Safety for Small Business

Employee Workbook

Presented by the Public Education Section
Department of Business and Consumer Business
Oregon OSHA

OR-OSHA Mission Statement

To advance and improve workplace safety and health for all workers in Oregon.

Consultative Services

- Offers no-cost on-site safety and health assistance to help Oregon employers recognize and correct safety and health problems in their workplaces.
- Provides consultations in the areas of safety, industrial hygiene, ergonomics, occupational safety and health programs, new-business assistance, the Safety and Health Achievement Recognition Program (SHARP), and the Voluntary Protection Program (VPP).

Enforcement

- Offers pre-job conferences for mobile employers in industries such as logging and construction.
- Provides abatement assistance to employers who have received citations and provides compliance and technical assistance by phone.
- Inspects places of employment for occupational safety and health rule violations and investigates workplace safety and health complaints and accidents.

Appeals, Informal Conferences

- Provides the opportunity for employers to hold informal meetings with OR-OSHA on workplace safety and health concerns.
- Discusses OR-OSHA's requirements and clarifies workplace safety or health violations.
- Discusses abatement dates and negotiates settlement agreements to resolve disputed citations.

Standards & Technical Resources

- Develops, interprets, and provides technical advice on safety and health standards.
- Provides copies of all OR-OSHA occupational safety and health standards.
- Publishes booklets, pamphlets, and other materials to assist in the implementation of safety and health standards and programs.
- Operates a Resource Center containing books, topical files, technical periodicals, a video and film lending library, and more than 200 databases.

Public Education & Conferences

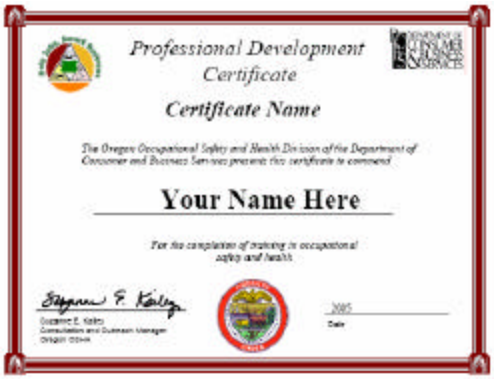
- Conducts conferences, seminars, workshops, and rule forums.
- Presents many workshops that introduce managers, supervisors, safety committee members, and others to occupational safety and health requirements, technical programs, and safety and health management concepts.

Additional Public Education Services

- Safety for Small Business workshops
- Interactive Internet courses
- Professional Development Certificates
- On-site training requests
- Access workshop materials
- Spanish training aids
- Training and Education Grants
- Continuing Education Units/Credit Hours

For more information on Public Education services, please call (888) 292-5247 Option 2

Portland Field Office	(503) 229-5910
Salem Field Office	(503) 378-3274
Eugene Field Office	(541) 686-7562
Medford Field Office	(541) 776-6030
Bend Field Office	(541) 388-6066
Pendleton Field Office	(541) 276-9175



Go online to check out our
Professional Development Certificate Program!

Salem Central Office: (800) 922-2689 or
(503) 378-3272

Web Site: www.orosha.org

Employee Training Record

Employee Name:_____

Training **I Have Received Training in the following:**

Date	Initial		Date	Initial	
_____	_____	Mod. 1 Company Safety & Health Plan	_____	_____	Mod. 5 Accident Investigation
_____	_____	Mod. 2 Rules For All Workplaces	_____	_____	Mod. 6 Back Safety
_____	_____	Mod. 3 Safety Committee Operations	_____	_____	Mod. 7 Ergonomic Awareness
_____	_____	Mod. 4 Hazard Identification & Control			

Mod 8 Lockout/Tagout Training

Date Initial

_____ _____ I have received training to make sure that the purpose and function of the energy control program is understood.

_____ _____ I have been given time to acquire the knowledge and skills required for the safe application, use, and removal of the energy controls.

I have received training in the following:

_____ _____ Authorized employee. The recognition of applicable hazardous energy sources, the type and magnitude of the energy available in the workplace, and the methods and means necessary for isolation and control.

_____ _____ Affected employee. The purpose and use of the energy control procedure.

_____ _____ All other employees. General lockout/tagout program and procedures, and the prohibition relating to attempts to restart or re-energize machines or equipment which are locked out or tagged out.

When a tagout system is used, I have been trained that:

* Tags are essentially warning devices affixed to energy isolating devices, and do not provide the physical restraint on those devices that is provided by a lock.
* When a tag is attached to an energy isolating means, it is not to be removed without authorization of the authorized person responsible for it, and it is never to be bypassed, ignored, or otherwise defeated.
* Tags must be legible and understandable by all authorized employees, affected employees, and all other employees whose work operations are or may be in the area, in order to be effective.
* Tags and their means of attachment must be made of materials which will withstand the environmental conditions encountered in the workplace.
* Tags may evoke a false sense of security, and their meaning needs to be understood as part of the overall energy control program.
* Tags must be securely attached to energy isolating devices so that they cannot be inadvertently or accidentally detached during use.

_____ _____

Mod. 9 Hazard Communication Training **I have received training in the following:**

Date Initial

Overview of the requirements contained in the Hazard Communication Rules, 1910.1200

_____ _____ Chemicals present in my workplace operations.

_____ _____ Locations and availability of our written hazard communication program and the MSDSs for the hazardous chemicals.

_____ _____ Physical and health effects of these hazardous chemicals.

_____ _____ Methods and observation techniques used to determine the presence or release of hazardous chemicals in my work area.

_____ _____ How to lessen or prevent exposure to these hazardous chemicals through usage of control/work practices and personal protective equipment.

Steps the company has taken to lessen or prevent exposure to these chemicals.

_____ _____ Safety emergency procedures to follow in the event of exposure to these chemicals.

_____ _____ How to read container labels, review, and interpret MSDSs to obtain appropriate hazard information.

_____ _____

Date	Initial		Date	Initial	
_____	_____	Mod. 10 Basic Machine Guarding	_____	_____	_____
_____	_____	_____	_____	_____	_____

Section 2. Training Modules

Module 1. The Company Safety and Health Plan

Why Have a Workplace Safety and Health Plan?

Taking risks is part of running a business, particularly for small business owners. You take risks in product development, marketing, and advertising in order to stay competitive. But there are some risks that should never be taken. One of these is risking the safety and health of workers.

1. Management Commitment

This company is committed to building an effective injury and illness prevention plan, putting it in writing, and integrating it into the entire operation. Review the following "Company Safety and Health Policy Statement"

Company Safety & Health Policy Statement

"The Oregon Safe Employment Act of 1973 clearly states our common goal of safe and healthful working conditions. Safety and health of our employees continues to be the first consideration in operating this business"

"Safety and health in our business must be part of every operation. Without question, it is every employee's responsibility at all levels."

"It is the intent of this company to comply with all laws. To do this, we must constantly be aware of conditions in all work areas that can produce injuries. No employee is required to work at a job they know is not safe or healthful. Your cooperation in detecting hazards and, in turn, controlling them, is a condition of your employment. Inform your supervisor immediately of any situation beyond your ability or authority to correct."

"The personal safety and health of each employee of this company is of primary importance. Prevention of occupationally-induced injuries and illnesses is of such consequence that it will be given precedence over operating productivity, whenever necessary. To the greatest degree possible, management will provide all mechanical and physical activities required for personal safety and health, in keeping with the highest standards."

"We will maintain an occupational safety and health program conforming to the best practices of organizations of this type. To be successful, such a program must embody proper attitudes towards injury and illness prevention on the part of supervisors and employees. It also requires cooperation in all safety and health matters, not only between supervisor and employee, but also between each employee and their co-workers. Only through such a cooperative effort can a safety and health program, in the best interest of all, be established and preserved."

"Our objective is a safety and health program that will reduce the number of injuries and illnesses to an absolute minimum, not merely in keeping with, but surpassing, the best experience of operations similar to ours. Our goal is zero accidents and injuries."

"Our safety and health program will include:

* Providing mechanical and physical safeguards to the maximum extent possible.
* Conducting a program of safety and health inspections to find and eliminate unsafe working conditions or practices, to control health hazards, and to fully comply with OR-OSHA safety and health standards for every job.
* Training all employees in good safety and health practices.
* Providing necessary personal protective equipment, and instructions for proper use and care.
* Developing and enforcing safety and health rules, and requiring that employees cooperate with these rules as a condition of employment.
* Investigating, promptly and thoroughly, every accident to find out what caused it, and correct the problem so it won't happen again.

"We recognize that the responsibilities for occupational safety and health are shared:

* The employer accepts responsibility for leadership of the safety and health program, for its effectiveness and improvement, and for providing the safeguards required to ensure safe work conditions.
* Supervisors are responsible for developing proper attitudes toward safety and health in themselves and in those they supervise, and for ensuring that all operations are performed with the utmost regard for the safety and health of all personnel involved, including themselves.
* Employees are responsible for wholehearted, genuine operations of all aspects of the safety and health program -- including compliance with the rules and regulations -- and for continuously practicing safety and health while performing their duties."

Module 1. The Company Safety and Health Plan

2. Labor & Management Accountability
All employees, both labor and management, need to understand their responsibilities under OR-OSHA rules and be held accountable for complying with the rules as well as the company's related policies.

Remember, it is the employer's responsibility to provide a safe and healthful work environment for their employees. However, holding everyone accountable for their part in workplace safety and health is critical for a successful injury and illness prevention plan.

