of hazardous chemicals present in a workplace and requires training of employees regarding the hazardous chemicals and related prevention and protective measures for routine and non-routine tasks.

The Hazard Communication Plan

- The Hazard Communication Plan (HCP) consists of four major components:

  1. Identification and inventory of all hazardous chemicals and listing on a Hazardous Chemical List (HCL).

  2. Acquisition of Safety Data Sheets (SDS) for each hazardous chemical listed on the HCL.

  3. Labeling of all hazardous chemicals with chemical name, hazards and warnings and the manufacturer's or importer's name and address, with reference to the appropriate Safety Data Sheet.

  4. Training of all employees about the hazardous chemicals in the workplace and of the Hazard Communication Plan.

- The _____ *(person in charge)* is the coordinator for the Hazard Communication Plan.

- Copies of the Hazard Communication Standard and the Hazard Communication Plan will be maintained and available upon request.

Hazardous Chemicals List

- The _____ *(department)* will have responsibility for identifying and inventorying all hazardous chemicals.

- A current master list will be maintained at all times. New chemicals will be added as they are received and chemicals no longer inventories will be removed from the list as they are discarded. A formal inventory and updating of the list will be done annually.

- Each hazardous chemical must be cross-referenced to an appropriate Safety Data Sheet.

- The master HCL will be maintained in the _____ *(department name)*. Partial lists may be maintained in the various departments where hazardous chemicals are used.

Safety Data Sheets (SDS)

- The Hazard Communication Standard requires that SDSs be available to all employees for each hazardous chemical identified and used. If the employer receives a chemical container labeled as a hazard, an MSDS is required.
    - The _____ *(department name)* will be responsible for acquiring and maintaining updated versions of all SDSs.
    - The SDS will be written in English and will consist of all information listed on OSHA Form 174, including the specific chemical identity and common names.
    - All new procurements of hazardous chemicals should be evaluated and, whenever possible, the least hazardous substance will be purchased.
    - Training of all employees regarding any new or updated SDS will be documented.
    - Purchase orders for hazardous chemicals should include a request for a current SDS.
    - Hazardous chemicals should not be incorporated into any work process until an SDS has been received and reviewed by employees exposed to the chemical.

- Accessibility of Safety Data Sheets.
    - A current SDS library will be maintained in _____ *(department name)* for all hazardous chemicals identified and listed on the HCL.
    - The SDSs will be readily available to all employees during each work shift.
    - If a new SDS contains changes or new information, the old SDS will be replaced with the new one in both the master file and the worksite file. Affected personnel will review updated or modified SDSs.

Labels and Other Forms of Warning

- Containers of hazardous chemicals will be properly labeled with at least the following information:
    - Identify of the hazardous chemical;
    - Appropriate hazards and warnings (including target organ effect); and
    - Name and address of the manufacturer.
- ***Where the manufacturer's label provides this information, it shall be used in lieu of an in-house label.***

- The appropriate SDS will be reviewed by _____ *(name or job title)* to verify the warning label.

- Unlabelled containers should not be used.

- Secondary containers used by several employees will be labeled.
    - A semi-permanent label with the following information will be used:
        - Identity of the hazardous chemical;
        - Appropriate hazards and warnings (including target organ effect); and
        - Name and address of the chemical manufacturer.

    - Use the secondary container only for the chemical identified on the label.
    - The secondary container will be emptied and washed as needed. The label will not be removed, but will remain in place for future uses.

- Alternate methods of labeling (signs, placards, batch tickets, process sheets and like written materials) may be used on individual stationary containers in lieu of affixed labels, provided the alternative method identifies the containers to which it applies and conveys the required information and is readily accessible to employees in their work area throughout the shift.

- All primary and secondary containers will be regularly checked and verified that labels have not been defaced or removed and the information contained on them is current.

Training and Communication

- Prior to an assignment, each employee who works with or is potentially exposed to hazardous chemicals will receive training on the Hazard Communication Standard and the specific use of applicable hazardous chemicals.

- Prior to the introduction of a new hazardous material or updated hazard, each employee will be trained concerning specific use or handling procedures.