3. Employee Involvement
Employees are required to work in compliance with the rules, report all accidents and near misses, and report all unsafe conditions or unsafe practices. To demonstrate this employer's commitment to support the employees in these responsibilities, the employer will do the following:

Communication System:

* Encourage employees to inform the employer about workplace hazards without fear of reprisal.
* Schedule general employee meetings at which time safety is freely and openly discussed by those present. These meetings will be regular, scheduled, and announced to all employees and managers to achieve maximum attendance. The purpose of these meetings is safety, and the concentration will be on:
    1. Occupational accident and injury history at our work sites, with possible comparison to other locations in the company;
    2. Feedback from safety committee;
    3. Guest speakers concerned with workplace safety and health; and
    4. When possible brief audio-visual materials that relate to our business.
* Conduct training programs for communicating with employees.
* Provide a safety suggestion box so that employees, anonymously if desired, can communicate their concerns with management.
* Document all communication efforts to demonstrate that an effective communication system is in place.

Safety Committee

* Recognize and support the safety committee as an excellent vehicle for facilitating communication and involvement between labor and management on occupation safety and health issues.

4. Hazard Identification & Control
Periodic inspections and procedures for correction provide methods of identifying existing or potential hazards in the workplace, and eliminating or controlling them.. Hazard control is essential to an effective injury and illness plan. We will be sure to look at safe work practices and ensure that they are being followed, and that unsafe conditions or procedures are identified and corrected properly.

Employees are encouraged to report possible hazardous situations, knowing their reports will be given prompt and serious attention.

Workplace equipment and personal protective equipment will be maintained in good, safe working condition.

Hazards, where possible, will be corrected as soon as they are identified. For those that can't be immediately corrected, a target date for correction will be set

The employer will provide interim protection for workers while hazards are being corrected. A written tracking system will be established to help monitor the progress of the hazard correction process.

Module 1. The Company Safety and Health Plan

5. Accident/Incident Investigation
Employers and safety committees are required to investigate or assign responsibility for investigating accident. Accidents/incidents will be investigated by trained individuals, with the primary focus of understanding why the accident or incident occurred, and what actions can be taken to preclude recurrence. The focus will be on solutions and never on blame. They will be in writing, and adequately identify the causes of the accident or near-miss occurrence.

6. Worker Training
Training is another essential element of any injury and illness prevention plan.

OR-OSHA rules require each employer to train workers for any job or task they are assigned.

Our plan includes training and instruction:

* For all employees when they are first hired;
* For all new employees for each specific task;
* For all employees given new job assignments for which training has not already been received;
* Whenever new substances, processes, procedures, or equipment are introduced into the workplace and present a new hazard;
* Whenever new personal protective equipment or different work practices are used on existing hazards;
* Whenever the employer is made aware of a new or previously unrecognized hazard; and
* For all supervisors to ensure they are familiar with the safety and health hazards to which employees under their immediate direction and control may be exposed.

An effective safety and health plan requires proper job performance by everyone in the workplace. As the employer, we must ensure that all employees are knowledgeable about the materials and equipment with which they work, what known hazards are present, and how they are controlled.

7. Periodic Program Evaluation
A periodic review is scheduled to look at each critical component in our safety and health plan to determine what is working well and what changes, if any, are needed. All employees are encouraged to participate by keeping the employer informed of their concerns regarding the elements of this safety and health plan.

The success of this safety and health plan is dependant upon two things: First the employer must provide a safe and healthful environment in which the employee has the opportunity to work safe, and second the employee must choose to work safe.

Module 2. Rules For All Workplaces

General 437-001-0760 Rules for all Workplaces

(1) Employers' Responsibilities

(a) The employer shall see that workers are properly instructed and supervised in the safe operation of any machinery, tools, equipment, process, or practice which they are authorized to use or apply. This rule shall not be construed to require a supervisor on every part of an operation nor to prohibit workers from working alone.

(b) The employer shall take all reasonable means to require employees:

(A) To work and act in a safe and healthful manner;

(B) To conduct their work in compliance with all applicable safety and health rules;

(C) To use all means and methods, including but not limited to, ladders, scaffolds, guardrails, machine guards, safety belts and lifelines, that are necessary to safely accomplish all work where employees are exposed to a hazard; and

(D) Not to remove, displace, damage, destroy or carry off any safety device, guard, notice or warning provided for use in any employment or place of employment while such use is required by applicable safety and health rules.

(c) Every employer shall be responsible for providing the health hazard control measures necessary to protect the employees' health from harmful or hazardous conditions and for maintaining such control measures in good working order and in use.

(d) Every employer shall inform the employees regarding the known health hazards to which they are exposed, the measures which have been taken for the prevention and control of such hazards, and the proper methods for utilizing such control measures.

(2) Employees' Responsibilities

(a) Employees shall conduct their work in compliance with the safety rules contained in this code.

(b) All injuries shall be reported immediately to the person in charge or other responsible representative of the employer.

(c) It is the duty of the workers to make full use of safeguards provided for their protection. It shall be a worker's responsibility to abide by and perform the following requirements:

(A) A worker shall not operate a machine unless guard or method of guarding is in good condition, working order, in place, and operative.

(B) A worker shall stop the machine or moving parts and properly tag-out or lock-out the starting control before oiling, adjusting, or repairing, except when such machine is provided with means of oiling or adjusting that will prevent possibility of hazardous contact with moving parts.

(C) A worker shall not remove guards or render methods of guarding inoperative except for the purpose of adjustment, oiling, repair, or the setting up of a new job.

(D) Workers shall report to their supervisor any guard or method of guarding that is not properly adjusted or not accomplishing its intended function.

(E) Workers shall not use their hands or any portion of their bodies to reach between moving parts or remove jams, hangups, etc. (Use hook, stick, tong, jig or other accessory.)

(F) Workers shall not work under objects being supported that could accidentally fall (such as loads supported by jacks, the raised body of a dump truck, etc.) until such objects are properly blocked or shored.

(G) Workers shall not use defective tools or equipment. No tool or piece of equipment should be used for any purpose for which it is not suited, and none should be abused by straining beyond its safe working load.

(d) Workers shall not remove, deface, or destroy any warning, danger sign, or barricade, or interfere with any other form of accident prevention device or practice provided which they are using, or which is being used by any other worker.

(e) Workers must not work underneath or over others exposed to a hazard thereby without first notifying them and seeing that proper safeguards or precautions have been taken.

(f) Workers shall not work in unprotected, exposed, hazardous areas under floor openings.

(g) Long or unwieldy articles shall not be carried or moved unless adequate means of guarding or guiding are provided to prevent injury.

(h) Hazardous conditions or practices observed at any time shall be reported as soon as practicable to the person in charge or some other responsible representative of the employer.

(i) Workers observed working in a manner which might cause immediate injury to either themselves or other workers shall be warned of the danger.

(j) Before leaving a job, workers shall correct, or arrange to give warning of, any condition which might result in injury to others unfamiliar with existing conditions.

The employer provides the environment and the worker must work safe.

Module 3. Safety Committee Operations

The purpose of safety committees

The purpose of a safety committee is to bring workers and management together in a non-adversarial, cooperative effort to promote safety and health in each workplace. A safety committee assists the employer and makes recommendations for change regarding occupational safety and health issues.

Safety committee costs will be directly offset by the effectiveness of the committee in reducing workplace injuries and illnesses. The average direct cost of a single accepted disabling workers' compensation claim is near $10,000**.**

Uninsured costs may run 2 - 10 times the actual cost of a workers' compensation claim. This could mean a cost of $20,000 - $100,000 per claim!

Key elements of a successful safety committee

A good committee:

* Is well-organized
* Has clearly defined purposes or goals
* Has realistic and measurable objectives and completion dates
* Knows the extent of its authority
* Follows established procedures
* Is supported by employer, CEO, and management in terms of time, effort, and money
* Clearly defines members' roles, responsibilities, functions, and duties
* Provides an environment for employee input
* Keeps well-documented written minutes and notes

Safety Committee Membership Activity:

☐ Review the Safety Committee Policy

☐ Complete training modules as follows: (minimum requirement = modules 1,2,3, and 4)

Date	Initial		Date	Initial	
_____	_____	Mod. 1 Company Safety & Health Plan	_____	_____	Mod. 7 Lockout / Tagout
_____	_____	Mod. 2 Safety Committee Operations	_____	_____	Mod. 8 Hazard Communication
_____	_____	Mod. 3 Hazard Identification & Control	_____	_____	Mod. 9 Basic Machine Guarding
_____	_____	Mod. 4 Accident Investigation	_____	_____	Mod. 10 Introduction to Fall Protection
_____	_____	Mod. 5 Back Safety	_____	_____	_____
_____	_____	Mod. 6 Ergonomic Awareness			

☐ Review the safety committee recordkeeping system (Meeting Agenda and Meeting Minutes)

☐ Review Oregon OSHA safety committee rules 437-001-0765 as follows:

Purpose 437-001-0765 (1)

The purpose of a safety committee is to bring workers and management together in a non-adversarial, cooperative effort to promote safety and health in each workplace. A safety committee assists the employer and makes recommendations for change.

General 437-001-0765 (2)

(a) Every public or private employer of 11 or more employees shall establish and administer a safety committee.

(b) Every public or private employer of 10 or fewer employees shall establish and administer a safety committee if the employer:

(A) Has a Lost Workday Case Incidence Rate (LWDCIR) in the top 10 percent of all rates for the employers in the same industry; or

(B) The employer is not an agricultural employer and the workers' compensation premium classification assigned to the greatest portion of the payroll for the employer has a premium rate in the top 25 percent of premium rates for all classes as approved by the Director pursuant to ORS 737.320(3)

(c) In making the determination of employment levels under section (a) and (b) of this rule, the employer shall count all permanent, contract, temporary, and/or seasonal workers under the employer's direction and control, and shall base the number on peak employment.

(d) Temporary services employers and labor contractors shall establish safety committees based upon the total number of workers over which the employer or contractor exercises direction and control.

Module 3. Safety Committee Operations

General 437-001-0765 (2) (cont.)

(e) Employers who hire only seasonal workers shall meet the intent of these rules by holding crew safety meetings prior to the commencement of work at each job site. Such meetings shall promote discussions of safety and health issues. All workers shall be informed of their rights to report workplace hazards, and shall be encouraged to make such reports during the meetings.

(f) Employers in the logging industry may meet the intent of these rules by complying with OAR 437, Division 6, Forest Activities.

Locations 437-001-0765 (3)

(a) Safety committees shall be established at each of the employer's primary places of employment. For the purpose of these rules, a primary place of employment shall mean a major economic unit at a single geographic location, comprised of a building, group of buildings, and all surrounding facilities. (Examples of primary places of employment would include a pulp or lumber mill, a manufacturing plant, a hospital complex, bank, a farm/ranch, a school district, or a state agency.) As a primary place of employment, the location would have both management and workers present, would have control over a portion of a budget, and would have the ability to take action on the majority of the recommendations made by a safety committee.

(b) An employer's auxiliary, mobile, or satellite locations, such as would be found in construction operations, trucking, branch or field offices, sales operations, or highly mobile activities, may be combined into a single, centralized committee. This centralized committee shall represent the safety and health concerns of all the locations.

(c) In addition to locating safety committees at each primary place of employment, an employer with work locations which include fire service activities shall establish a Fire Service Safety Committee as required by OAR 437-002-0182(7) in OAR 437, Division 2/L, Oregon Rules for Fire Fighters.

Innovations 437-001-765 (4)

Upon application, the division may approve safety committees which are innovative or differ in form or function, when such committees meet the intent of these rules.

Formation and Membership 437-001-765 (5)

(a) The safety committees required by OAR 437-001-765 (2) shall:

(A) Be composed of an equal number of employer and employee representatives. Employee representatives shall be volunteers or shall be elected by their peers. When agreed upon by workers and management, the number of employees on the committee may be greater than the number of employer representatives. Seasonal workers shall not be counted for the purpose of determining the number of members who will serve on the committee.

(B) Concise of:
(i) No fewer than two members for each employer with 20 or less employees, or
(ii) No fewer than four members for each employer with more than 20 employees.

(C) Have a chairperson elected by the committee members.

(b) Employee representatives attending safety committee meetings required by OAR 437-001-0765(2) or participating in safety committee instruction or training required by OAR 437-001-0765(7) shall be compensated by the employer at the regular hourly wage.

(c) Employee representatives shall serve a continuous term of at least one (1) year. Length of membership shall be alternated or staggered so that at least one experienced member is always serving on the committee.

(d) Reasonable efforts shall be made to ensure that committee members are representative of the major work activities of the firm.

Duties and Function 437-001-0765 (6)

(a) Management commitment to workplace health and safety:

(A) The committee shall develop a written agenda for conducting safety committee meetings. The agenda shall prescribe the order in which committee business will be addressed during the meeting;

(B) The safety committee shall hold regular meetings at least once a month except months when quarterly workplace safety inspections are made. This does not exclude other months from safety committee meetings if more frequent safety inspections are conducted.

(C) Quarterly safety committee meetings may be substituted for monthly meetings where the committee's sole area of responsibility involves low hazard work environments such as offices.

(D) Small farms of five or fewer full time employees may substitute quarterly meetings for monthly meetings during the farm's off season. The off season shall mean that period of time when only routine farm upkeep is being done.

(b) Written records:

(A) Minutes shall be made of each meeting which the employer shall review and maintain for three years for inspection by the division. Copies of minutes shall be posted or made available for all employees and shall be sent to each committee member;

Module 3. Safety Committee Operations

Duties and Function 437-001-0765 (6) (cont.)

(B) All reports, evaluations, and recommendations of the safety committee shall be made a part of the minutes of the safety committee meeting;

(C) A reasonable time limit shall be established for the employer to respond in writing to all safety committee recommendations.

(c) Employee involvement:

(A) The committee shall establish a system to allow the members to obtain safety-related suggestions, reports of hazards, or other information directly from all persons involved in the operations of the workplace. The information obtained shall be reviewed the next safety committee meeting, and shall be recorded in the minutes for review and necessary action by the employer.

(d) Hazard assessment and control:

(A) The safety committee shall assist the employer in evaluating the employer's accident and illness prevention program, and shall make written recommendations to improve the program where applicable. Additionally, the safety committee shall:

(i) Establish procedures for workplace inspections by the safety committee inspection team to locate and identify safety and health hazards;

(ii) Conduct workplace inspections at least quarterly; and

(iii) Recommend to the employer how to eliminate hazards and unsafe work practices in the workplace.

(B) The inspection team shall include employer and employee representatives and shall document in writing the location and identity of the hazards and make recommendations to the employer regarding correction of the hazards;

(C) Quarterly inspections of satellite locations shall be conducted by the committee team or by a person designated at the location;

(D) Mobile work sites or locations and activities which do not lend themselves to a quarterly schedule shall be inspected by a designated person as often as Oregon occupational safety and health rules require and/or the committee determines is necessary;

(E) The person designated to carry out inspection activities at the locations identified in sections (9) and (10) of this rule shall be selected by the employer and shall receive training in hazard identification in the workplace.

(e) Safety and health planning: The safety committee shall establish procedures for the review of all safety and health inspection reports made by the committee. Based on the results of the review, the committee shall make recommendations for improvement of the employer's accident and illness prevention program;

(f) Accountability: The safety committee shall evaluate the employer's accountability system and make recommendations to implement supervisor and employee accountability for safety and health.

(g) Accident investigation: The safety committee shall establish procedures for investigating all safety-related incidents including injury accidents, illnesses, and deaths. This rule shall not be construed to require the committee to conduct the investigations.

Safety and Health Training and Instruction.

(a) The following items shall be discussed with all safety committee members:

(A) Safety committee purpose and operation;

(B) Rules 437-001-0760 through 437-001-0765 and their application; and

(C) Methods of conducting safety committee meetings.

(b) Committee members shall have ready access to applicable Oregon Occupational Safety and Health Codes which apply to the particular establishment and verbal instructions regarding their use;

(c) All safety committee members shall receive training based upon the type of business activity. At a minimum, members shall receive training regarding:

(A) Hazard identification in the workplace; and

(B) Principles regarding effective accident and incident investigation.

Safety Committee Policy Statement

INTRODUCTION

This company is committed to accident prevention in order to protect the safety and health of all our employees. Injury and illness losses due to hazards are needless, costly and preventable. To prevent these losses, a joint management / worker safety committee will be established. Employee involvement in accident prevention and support of safety committee members and activities is necessary to ensure a safe and healthful workplace.

PURPOSE

The purpose of our safety committee is to bring workers and management together in a non-adversarial, cooperative effort to promote safety and health in the workplace. The safety committee will assist management and make recommendations for change.

ORGANIZATION

There shall be, in most cases, an equal number of employee and employer representatives. However, there may be more employee representatives than employer representatives if both groups agree. Employee representatives shall be volunteers or elected by their peers. If no employees volunteer or are elected, they may be appointed by management. Employer representatives will be appointed. Safety committee members will serve a continuous term of at least one year. Committee membership terms will be staggered so that at least one experienced member is always on the committee.

EXTENT OF AUTHORITY

It must be clearly understood that the safety committee advises management on issues that will promote safety and health in the workplace. Written recommendations are expected from the safety committee and they will be submitted to management. It turn, management will give serious consideration to the recommendations submitted and will respond in writing to the committee within a reasonable time.

FUNCTIONS

* Committee meetings and employee involvement; * Hazard assessment and control; * Safety and health planning;
* Evaluation of accountability system; * Evaluation of management commitment to workplace safety and health;
* Evaluation of accident and incident investigation program; * Safety and health training;

RECOMMENDATIONS

All recommendations submitted to management must be written and should: (1) Be clear and concise; (2) Provide reasons for implementation; (3) Give recommended options; (4) Show implementation costs and recommended completion dates; (5) List benefits to be gained.

PROCEDURES

The committee's plan of action requires procedures by which the committee may successfully fulfill its role.
Procedures developed should include but not be limited to:

* Meeting date, time, and location (Safety Committee Meeting Agenda)
* Election of chairperson and secretary
* Order of business
* Records (Safety Committee Meeting Minutes)

Duties of each member must include, but not be limited to:

* Reporting unsafe conditions and practices
* Attending all safety and health meetings
* Reviewing all accidents and near-misses
* Recommending ideas for improving safety and health
* Working in a safe and healthful manner
* Observing how safety and health is enforced in the workplace
* Completing assignments given to them by the chairperson
* Acting as a work area representative in matters pertaining to health and safety
* Others as determined by company safety and health needs

_____ _____

Owner Signature Date

Safety Committee Meeting Agenda

Date: _____

To: All committee members, alternates, bulletin board

Meeting Date and Time: _____

Place: _____

Agenda Items	**Person Responsible**
1. Old business	
a. Review last months recommendations	**_____**
b. Follow-up on last quarterly inspection	**_____**
2. New business	
a. Hazard reports	**All**
b. Accident investigation reviews	**_____**
c. Recommendations review	**_____**
d. _____	**_____**
e. _____	**_____**
f. _____	**_____**
3. Safety Committee Members Training	
a. _____	**_____**
b. _____	**_____**

Notes:

_____

_____

_____

_____

_____

_____ _____

Chair Persons Signature Date

Safety Committee Meeting Minutes

Chairperson: _____ **Date:** _____

Department: _____ **Time meeting started:** _____

PRESENT	ABSENT
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Previous meeting minutes from _____ were read.
Date

Old Business

a. Review of last months recommendations

Recommendation Number	Description	Not Completed	Completed	Date
R-____	_____	☐	☐	_____
R-____	_____	☐	☐	_____
R-____	_____	☐	☐	_____
R-____	_____	☐	☐	_____
R-____	_____	☐	☐	_____
R-____	_____	☐	☐	_____
R-____	_____	☐	☐	_____

b. Follow-up on last quarterly inspection:_____

_____

New Business

a. Hazard (inspection) reports reviewed:_____

Hazard Number	Description	Recommendation Number
H-____	_____	R-____
H-____	_____	R-____
H-____	_____	R-____
H-____	_____	R-____
H-____	_____	R-____
H-____	_____	R-____
H-____	_____	R-____
H-____	_____	R-____
H-____	_____	R-____
H-____	_____	R-____

Safety Committee Meeting Minutes

b. Accident/incident investigation reviews:

Accident Number	Near Miss	Description	Recommendation Number
A-_____	☐	_____	R- _____
A-_____	☐	_____	R- _____
A-_____	☐	_____	R- _____
A-_____	☐	_____	R- _____
A-_____	☐	_____	R- _____
A-_____	☐	_____	R- _____
A-_____	☐	_____	R- _____
A-_____	☐	_____	R- _____
A-_____	☐	_____	R- _____

Safety Committee Members Training Report: _____

_____

_____

Miscellaneous New Business: _____

_____

_____

_____

_____

Activity/Assignment Report:

Description	Person Assigned
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Committee Remarks: _____

_____

_____

_____

Meeting adjourned: _____ Time/date **Next meeting:** _____ Time/date

_____ Secretary Signature

_____ Chair Person Signature

Section 2. Training Modules

Module 4. Hazard Identification & Control

Identifying and controlling workplace hazards involves more than simply "inspecting out hazards." Before we can eliminate or reduce hazardous conditions and unsafe work practices, we need to be familiar with their characteristics.