- Training will emphasize the following elements:
    - A summary of the Hazard Communication Standard and Hazard Communication Plan;
    - Hazardous chemical properties, including visual appearance and odor and methods that can be used to detect the presence or release of hazardous chemicals.
    - Physical and health hazards of the chemicals in the work area (including signs and symptoms of exposure) and any medical conditions known to be aggravated by exposure to the chemical.
    - Procedures to protect against hazards, including:
        - Personal protective equipment required.
        - Proper use and maintenance.
        - Work practices or methods to assure proper use and handling of chemicals.
        - Emergency response procedures.
    - Work procedures to follow to assure protection when cleaning hazardous chemicals and leaks.

    - Location of SDS, interpretation of their contents and labeling information, as well as instructions for employees in how to obtain and use appropriate hazard information.
    - Explanation of the labeling system and instructions for preparing secondary container labels.

- Employee training will be documented and monitored for use in identifying training needs.
    - Retraining is required when a chemical hazard changes or when a new hazard is introduced into the workplace. It will also be company policy to include hazard communications into regularly scheduled staff meeting agendas.
    - The training program will be assessed by obtaining input from employees

regarding training they have received and their suggestions for improvement.

Non-Routine Tasks

- Maintenance or other supervisor contemplating undertaking a non-routine task, e.g., instrument repair and cleaning, will ensure that employees are informed of chemical hazards associated with the performance of these tasks and that appropriate protective measures are taken prior to the beginning of the task.

OSHA 300 Logs

Available upon request. Hard copies can be found in Comprehensive Safety Binder.

Powered Industrial Trucks Policy

Policy

All powered industrial trucks (PITs) in this facility shall be operated and maintained in accordance with this policy.

Scope

This policy applies to all powered industrial trucks and provides guidance on the safe operation of propane, gasoline and electric battery powered forklifts and power lifts.

Authority and Responsibility

The Safety Department is responsible for:

1. Reviewing the PIT policy to assure compliance;
2. Coordinating and providing training of affected employees;
3. Inspecting recordkeeping material; and
4. Maintaining training records of all operators.

Departmental Supervisors are responsible for:

1. Ensuring employees attend training and operate PITs in a safe manner;
2. Ensuring all equipment is in proper working condition;
3. Assuring operators perform appropriate pre-operation safety inspections and complete log books prior to operating equipment;
4. Scheduling maintenance by outside contractors; and
5. Maintaining required documentation.

Employees are responsible for complying with this policy.

General Requirements

General requirements for PITs are as follows:

1. The Occupational Safety and Health Administration (OSHA) per 29 CFR 1910.178 states in part, only trained and authorized operators shall be permitted to operate a PIT;
2. The employee is responsible for ensuring the safe operation of the PIT;
3. Modifications and additions that affect capacity and the safe operation of the PIT shall not be performed by the Company without the manufacturer’s prior written approval. Capacity, operation, and maintenance instruction plates, tags, or decals shall be modified accordingly;
4. If the PIT is equipped with front-end attachments other than factory installed attachments, the PIT shall be marked to identify the attachments and show the approximate weight of the truck and attachment combination at maximum elevation with load laterally centered;
5. Nameplates and markings shall be in place and maintained in a legible condition; and

6. All Company PITs are used in unclassified locations according to 29 CFR 1910.178 Table N-1. If a location is re-classified as hazardous, 29 CFR 1910.178(c) shall be consulted in order to determine the appropriate type of PIT to be utilized.

Pre-Operation Safety Inspection

Prior to operating a PIT, the employee shall perform a pre-operation safety inspection.

1. This inspection shall be made at least daily;
2. When PITs are used on a round-the-clock basis, they shall be examined after each shift;
3. The inspection shall identify any conditions that could affect the safe operation of the PIT;
4. If any condition(s) exist, the PIT shall be removed from service and tagged "Out of Service" until the proper repairs or concerns are addressed;
5. Upon an operator discovering any concerns, immediately notify your supervisor so he or she can notify the person responsible for the repairs; and
6. Only outside contractors qualified to repair PITs shall perform all repairs and adjustments.

Safety Department officials shall inspect all records and log books. The keys to PITs shall be confiscated by the Safety Department for any PIT that is determined to be unsafe.

Fuel Handling and Storage

The handling and storage of liquid fuels such as gasoline shall be in accordance with the National Fire Protection Association (NFPA) Flammable and Combustible Liquids Code (NFPA 30).