What is a "Hazard"?

_____

What is "Exposure"?

_____

Identifying Types of Hazards

Acceleration: When we speed up or slow down too quickly.

Vibration/Noise: Produce adverse physiological and psychological effects.

Toxics: Toxic to skin and internal organs.

Radiation: Not-ionizing (burns). Ionizing (destroys tissue)

Ergonomics: Lifting, lowering, pushing, pulling, twisting

Pressure: Increased pressure in hydraulic and pneumatic systems.

Mechanical: Pinch points, sharp points and edges, weight, rotating parts, stability, ejected parts and materials, impact.

Heat / Temperature: Extremes in either can cause trauma, illness.

Flammability / Fire: In order for combustion to take place, the fuel and oxidizer must be present in gaseous form.

Explosives: Explosions result in large amounts of gas, heat, noise, light and over-pressure.

Electrical contact: Inadequate insulation, broken electrical lines or equipment, lightning strike, static discharge, etc..

Chemical reactions: Can be violent, can cause explosions, dispersion of materials and emission of heat.

Biological: Primarily airborne and bloodborne viruses

Getting To The Root Cause for Hazards

All unsafe conditions and practices are symptoms of breakdowns in the safety and health system. A working safety and health system identifies and corrects unsafe conditions and/or practices before accidents happen. To be able to correct a problem, one must first get to the source. Consider the following as an example of the relationship between a "symptom" a "cause" and a "solution".

An unsafe condition (an unguarded sprocket) exists because of an unsafe practice (guard was left off) by a maintenance worker. The unsafe condition and practice in this are both symptoms of a breakdown in the safety and health system. To find the root cause the investigator must find out why the worker left the guard off. It could be that they were rushed. Why? Or it might be that the worker didn't see the need. Why? The work schedule might have pressured the worker into making mistakes in good procedure. Why? The supervisor may have not trained the worker. Why? There are many possible answers and they must all be considered if the root cause is to be identified and corrected. The solution is not as simple as playing a "blame game" or labeling the worker as being careless, having no common since, or just plane accident prone. These are excuses for not dealing with the bigger problem. Finding out where the system broke down and then taking action to correct it is the only way to insure long term results.

Seven Key Elements of an Effective Hazard Control Program

1. Assess and Analyze

Assessment: Your company is unique in many ways from any other company of it's kind. The workers, equipment, layout, and service or product all contribute to this uniqueness. The training modules that you are going through provide a beginning, but there is much more to do. It is important that other safety and health education and training needs are identified and addressed. The following is a list of the free Oregon OSHA safety and health workshops that will help identify and control hazards in the workplace.

Section 2. Training Modules

Module 4. Hazard Identification & Control

1. Assess and Analyze (cont.)

Oregon OSHA Training Course Offerings:

____ 100 Safety & Health Management
____ 101 Safety Committee Operations
____ 102 Accident Investigation
____ 103 Job Hazard Analysis
____ 104 Hazard Identification and Control
____ 105 Effective Safety Training
____ 106 What to Expect From An OSHA Inspection
____ 107 Effective Recommendations
____ 108 OSHA 300
____ 110 Continuous Safety Improvement
____ 112 Effective Safety Supervision
____ 116 Safety & Health Program Evaluation
____ 117 Industrial Hygiene for the Non-IH
____ 118 Safety Leadership
____ 119 Developing an Effective Safety Accountability System
____ 120 Developing a Violence Prevention Program
____ 122 Safety Committee Meeting Management
____ 126 Effective Recognition Systems
____ 201 Ergonomics Awareness
____ 202 Developing an Effective Ergonomics Program
____ 203 Personal Protective Equipment
____ 204 Lockout / Tagout
____ 205 Hazard Communication
____ 206 Ergonomics of Manual Material Handling
____ 207 Ergonomics in the Office
____ 212 Workplace Emergency Action Plan
____ 215 Confined Space Safety
____ 216 Exposure Control / Bloodborne Pathogens
____ 217 Hearing Conservation Program
____ 221 Powered Industrial Truck Safety
____ 301 Fall Protection
____ 302 Excavation Safety
____ 401 Worker Protection Program

Analysis: It is also important for each employee to know what the safety and health history is regarding hazard identification and accident investigation. The following is a list of documents that should be reviewed at this time. If any do not exist, be assured that the employer is in the process of developing them. The OSHA 200 log; hazard inspection checklists (last 3 years), hazard reports, incident reports, first aid reports, maintenance logs, and safety committee meeting minutes (last 3 years).

2. Hazard Identification Procedures

An Effective Inspection Checklist: We have a Hazard Inspection Checklist. Take time now to review this checklist.

An initial assessment has been made regarding applicable state safety & health rules for the workplace. These rules are available and you will be asked to review them.

In addition to the beginning Hazard Inspection Checklist, you will be asked to participate in the development of checklists for your specific work areas.

A Job Hazard Analysis (JHA) breaks a job or task into specific steps, analyzes each step for specific hazards, develops safe work procedures to eliminate or reduce those hazards, and integrates safe work procedures into the company's safety and health programs. As time permits, JHAs will be developed for each high risk job or task. Your supervisor will have more information regarding this program.

3. Hazard Reporting Procedures

According to Oregon OSHA rules 437-001-760, you, the employee, are responsible to report all hazards in the workplace. Our policy encourages you to report all hazards to your supervisor, and to correct those hazards that are within your area of control. In addition, you are expected to work safe. Working safe is not an option but instead a condition of employment.

We have a "Hazard Alert" form. Any time you see a hazard (an unsafe condition or practice), take the time to complete the form and give it to your supervisor with a copy to the safety committee.

Section 2. Training Modules

Module 4. Hazard Identification & Control

3. Hazard Reporting Procedures (cont.)

Each employee will be given the opportunity to participate in safety inspections. A written inspection report must be completed once the inspection is over. This written inspection report must include the following:

1. The Background / Introduction section briefly outlines the contents of the rest of the report and tells the reader:
   a. What the report is,
   b. Who conducted the inspection,
   c. Where it was conducted,
   d. Why it was conducted.

2. The Findings section tells the reader the results of the inspection. It details hazardous conditions, unsafe work practices, and their root causes; safety system inadequacies.

3. The Recommendation section proposes changes to reduce or eliminate hazards found during the inspection. Options should be given to increase the likelihood of corrective action being taken.

4. The Conclusion / Summary section summarizes the information in the findings and recommendations sections to emphasis the potential benefits realized from making corrections.

4. Maintenance Programs

There are two equipment maintenance programs at this company.

1. *Preventive* maintenance to make sure equipment and machinery runs safely and smoothly, and
2. *Corrective* maintenance to make sure equipment gets back into safe service quickly.

Each employees role in these programs is determined by their job description.

5. Hazard Tracking

The safety committee will keep track of all hazards in their "Hazard Tracking Log". They will also record and report the status of these hazards in their safety committee minutes. All employees will be given log updates monthly.

6. Training Programs

Every employee will receive a safety and health orientation and then training specific to their job. No employees work experience will be taken for granted. Each employees skill, knowledge, and aptitude will be evaluated prior to beginning work on a new job. Periodic performance reviews will be conducted to ensure that the needs of the company and of the employee are identified and addressed. Retraining may be conducted to enhance an employees individual performance. Updates in training and refresher training will be conducted as outlined by Oregon OSHA codes.

7. Monitoring Systems

The supervisor and/or the safety committee will monitor and report on the status, condition, and effectiveness of all safety programs and procedures. This report will be published at the end of each year.

Hazard Alert

Hazard Alert **Date: _____**

Department: _____

Location: _____

Description of Hazard: _____

_____

_____

_____

Person who discovered hazard: _____

Supervisor actions:

Root Cause (s): _____

_____

Control (s): _____

_____

Date corrected: _____ Reviewed by: _____

Hazard Alert **Date: _____**

Department: _____

Location: _____

Description of Hazard: _____

_____

_____

_____

Person who discovered hazard: _____

Supervisor actions:

Root Cause (s): _____

_____

Control (s): _____

_____

Date corrected: _____ Reviewed by: _____

Hazard Tracking Log

Hazard Number	Description	Reported by	Date Reported	Corrected by	Responsible Supervisor	Date Corrected

Section 2. Training Modules

Module 5. Accident Investigation

Effective Accident Investigations are Important!

The primary reason for conducting an accident investigation is to "prevent" a repeat of the accident from occurring.

A few other reasons may be; to reduce operating costs, improve morale, improve productivity, improve efficiency, and/or reduce waste.

It is important to remember that accident investigation is "fact-finding" not "fault-finding".

An accident is defined as **" an unplanned, unwanted event that causes injury, illness or property damage".**

For there to be an accident two key conditions must be present at the same time. There must be a **Hazardous condition**, and there must be an **exposure** to that hazardous condition.

An **incident** differs from an **accident** in that though they are unplanned, and unwanted, they do not result in an injury, illness or property damage. Often times and incident is referred to as a "close call" or "near miss".

Safety committee members conduct accident investigations in the workplace only if the employer has assigned these investigations to them. It is not a requirement of OR OSHAs.

Employers must investigate all lost-time injuries.

Fatalities and catastrophes must be reported to OR-OSHA within 8 hours.

Serious accidents must be reported to OR-OSHA within 24 hours. *Note: Consider the event a "serious accident" if an employee is admitted to a hospital for observation as a result of injuries suffered from a workplace accident.*

Employees often times are reluctant to report an accident because of fear, peer pressure, or concern that it may affect their job in some way.

To ensure that accidents will be reported, employees must be encouraged to participate in the "fact-finding" process. The message must be that "hazardous condition" and " unsafe practices" are symptoms of a much bigger problem with a breakdown in the safety and health system. The purpose of the accident investigation then becomes one that will uncover these system problems and provide solutions that will result in long term corrective action.

The process

When a serious accident occurs in the workplace, everyone will be too busy dealing with the emergency at hand to worry about putting together an investigation plan. Our companies investigation plan includes the following and will be posted on the employee bulletin board.

* Who should be notified about an accident and by whom
* Who is authorized to notify outside agencies (fire, police, etc)
* Who is assigned to conduct investigations.
* What training and at what level is required for accident investigators.
* Who receives and acts on investigation reports.
* What timetables are set for conducting the investigation and follow-up actions such as hazard correction.

An accident investigation kit is available in the first aid cabinet.

Once the accident scene has been secured to preserve the evidence, all accident investigations will be conducted in accordance with the following procedures.

1. **Gathering Information:** The first step in accident investigation is to gather information that can give critical clues into the causes associated with the accident. This gathering of information may include pictures, videos and/or sketches of the scene.

Section 2. Training Modules

Module 5. Accident Investigation

The Process (cont)

It is important to gather facts and interview witnesses as soon as possible after an accident to ensure the most accurate information is being recorded.

Two things begin disappearing immediately after an accident. They are "evidence" and "memory".

The effectiveness of the corrective action is dependant on the accuracy of the information gathered.

The best place to conduct an interview is wherever the employee being interviewed feels most comfortable.

The most important interviewing technique you can use to ensure accuracy is to "listen".

2. **Analyzing the Facts:** Once the information regarding the events of the accident have been gathered, it is time to organize it into a usable form. All the information should be broken down into the following basic categories:

Category 1: Hazardous conditions that existed (symptoms)
Category 2: Hazardous practices that put the employee into a danger zone (symptoms)
Category 3: Breakdowns in the safety and health system that allowed for category 1 and 2 (root causes)
Category 4: Non-essential information

A sequence of events should be developed based on these categories.

3. **An Accident Investigation Report will be written:** Each report will include the following:

Section 1: Background / Introduction: Contains background information that answers who, when, where questions.

Section 2: Description of Accident: Describes the sequence of events you constructed during the cause analysis

Section 3: Findings: Details the symptoms and root causes uncovered during the cause analysis step of the investigation.

Section 4: Recommendations: Proposes recommendations to eliminate or reduce hazardous conditions, practices, policies, and decision making that caused the accident.

Note: Recommendations that only address the symptoms will only give you short term corrections. The root causes must also be addressed.

Section 5: Summary: Contains a brief review of the causes of the accident and recommendations for corrective actions.

4. **Taking Corrective Action:** The owner, supervisor, and/or safety committee will review each accident investigation and take appropriate corrective action to prevent a repeat of that accident.

5. **Follow Up:** The safety committee will conduct a follow up evaluation of the corrective action to ensure that the causes for the accident have been properly addressed.

6. **Critical Review:** Once each year, the safety committee will conduct a critical review of the entire accident investigation program and make recommendations for changes that will improve the effectiveness of these investigations.

Take time to review our Accident Investigation Report form now.

Accident Investigation Plan

Accident Investigation Plan

In the event of an accident

1. Notify your supervisor immediately. *If you are the injured employee and can not, then a co-worker must do so.*

2. Your supervisor will notify outside agencies. *If there is no supervisor available then find a safety committee member and they will make the appropriate notifications.*
3. Your supervisor and a designated safety committee member will conduct all investigation.

4. All accident investigators receive a minimum of four hours of accident investigation training.

5. All accident investigation reports go to the owner with copies going to the supervisor and the safety committee.

6. All accident investigation will begin as soon as the injured employee has be taken care of and the supervisor has determined that the accident scene is safe to enter.

An accident investigation kit is located in the first aid cabinet.

Accident Investigation Procedures

Once the accident scene has been secured to preserve the evidence, all accident investigations will be conducted in accordance with the following procedures.

1. **Gathering Information and Analyzing Facts:** Pictures, video, and or sketches of the scene, that may have valuable information, will be conducted.

2. **Analyzing Facts:** All of the gathered information will be analyzed, symptoms identified, and root causes documented.

3. **An Accident Investigation Report will be written:** Each report will include the following:

Section 1: Background / Introduction
Section 2: Description of Accident
Section 3: Findings
Section 4: Recommendations
Section 5: Summary

4. **Taking Corrective Action:** The owner, supervisor, and/or safety committee will review each accident investigation and take appropriate corrective action to prevent a repeat of that accident.

5. **Follow Up:** The safety committee will conduct a follow up evaluation of the corrective action to ensure that the causes for the accident have been properly addressed.

6. **Critical Review:** Once each year, the safety committee will conduct a critical review of the entire accident investigation program and make recommendations for changes that will improve the effectiveness of these investigations.

_____ _____

Owner Signature Date

Accident Investigation Report

Accident Investigation Report Accident Number _____ Date_____

Accident Investigator _____ Dept. _____ Tel # _____

Accident Investigator _____ Dept. _____ Tel # _____

Accident Investigator _____ Dept. _____ Tel # _____

Section I. BACKGROUND

WHO was involved or injured? Date Accident Reported _____

Name _____ Witnesses (1) _____ Tel # _____

Address _____ (2) _____ Tel # _____

_____ (3) _____ Tel # _____

Phone (H) _____ (W) _____

Job Title _____ Length of Service _____

WHEN did accident/incident occur?

Date _____ Time of day _____

Work shift _____

WHERE did accident/incident occur?

Department _____ Equipment _____

Location _____

Section II. DESCRIPTION OF ACCIDENT (Describe sequence of events. Attach separate page if necessary)

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Accident Investigation Report

Section III. FINDINGS (Attach separate page if necessary)

Surface Cause(s) (symptoms) (Unsafe conditions and/or work practices)

1. _____

_____

_____

2. _____

_____

_____

3._____

_____

_____

4._____

_____

_____

Root Cause(s) (Policies, procedures, supervision, training, decision making, other factors)

1. _____

_____

_____

2. _____

_____

_____

3._____

_____

_____

4._____

_____

_____

Accident Investigation Report

Section IV. RECOMMENDATIONS (Attach separate page if necessary)

Immediate Corrections. (To reduce or eliminate unsafe conditions and/or work practices)

1. _____

_____

2. _____

_____

3._____

_____

Long Term Corrections. (Policies, procedures, training, etc. to ensure unsafe conditions and/or practices do not recur.)

1. _____

_____

_____

_____

2. _____

_____

_____

_____

3._____

_____

_____

_____

4._____

_____

_____

_____

Accident Investigation Report

Section V. SUMMARY (Est. costs of accident. Costs and benefits of corrective action)

FOLLOW-UP. ACTIONS/COMMENTS (appropriate, timely, etc.)

Corrective Actions Taken:
Immediate

Long Term

Prepared by _____ Reviewed by _____

Title _____ Date _____ Title _____ Date _____

Department _____ Reviewed by _____

Title _____ Date _____

ATTACHMENTS: (Photos, sketches, interview notes, etc.)

Section 2. Training Modules

Module 6. Back Safety

BACK INJURIES - NATION'S NUMBER ONE WORKPLACE SAFETY PROBLEM

Preventing back injuries is a major workplace safety challenge. According to the Bureau of Labor Statistics, more than one million workers suffer back injuries each year, and back injuries account for one of every five workplace injuries or illnesses. Further, one-fourth of all compensation indemnity claims involve back injuries, costing industry billions of dollars on top of the pain and suffering borne by employees.

Though lifting, placing, carrying, holding and lowering are involved in manual materials handling (the principal cause of compensable work injuries) the BLS survey shows that four out of five of these injuries were to the lower back, and that three out of four occurred while the employee was lifting.

No approach has been found for totally eliminating back injuries caused by lifting, though it is felt that a substantial portion can be prevented by an effective control program and ergonomic design of work tasks.

Common Causes of Back Injuries

Most back injuries are not the result of a single causal factor. They tend to be the result of cumulative damage suffered over a long period of time. There are certain actions, motions, and movements that are more likely to cause/contribute to back injuries than others.

DANGER! If I do this I could hurt my back!

Anytime you find yourself doing one of the following, you could injure you back

Heavy lifting … especially repetitive lifting over a long period of time.

Twisting at the waist while lifting … using a shovel or moving objects from one location to another while the feet remain in one position for example.

Reaching and lifting … over your head, across a table, or from the back of a truck or trunk of car.

Lifting or carrying objects that have an odd shape or are awkward … carrying a typewriter.

Working with poor body posture or in uncomfortable positions … tasks that require you to bend over for long periods of time… kneeling… gardening… sorting… packing…

Standing or sitting too long in one position … Sitting can be very hard on the lower back.

Slips and falls … It is possible to suffer serious back injury from slipping on wet floors or ice or the result of a trip and fall.