The handling and storage of liquefied petroleum gas fuel shall be in accordance with the Storage and Handling of Liquefied Petroleum Gases Code (NFPA 58).

The following procedures shall be followed:

1. When refueling or recharging the batteries of a PIT, the operator shall ensure that the PIT is shut-off and the parking brake is engaged;
2. Refueling and recharging shall be completed in areas that are designated and well ventilated;
3. Personal protective equipment (approved face shield, goggles, gloves) shall be worn during all refueling and battery recharging operations;
4. Emergency eyewash/shower station shall be present in the area;
5. Smoking shall be prohibited in refueling and recharging areas. Fuel vapors and gases, which can escape from the battery and fuel vents, are extremely flammable;
6. Tools and other metallic objects shall be kept away from the top of uncovered batteries; and
7. An ABC rated fire extinguisher shall be present in all refueling or recharging areas.

Workplace Hazards

Many hazards exist in the workplace that are easily detectable if a quick survey of the area is conducted. These hazards include, but are not limited to, the following:

1. Overhead obstructions such as fire protection sprinkler piping, ventilation ducts, lighting fixtures, power lines. If the load you are moving is carried too high or the PIT mast is raised too high, damage can occur to the overhead obstruction and possibly cause injury to the operator or people in the immediate area;
2. Co-workers or pedestrians traveling to and from certain areas within the facility;
3. Poor housekeeping such as debris left on the floor and wet floors;
4. Poor condition of the floor surface such as uneven concrete, potholes and cracks;
5. Poor visibility around corners. The operator's view from a PIT can be blocked or obstructed by the load. If there is not a clear view, drive in reverse or have a co-worker, "spotter", direct you;
6. Operating a PIT in a confined area with poor ventilation can allow the PIT exhaust gases to accumulate. This creates a hazard not only for the forklift operator, but also for others within the area or building. The Safety Department shall be contacted to determine air quality if concerns should arise;
7. For those individuals who wear eyeglasses, this could be a hazard when entering a warm atmosphere from a cold atmosphere (driving into a building from the outside) and having your eyeglasses steam up; and
8. Driving too fast for the conditions of the area. When operating a PIT, always remain alert and cautious.

Note the existing and potential hazards and conditions that do or could exist in your work environment. Whenever a hazard is discovered which requires action such as housekeeping, poor floor condition or poor ventilation, immediately notify your supervisor to ensure the proper procedures are followed to address the hazards.

Operating Procedures

When operating a PIT, always travel with the forks approximately four inches from the ground so they clear any uneven surfaces. Always survey the area ahead and to the sides as you travel. Always travel in reverse or use a "spotter" when the load you are carrying obstructs your view.

Some factors that could cause the PIT to tip over:

1. Overloads;
2. Unstable loads;
3. Load not centered on forks;
4. Traveling with the load raised;
5. Sudden stops and starts;
6. Making sharp turns; and
7. Traveling across a ramp or incline.

Safety Practices

The following safety practices shall be adhered to at all times:

1. Wear seatbelts whenever the PIT is equipped with them;
2. Keep all body parts inside the driver's compartment;
3. Drive at appropriate speeds;
4. Do not carry passengers on the PIT;

5. No person shall be permitted to stand or pass under elevated portions of any PIT, whether loaded or empty;
6. All PIT operators working on platforms that are six feet above a lower level shall wear appropriate fall protection devices;
7. When traveling behind other PITs or vehicles, always maintain at least three forklift lengths from the vehicle or PIT ahead, and maintain control of the PIT at all times;
8. Slowly approach ramps and inclines straight, not at an angle;
9. Never turn the PIT while on a ramp or incline;
10. When parking a PIT and prior to dismounting or leaving the unit, shut-off the power. The operator shall never leave a running PIT unattended;
11. When the PIT is left unattended, the load shall be fully lowered, controls shall be neutralized, power shut off, brakes set and wheels blocked if PIT is parked on an incline;
12. Never park a PIT in front of any fire protection equipment, emergency exits, or in a manner that would obstruct a person from exiting the area;
13. If at any time during operation a PIT is found to be in need of repair, defective, or in any way unsafe, it shall be immediately removed from service. The department supervisor shall be notified so he or she can notify the person responsible for the repairs; and
14. Refueling and recharging areas equipped with emergency eyewash stations shall be inspected on a weekly basis.