BACK INJURY PREVENTION

Avoid Lifting and Bending Whenever Possible

Place object off the floor. Whenever you know that you or someone else will be lifting an object later, put it down on a table or other elevated surface instead of on the floor.

Lower / raise shelves. Store objects between knuckle and shoulder height. The heaviest objects should be stored at waist level.

Section 2. Training Modules

Module 6. Back Safety

BACK INJURIES - NATION'S NUMBER ONE WORKPLACE SAFETY PROBLEM

Avoid Lifting and Bending Whenever Possible (cont.)

Use dollies and/or carts. When moving objects, instead of carrying them yourself use a dolly or cart. Always remember that it is better to push carts than to pull them.

Use cranes, hoists, lift tables, and other lift-assist devices whenever possible.

Use Proper Lifting Procedures

Follow these steps when lifting:

1. Take a balanced stance with your feet about shoulder-width apart. (It is OK to put one foot behind the object and the other next to it.)

2. Squat down, but keep your heels off the floor (on the balls of your feet). Get as close as you can to the object.

3. Use your palms and not just your fingers to get a secure grip on the object. Make sure that this grip will hold and you will not have to switch your grip later.

4. Lift slowly (without jerking) using your leg, abdominal and buttock muscles while keeping the load as close as possible to you.

5. Once you are standing "do not twist" when you change directions. Point your feet in the direction you want to go and then turn your whole body. Do not twist with the object while you are walking.

6. To lower the load or place the object, use these same guidelines in reverse.

Tips: Reduce the weight of the object whenever possible. Use handles and lifting straps. Get help if the object has an awkward shape or the object is too heavy for you to lift or move by yourself.

Body Management

It is important to be aware of your body position at all times and to know your body's limitations. You must learn to recognize situations where your back is most at risk: lifting reaching, bending twisting, etc. Then you must take measures to avoid an injury. "**Its up to you to make good choices and to work safe".**

Stretch first … Take the time to stretch your muscles before starting if you know that you're going to be doing anything that may be hard on your back.

Slow down … Take it slow if you are doing a lot of heavy, repetitive lifting. Allow recovery time between lifts. **"Don't overdo it"**

Section 2. Training Modules

Module 6. Back Safety

BACK INJURIES - NATION'S NUMBER ONE WORKPLACE SAFETY PROBLEM

Body Management (cont.)

Rest your back … Take "micro" (short) breaks frequently. Stretch after each lift. When you know that you will be working in an awkward position for a long time, plan on taking one minute stretch break every so often to avoid stiffness and soreness.

Get in shape … Strengthen your stomach muscles, lose weight if you are overweight, increase your flexibility. All of these thing can help reduce the probability of a back injury.

In one study it was determined that at least one-third of compensable back injuries could be prevented through better job design. If you have any ideas regarding how to design a better work station, then we encourage you to share your ideas with management.

Remember, some of the other factors that contribute to back injuries include frequency of lifting, duration of lifting activities, and the type of lifting.

The approaches suggested include the NIOSH Work Practices Guide for Manual Lifting (*) employing an equation using horizontal location, vertical location, vertical travel distance and lifting frequency. Another approach would put a maximum weight limit for any single lift, or a load-moment limit which would consider the effect of the distance of the load from the worker's body.

(*) NOTE: The NIOSH (National Institute for Occupational Safety and Health) **Work Practices Guide for Manual Lifting** (NTIS PB 821-789-48) (cost $26.00 paper; $17.00 microfiche) is available from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161. Updated report: Scientifically-supported documentation for revised 1991 NIOSH lifting equation: Technical Contract Report (NTIS PB 912.262-74) ($35.00 paper; $17.00 microfiche). $3.00 shipping and handling per order.

Section 2. Training Modules

Module 7. Ergonomic Awareness

Introduction: What is "Ergonomics" ?

Ergonomics comes from the Greek words for Work (Ergo) and Laws (Nomics). In technical terms, ergonomics can be defined as " the laws or principles governing work design. The study of the design of work in relation to the physiological and psychological capabilities of people."

Ergonomics as a science concerns human performance and safety in relationship to the job's equipment, tools, and environment.

What does this all mean? In everyday language: Does the workstation design, equipment used, work procedures, and/or general work environment effect the worker positively or negatively?

Injury and Illness History (Oregon 1995)

The Workers' Compensation Division received 30,564 accepted disabling claims in 1995.

Of the 76,026 active Oregon employers, 10,480 employers had at least one accepted disabling claim. (one out of every seven).

Thirty-five percent of the claims were due to overexertion, where workers used excessive physical effort to handle or move something. More than 80 percent of these cases resulted in a sprain or strain. A third of the overexertion cases resulted from overexertion with containers.

Fifty-four percent of the claims were filed for sprains and strains. Back sprains and strain accounted for 24 percent of all claims.

Workers in their first year with their employer produced 42 percent of the claims for which the worker's tenure was reported.

A Few Things That You Should Know.

Repetitive tasks in combination with awkward body positions induce much higher stress and strain that have the potential to cause musculo-skeletal disabilities, lost work time, and reduced productivity. These disabilities are sometimes referred to as cumulative trauma or repetitive motion disorders.

Since their onset is often slow, employees may not report symptoms until the condition has become serious. In the most severe cases, surgery may be required. At times, partial or complete disability can result.

The average low-back injury costs $6,800 per case. And if surgery is required, the cost can be many times that number. These statistics do not include the cost of training a new hire, and the reduced productivity as a result of loosing a valued employee.

The most common **Cumulative Stress Disorders** are those of the hands, wrists, arms, and shoulders. Actually, it's the nerves, tendons, ligaments, and blood vessels in the effected areas that can be damaged.

Causes must be identified, engineering controls implemented, and work procedures that correct them put into place. You can help to reduce these disorders by identifying, analyzing, and controlling potential problems.

Ergonomics has become the primary tool behind the prevention and reduction of cumulative trauma disorders. Good ergonomics can increase productivity by reducing down time, and, by reducing stress and fatigue, increased quality will probably follow.

Section 2. Training Modules

Module 7. Ergonomic Awareness

Eight Ergonomic Risk Factors Any one of these risk factors can, in the worst case, cause injury or illness, but, anytime you have a combination of two or more at the same time, the odds of injury or illness increase dramatically.

Frequency: The number of repetitions of a periodic process in a unit of time.

Examples: How many lifts per hour
How many key strokes per minute
How many cycles per five minutes

Tasks that have "Frequency"
Entering data on a computer
Packing and Stacking Cases
Picking Apples

Duration: The time during which something exists or lasts.

Examples: How long the cycles continue without a break.
How long one cycle takes.
How long one repeats a single activity without changing activities.

Tasks that have "Duration"
Running a piece of machinery
Assembly work
Carrying several objects, one at a time, from one location to another.

Force / Exertion: Force: strength or energy exerted or brought to bear, cause of motion or change, active power. Exertion: the act or instance of sustained effort or lasting effect.

Examples: Lifting
Pushing/Pulling
Throwing/Hurling
Carrying
Reaching

Tasks that require "Force / Exertion"
Stacking cases
Pushing / pulling pallets of materials
Throwing pieces into a bin
Carrying sacks from one location to another
Reaching for something on the top shelf

Posture: The position or bearing of the body whether characteristic or assumed for a special purpose.

Examples: How one sits at a desk
The required body position(s) because of work station design
The body position(s) required to complete a task
The workers choice of body position(s) regard assigned jobs.

Tasks that force "Posture"
Reaching to remove something from a top shelf
The position(s) of the body when working with non-adjustable office furniture
How a worker lifts
How the worker carries objects

Section 2. Training Modules

Module 7. Ergonomic Awareness

Eight Ergonomic Risk Factors (cont.)

Point of Operation: The location of direct interface between the worker and the task.

Examples: Hammering a nail: the location of the nail
Typing at a computer: the location of the keyboard, the monitor, the mouse pad, the document holder
Picking up an object: the location of the object

Task that have a "Point of Operation"
All physical tasks

Note: Many of the other risk factors are directly affected by changing the point of operation.

Mechanical Pressure: Sharp, non-penetrating / non-cutting, edges that, when the body comes is prolonged contact with, can cause the restriction of blood, tendon/muscle movement, and/or loss of nerve sensation and even damage.

Examples: Tool trigger with sharp edges
Sharp edges on tables, desk, keyboards
Sharp edges on tool grips
Sharp edges on boxes or hand holds

Vibration: The state of being moved to and fro or from side to side - oscillation

Examples: The motion of certain tools
The motion of equipment or machinery
The secondary motion of objects as the result of equipment, machinery and/or tools

Tools, equipment / machinery, objects
Chainsaws, jack hammers, hand held power tools (sanders etc)
Drive systems, pumps, engines, air conditioners, ventilation systems
Office equipment / furniture that vibrates because of location and proximity to vibrating equipment or machinery.

Environmental Exposure: Environmental: the circumstances, objects, or condition by which one is surrounded. Exposure: being subject to a lack of shielding or protection.

Examples: Temperature and/or humidity extremes
Poor lighting
Release of chemical without protection
Noise

Questions to Ask When Considering Whether a Job Has a Deficiency:

* Does the job or facility have high absenteeism and/or accident rate?
* Is there a high turnover rate?
* Does the production result in too much wasted material?
* Do workers make subtle workplace changes to enhance their comfort?
* Are workers seen stretching fingers, hands, or arms to relieve muscle stress and strain?

The answer "yes" to any of these questions should prompt further examination.

Section 2. Training Modules

Module 8. Lockout / Tagout Program

When it's time for maintenance, repairs or retooling of a machine, simply turning the machine off or unplugging it while it is being worked on does not give enough protection for workers. Many serious accidents happen when someone thought the machine or all of the energy was safely turned off.