Training

Company employees and outside contractor employees designated to operate a powered industrial truck shall be required to participate in and successfully complete a PIT training program offered through Safety and Environmental Affairs to ensure the operator is competent to operate a PIT safely before assuming their responsibilities.

Training consists of a combination of formal instruction and practical training. Formal instruction includes lecture, interactive discussion, video, and written material handouts. Practical training includes demonstrations performed by the trainer, practical exercises performed by the trainee, and evaluation of the operator's performance in the workplace.

Trainees may operate a powered industrial truck only:

- Under the direct supervision of persons who have the knowledge, training, and experience to train operators and evaluate their competence; and
- Where such operation does not endanger the trainee or other employees.

Curriculum

The curriculum of the training program shall, at a minimum, address the following topics:

1. Pre-Operation Safety Inspection;
2. Workplace Hazards;
3. Safe Driving and Operating Procedures;
4. Loading-Carrying-Unloading of Materials; and
5. Operation and Safety Driving Practical.

Retraining

Employees shall be required to participate in refresher training at least once every three years. Retraining may also be deemed necessary when it has been documented that the operator has been observed to operate the PIT in an unsafe and/or inappropriate manner, involved in an accident or near miss incident, is assigned to drive a different type of PIT, or a condition in the workplace changes in a manner that could affect safe operation of the PIT as directed by this policy and according to OSHA & DOSH regulations. Curriculum for retraining shall cover the same topics as the initial training.

BAKER
CONSTRUCTION & DEVELOPMENT, INC.

Weekly Forklift Checklist

Perform every day prior to operation. If equipment is not being used please indicate "NIU" (not in use) in the appropriate block. **Do Not Operate this unit until all discrepancies have been noted and corrected.**

Make/Model_____ Type of Equipment_____

	Mon	Tue	Wed	Thur	Fri
Date:	_____	_____	_____	_____	_____
Inspected by:	_____	_____	_____	_____	_____
Hour Meter:	_____	_____	_____	_____	_____
Equip in use?: (If yes, continue)	_____	_____	_____	_____	_____
Check Fluid Levels/Leaks					
1. Engine Oil:	☐	☐	☐	☐	☐
2. Hydraulic Fluid:	☐	☐	☐	☐	☐
3. Battery Water:	☐	☐	☐	☐	☐
4. Steering:	☐	☐	☐	☐	☐
5. Coolant:	☐	☐	☐	☐	☐
Check Operation					
1. Battery Resistant	☐	☐	☐	☐	☐
2. Gauges/Horn	☐	☐	☐	☐	☐
3. Hoist/Boom	☐	☐	☐	☐	☐
4. Tires	☐	☐	☐	☐	☐
5. Brakes (Service and Parking)	☐	☐	☐	☐	☐
6. Steering	☐	☐	☐	☐	☐
7. Forks/Bucket	☐	☐	☐	☐	☐
8. Seatbelt/Seat	☐	☐	☐	☐	☐
9. Operators Manual	☐	☐	☐	☐	☐

Comments:

SAFETY MEETINGS AVAILABLE UPON REQUEST (BELOW IS A SAMPLE)

Scaffold Safety for Construction - Access to Scaffolds

Overview Of Topic

Getting to and from a scaffold working surface is a critical event for your employees. This is the time most scaffold accidents happen. The previous scaffold rule only required that "an access ladder or equivalent safe access be provided." This new rule goes into detail on how employees can get to their working surface safely.

The new rule also places an additional requirement on employers. Now, you must provide safe access for employees erecting or dismantling supported scaffolds.

Access rule

When a scaffold working platform is more than two feet above or below an access point to that platform, the methods in the scaffold rule at 1926.451(e) must be used to get to the platform.

Crossbraces cannot be used as a means of access to a working platform.

Methods that can be used to gain access to scaffold platforms are:

- ***Portable, hook-on, and attachable ladders*** must be:
    - Positioned so as not to tip the scaffold.
    - Specifically designed for use with the type of scaffold being used.

  When hook-on or attachable ladders are used on supported scaffolds more than 35 feet high, they must have rest platforms at least every 35 feet.