Scope, Application and Purpose

The Lockout / Tagout standard covers the servicing and maintenance of machines and equipment in which the unexpected energizing or startup of the machines or equipment, or release of stored energy could cause injury to employees.

Normal production operations are not covered by this standard unless: An employee is required to remove or bypass a guard or other safety device; or an employee is required to be placed in a danger zone, as defined by the standard.

The purpose of the standard is to help prevent unexpected energizing, start-up or release of stored energy in order to prevent injury to employees.

Energy Control Program 1910.147 (c) (4)

If any of the conditions below exist, the employer must include the machine or equipment in the written program.

1. The machine or equipment has potential for stored or residual energy, or re-accumulation of stored energy after shutdown which could endanger employees:

2. The machine or equipment has more than a single energy source;

3. The isolation and locking out of any single energy source will not completely de-energize and deactivate the machine or equipment;

4. The lockout device is not under exclusive control of an authorized employee performing the servicing or maintenance;

5. The servicing or maintenance of the machinery or equipment creates hazards for other employees;

6. The employer has had accidents involving the unexpected activation or re-energizing of the machine or equipment during servicing or maintenance.

What kinds of injuries might occur as a result of an accident while working on machinery or equipment?

Authorized, Affected, and Other Employees

The standard details lockout/tagout responsibilities of "authorized", "affected", and "other" employees.

Authorized Employees: Person who services or performs maintenance on machines or equipment. Employees who are properly trained and certified on equipment maintenance and lockout/tagout procedures, and approved by the facility manager.

Affected Employee: Person who operates or uses a machine or equipment which is being serviced or has maintenance being performed.

Other Employee: Person who works in an area where lockout/tagout procedures are being used.

Application

The standard covers servicing and maintenance of machines when unexpected startup or release of stored energy could cause injury.

If you are doing any of the following the standard applies: Adjusting… inspecting… modifying… constructing… re-tooling… lubricating… removing jams… cleaning… etc.

Section 2. Training Modules

Module 8. Lockout / Tagout Program

Sources of Energy

The authorized employee must be aware of many possible sources of energy. Name as many as you can.
**** Electrical * Pneumatic * Mechanical * Gravity * Steam * Chemical * Pressure * Radiation * Hydraulic***

Compliance

All supervisors are responsible and accountable for the use of safe lockout/tagout procedures by all employees under their supervision. Compliance with lockout/tagout procedures is mandatory. Non-compliance with these procedures is considered a violation of an employee's condition of employment and **will result in the initiation of serious disciplinary procedures to include possible termination of employment.**

Lockout/Tagout Procedures

A. Preparation for Lockout

1. Review: Prior to lockout, the authorized employee(s) will review the lockout/tagout information for the machine/piece of equipment that they are going to work on. As a minimum the following information will be reviewed:

(a) Types and magnitudes of energy;
(b) Hazards posed by the energy; and
(c) Methods to effectively control the energy

Particularly close attention must be given to energies (such as gravity, electrical, high pressure) that can be stored or re-accumulated after shut-down.

2. Notification: Prior to shutdown all affected employees will be notified to clear their work area and/or any other area that might be hazardous.

B. Shutdown: Machinery and equipment will be shut down in an orderly manner using the shutdown checklist procedures on the associated lockout/tagout information sheet for that machinery or equipment.

C. Isolation: All energy isolation devices will be located and operated to completely de-energize and isolate the equipment. The authorized employee will verify operation of each energy isolation device.

D. Applying Lockout/Tagout Devices

1. Lockout Devices: Lockout devices will be used to secure energy isolating devices unless the machinery or equipment is not capable of being locked out. Only authorized employees will affix lockout/tagout devices. Lockout devices must be able to hold energy isolation devices in a "safe" or "off" position.

2. Tagout Devices: Tagout devices will be used only if machinery or equipment is not capable of being locked out. Tags will clearly state that moving energy isolation devices from the "safe" or "off" position is strictly prohibited. If a tag cannot be affixed to the energy isolating device, it will be located as close as safely possible to the device so that the tag is obvious to anyone attempting to operate the device.

Only the "Authorized Employee" may lockout/tagout machinery or equipment!

E. Lockout/Tagout Materials and Hardware: Lockout/tagout devices are provided by your employer and meet the following:

* Each lockout/tagout device is uniquely identified as being used exclusively for lockout/tagout:
* Lockout/tagout devices identify the user:
* Lockout/tagout devices are not to be used for any other purpose than lockout/tagout:
* Tagout devices must be substantial enough to prevent inadvertent or accidental removal. They are:

1. Non-reusable,
2. Attachable by hand,
3. Self-locking
4. Non-releasable with not less than 50 LB locking strength
5. Design/characteristics at least equivalent to a one-piece, all environment-tolerant nylon cable tie.

Section 2. Training Modules

Module 8. Lockout / Tagout Program

Which is preferred? Lockout or Tagout? (lockout)

A tagout can only be used:

1. **When an energy isolating device is not capable of being locked out; and**
2. **If employer can demonstrate (prove) that using a tagout system will provide full employee protection**

What two tests must be met to demonstrate full employee protection?

1. *Tags can be place where lockout devices would have been placed; and*
2. *The employer demonstrates full protection can be obtained with tags.*

F. Stored Energy

1. Immediately after applying lockout or tagout devices, the authorized employee will ensure all potentially hazardous stored or residual energy is relieved, disconnected, restrained, and otherwise rendered safe.

2. If stored energy can be re-accumulated, the authorized employee will verify that the energy is isolated until maintenance is complete or the energy no longer exists.

If stored energy can be re-accumulated to a hazardous level, authorized employees must continually verify that the machinery or equipment is safely isolated until the possibility of re-accumulated energy no longer exists.

G. Verification of Isolation: Before starting work on a machine or equipment that is locked or tagged out, the authorized employee will verify that the machinery or equipment is actually isolated and de-energized.

H. Release from Lockout/tagout: The authorized employee will follow the procedures below prior to removing lockout/tagout devices and restoring energy:

1. Equipment: Make sure machinery or equipment is properly reassembled. Inspect machinery or equipment to make sure nonessential items have been removed.

2. Employees: Make sure all employees are safely positioned outside danger zones. Notify affected employees that lockout/tagout devices have been removed and that energy is going to be reapplied.

3. Removing lockout/tagout devices: Only the authorized employee who applied the lockout/tagout device may remove that device. Exception - When the authorized employee is not at the facility and all reasonable efforts have been taken to inform him/her that the lockout/tagout device has been removed:

a. The supervisor is authorized to remove the device following procedures in this section.

b. Each supervisor will be trained in proper lockout/tagout procedures.

c. The supervisor will ensure the authorized employee has this knowledge before he/she resumes work.

Addition Requirements

A. Testing/Positioning Machines or Equipment: Whenever lockout/tagout devices are removed to test or position machines and equipment, or their components, the authorized employee will complete the following procedures in the sequence presented:

1. Clear the machine or equipment of tools and materials;
2. Remove employees safely away from danger zone;
3. Remove lockout/tagout devices;
4. Energize and proceed with testing or positioning; and
5. De-energize all systems and re-apply lockout/tagout devices using proper procedures.

Section 2. Training Modules

Module 8. Lockout / Tagout Program

B. Outside Personnel

1. Outside servicing personnel, contracted to perform maintenance or other services requiring lockout/tagout procedures, will not begin work until the supervisor is satisfied that their lockout/tagout procedures are at least equivalent to company procedures.

2. The supervisor will also ensure company employees understand and comply with contracted personnel lockout/tagout procedures.

C. Shift/Personnel Changes: When a shift change occurs during a lockout/tagout procedure, the following procedures will be followed:

1. Shift to Shift: The off-going authorized employee will not remove his/her lock until the oncoming authorized employee has arrived and placed their lock on the machine or equipment.

2. Skip one Shift: The off-going authorized employee will describe in detail the status of the machine or equipment in the maintenance log and sign the log for a "maintenance department" lock and place in on the machine or equipment in place of their personal lock. The on-coming authorized employee, upon seeing the "maintenance department" lock will go to the maintenance log read the status information and then sign for the key to the "maintenance lock". The on-coming authorized employee will then replace the "maintenance lock" with their own personal lock and return the "maintenance lock and key" to the lock storage area. They must then sign in the "maintenance lock and key".

D. Training

1. General

a. Authorized employees must be able to recognize hazardous energy sources, types and magnitudes of energy in the workplace, and methods and means necessary to isolate and control the energy.

b. Affected employees must be able to recognize the purpose and use of energy control procedures.

c. Other employees must be able to recognize procedures and prohibitions of the energy control program.

2. Training on Tagout Devices

a. Tags are warning devices only and do not provide a physical restraint that lockout devices provide.

b. Tags must not be removed by anyone other that the authorized employee who used the tag.

c. Tags must be legible, and understandable by all employees.

d. Tags must be able to withstand environmental conditions in the workplace.

e. Tags may give employees a false sense of security.

f. Tags must be securely attached to prevent being accidentally detached during use.

3. Retraining: Employees will participate in retraining at the following times:

a. Change of job assignment;

b. Change in machinery or equipment, or

c. Change in operating procedures.

Lockout / Tagout Plan

I. General

A. Purpose. We have established this lockout/tagout procedure to provide maximum safety protection to our employees whenever they must service or perform maintenance on machinery and equipment.

B. Scope. These procedures must be used by all employees authorized to service or maintain our equipment to ensure that machines or equipment is completely isolated from all potentially hazardous energy sources. All employees affected in any way by servicing and maintenance activities must also be knowledgeable of lockout/tagout procedures.

C. Application. These procedures must be followed whenever unexpected energizing, star-up or release of stored energy could cause injury. These procedures do not apply when servicing or maintenance of equipment during normal production operations unless:

1. Guards, or other safety devices, must be removed or bypassed; or
2. An employee places him/herself in an area where work on materials, etc, is actually being performed; or
3. An employee places him/herself in any area considered dangerous during the normal operating cycle.