  Note: Additional requirements for the proper construction and use of portable ladders are in Subpart X—Stairways and ladders.

- ***Stairway-type ladders***, such as ladder stands, must have:
    - Rest platforms at a maximum of 12 foot intervals.
    - Slip-resistant treads on all steps and landings.

- ***Stairtowers (scaffold stairway towers)*** must:
    - Have a stairrail with toprail and midrail on each side of the stairway.
    - Have guardrails provided on the open sides and ends of each landing.

- ***Ramps and walkways*** are used extensively as a means of getting to an elevated surface. Ramps are also used for material handling equipment. Ramps and walkways must have guardrails which comply with the fall protection rule if they are six feet or more above lower levels.

  Note: Employees are prohibited from working on scaffolds covered with snow, ice, or other slippery material except as necessary for removal of the material. OSHA will also apply this rule to scaffold access ramps and walkways.

- ***Integral prefabricated scaffold access frames*** must:

SAFETY MEETING FORM

Company Name_____ Project_____

Date_____ Supervisor's Signature_____

Topics:

1. Access to scaffolds	2.	3.
4.	5.	6.

Print Name	**Employee Signature**	

Return form to:

RELEASE TO RETURN TO WORK

Name of worker	Claim number

Please fill out this form and return it to us at the address indicated above.

1. Is the worker medically stationary? ☐ Yes ☐ No If yes, date: _____ (Provide closing information and complete Form 827.)

   If no, estimated medically stationary date: _____ Are there permanent restrictions? ☐ Yes ☐ No ☐ Unknown

   Next scheduled appointment date: _____

2. Worker is released to:

   ☐ full duty without limitations Date: _____ (Do not complete lines 3 through 11. Sign below.)

   ☐ modified duty from (date): _____ through (date): _____ (specify limitations below)

   ☐ modified hours specify hours: _____ from (date): _____ through (date): _____

   ☐ not released to work Est. RTW date: _____ If modified release, provide date of anticipated regular release: _____

	Hours:	**No limitations**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**Other (specify)**
3. In a/an ☐ 8 ☐ 10 ☐ 12 ☐ other ____ -hour workday, worker can stand/walk a total of		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐ _____
4. At one time, worker can stand/walk		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐ _____
5. In a/an ☐ 8 ☐ 10 ☐ 12 ☐ other ____ -hour workday, worker can sit a total of		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐ _____
6. At one time, worker can sit		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐ _____

7. The worker is released to return to work in the following range for lifting, carrying, pushing/pulling:

Pounds	**<10**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**	**75**	**80**	**85**	**90**	**95**	**100**	**>100**
Occasionally	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Frequently	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

8. Worker can use hands for repetitive:

	Right	**Left**	
a. Fine manipulation	☐ Yes ☐ No	☐ Yes ☐ No	Dominant hand
b. Pushing and pulling	☐ Yes ☐ No	☐ Yes ☐ No	☐ Right ☐ Left
c. Simple grasping	☐ Yes ☐ No	☐ Yes ☐ No	
d. Keyboarding	☐ Yes ☐ No	☐ Yes ☐ No	

9. Worker can use feet for repetitive raising and pushing (as in operating foot controls): ☐ Yes ☐ No

10. Worker is able to:

	Continuous 67-100% of the day	**Frequently 34-66% of the day**	**Occasionally 6-33% of the day**	**Intermittently 1-5% of the day**	**Not at all**
a. Stoop/bend	☐	☐	☐	☐	☐
b. Crouch	☐	☐	☐	☐	☐
c. Crawl	☐	☐	☐	☐	☐
d. Kneel	☐	☐	☐	☐	☐
e. Twist	☐	☐	☐	☐	☐
f. Climb	☐	☐	☐	☐	☐
g. Balance	☐	☐	☐	☐	☐
h. Reach	☐	☐	☐	☐	☐
i. Push/pull	☐	☐	☐	☐	☐

11. Other functional limitations or modifications necessary in worker's employment:

Additional comments may be written on back of form.

Signature of medical service provider*	Printed name	Date

440-3245 (10/05/DCBS/WCD/WEB)

* See OAR 436-010-0210 regarding who may provide medical services and authorize time loss.