D. Compliance. All supervisors are responsible and accountable for the use of safe lockout/tagout procedures by all employees under their supervision. Compliance with lockout/tagout procedures is mandatory. Non-compliance with these procedures is considered a violation of an employee's condition of employment and will result in the initiation of progressive disciplinary procedures including termination.

E. Authorization. Employees who are properly trained and certified on equipment maintenance and lockout/tagout procedures, and approved by the facility manager, are authorized to implement lockout/tagout procedures as appropriate.

II. Lockout/Tagout Procedures

A. Preparation for Lockout.

1. Review. Prior to lockout, the authorized employee(s) will review the lockout/tagout procedures for each machine/piece of equipment. As a minimum the following information will be reviewed:

a. types and magnitudes of energy;
b. hazards posed by that energy; and
c. methods to effectively control the energy.

Particularly close attention must be given to energies (such as gravity, electrical, high pressure) that can be stored or re-accumulated after shut-down.

2. Notification. Prior to shutdown all affected employees will be notified to clear their work area and/or any other area that might be hazardous.

B. Lockout/Tagout

1. Shutdown. Machinery and equipment will be shut down in an orderly manner using the shutdown checklist procedures on the associated lockout;/tagout procedures for each machine/piece of equipment. If more than one authorized employee is involved in shutdown, the maintenance team leader will make sure all assistants have accomplished their tasks and are aware that shutdown will occur.

2. Isolation. All energy isolation devices will be located and operated to completely de-energize and isolate the equipment. The authorized employee, or team leader will verify operation of each energy isolation device.

3. Applying Lockout/Tagout Devices

a. Lockout Devices will be used to secure energy isolating devices unless the machinery or equipment is not capable of being locked out. Only authorized employees will affix lockout/tagout devices. Lockout devices must be able to hold energy isolation devices in a "safe" or "off" position.

Lockout / Tagout Plan

b. Tagout Devices. Tagout devices will be used only if machinery or equipment is not capable of being locked out. Tags will clearly state that moving energy isolating devices from the "safe" or "off" position is strictly prohibited. If a tag cannot be affixed to the energy isolating device, it will be located as close as safely possible to the device so that the tag is obvious to anyone attempting to operate the device.

c. Lockout/Tagout Materials and hardware. Lockout/Tagout devices will be provided by the employer. Each lockout/tagout device will be used only for lockout/tagout.

(1) Lockout devices will have the following characteristics:

(a) Capable of withstanding harsh environments,
(b) Standardized within the facility. Same color, shape, size, etc.,
(c) Prevent removal without excessive force,
(d) Singularly identify the user,
(e) Uniquely keyed.

(2) In addition, tagout devices will also have the following characteristics:

(a) Non-reusable,
(b) Attachable by hand,
(c) Self-locking
(d) Non-releasable with not less than 50 LB locking strength,
(e) Design/characteristics at least equivalent to a one-piece, all environment-tolerant nylon cable tie.

d. Stored Energy

(1) Immediately after applying lockout or tagout devices, the authorized employee will ensure all potentially hazardous stored or residual energy is relieved, disconnected, restrained, and otherwise rendered safe.

(2) If stored energy can be re-accumulated, the authorized employee will verify that the energy is isolated until maintenance is complete or the energy no longer exists.

e. Verification of Isolation. Before starting work on a machine or equipment that's locked or tagged out, the authorized employee will verify that the machinery or equipment is actually isolated and de-energized.

4. Release from Lockout or tagout. The authorized employee will follow the procedures below prior to removing lockout or tagout devices and restoring energy:

a. Equipment. Make sure machinery or equipment is properly re-assembled. Inspect machinery or equipment to make sure nonessential items have been removed.

b. Employees. Make sure all employees are safely positioned outside danger zones. Notify affected employees that lockout/tagout devices have been removed and that energy is going to be re-applied.

c. Removing lockout/tagout devices. Only the authorized employee who applied the lockout/tagout device may remove that device. Exception: When the authorized employee is not at the facility and all reasonable efforts have been made to inform the employee that their lockout/tagout device has been removed:

(1) The owner is authorized and will remove the device following procedures in this section.

(2) Each owner will be trained in proper lockout/tagout procedures.

(3) The owner will ensure the authorized employee has this knowledge before he/she resumes work.

5. Testing/Positioning Machines or Equipment. Whenever lockout/tagout devices are removed to test or position machines and equipment, or their components, the authorized employee will complete the following procedures in the sequence presented:

Lockout / Tagout Plan

a. Clear the machine or equipment of tools and materials;

b. Remove employees from danger zones;

c. Remove lockout/tagout devices;

d. Energize and proceed testing or position; and,

e. De-energize all systems and re-apply lockout/tagout devices using procedures in section 3.

6. Outside Personnel (Contractors, etc.)

a. Outside servicing personnel contracted to perform maintenance or other services covered by these lockout/tagout procedures will not begin work until the owner is satisfied that their lockout/tagout procedures are at least equivalent to company procedures.

b. The owner will also ensure company employees understand and comply with contracted personnel lockout/tagout procedures.

7. Shift/Personnel Changes. When a shift change occurs during a lockout/tagout procedure, the following procedures will be followed:

a. The on-coming authorized employee(s) will attach lockout/tagout devices and verify complete isolation:

b. The on-coming authorized employee(s) will receive a comprehensive briefing on the maintenance being performed from the off-going authorized employee(s);

c. The off-going authorized employee(s) will remove their lockout/tagout devices.

Special Procedure: In the event that communication between off-going and on-coming authorized employee(s) is impossible and work is to be done on the equipment/machinery by the on-coming authorized employee(s), then the following procedures must be followed:

a. The off-going authorized employee(s) will each check out a “department” lock from the maintenance department and record in the checkout log the status and condition of the equipment in question.

b. The off-going authorized employee(s) will attach the “department” lock to the equipment/machinery and remove their personal lock.

c. The on-coming authorized employee(s), upon realization the there is a “department” lock in place on the equipment/machinery to be worked on, will go to the maintenance department and read the checkout log, and sign for the appropriate key.

d. The on-coming authorized employee(s) will attach their personal lock to the equipment/machinery and remove the “department” lock.

e. The on-coming authorized employee(s) will immediately return the “department” lock and key to the maintenance department and sign in the key and lock.

8. Training.

a. Training in lockout/tagout will be provided to all employees who may be in an area where energy control procedures are used. This training will make sure that the purpose and function of the energy control program are understood and that employees gain the needed knowledge and skills to safely apply, use, and remove energy controls. As a minimum, training will include:

Lockout / Tagout Plan

(1) Authorized employees must be able to recognize: hazardous energy sources, type and magnitude of energy in the workplace, and methods and means necessary to isolate and control the energy.

(2) Affected employees must be able to recognize: purpose and use of the energy control procedures.

(3) Other employees must be able to recognize: procedures and prohibitions of the energy control program.

b. Training Tagout Devices. Further training on tagout systems need to emphasize that:

(1) Tags are warning devices only and do not provide a physical restraint that lockout devices provide.

(2) Tags must not be removed without the authorized employee's approval, and should never be bypassed, ignored, or otherwise defeated.

(3) Tags must be legible, and understandable by all employees.

(4) Tags must be able to withstand environmental conditions in the workplace.

(5) Tags may give employees a false sense of security.

(6) Tags must be securely attached to prevent being accidentally detached during use.

c. Retraining. Employees will be retrained at the following times:

(1) Initial Assignment.

(2) Change in job assignment.

(3) Change in machinery or equipment, or

(4) Change in operating procedures.

9. Inspections.

a. Annual inspection on lockout/tagout procedures will be conducted by an authorized employee other than the one(s) using the control procedure being inspected.

b. The purpose of the inspection is to correct any deviations or inadequacies in the procedures.

c. The inspector and authorized employee must review responsibilities under the energy control procedure.

d. The owner will certify that the inspection was conducted. Elements of the certification include:

(1) Identification of equipment or machinery

(2) Date of inspection

(3) Employees included in the inspection

(4) Person performing inspection.

_____ _____

Owner Signature Date

Lockout / Tagout
Authorized Employee List

Authorized Employees Name	Emergency Phone	Training Date	Authorized By

Section 2. Training Modules

Module 9. Hazard Communication Program

Purpose of The Hazard Communication Program

To ensure information about hazardous chemicals and protective measures is given to employers and employees.

Hazardous Chemicals

Any Chemical which is a physical or health hazard.

Physical Hazards - reactions that could occur if chemicals are handled or stored improperly. This could result in a fire, explosion, and/or toxic gas release.

Health Hazards - health effects caused directly by the chemicals themselves, not an injury resulting from a reaction. All chemical materials can cause health problems under the wrong conditions.

Forms of Hazardous Chemicals

Solids - Dusts are finely divided particles. Example - wood dust

Fumes are even smaller particles usually formed when solid metal is heated and vaporized, and then condenses as tiny particles.

Fibers are similar to dusts but are of an elongated shape. Examples - asbestos and fiberglass.

Liquids - Mists are liquid droplets that have been sprayed into the atmosphere.

Vapors are gases formed when liquid evaporates.

Gases - Gases are substances that are normally airborne at room temperature. A vapor is the gaseous phase of a substance which is normally a liquid or solid at room temperature.

Effects of Chemicals

The effects of chemicals on the human body depend on several factors:

1. The **form** of the chemical: solid, liquid, or gas;
2. How the chemical **contacts** the body: ingestion, inhalation, or absorption;
3. The amount, or **dose**, the body receives;
4. How **toxic**, or poisonous the chemical is.

Routes of Entry

Ingestion: Example - through the mouth and swallowed (carried in on hands, food, liquids, drinking container contamination etc.)

Inhalation: Example - breathed in through the mouth or nose (vapors, gases in the air)

Absorption: Example - penetration through the skin (solvents like gasoline, parts cleaners, paint thinners etc.)

Three Ways to Inform Workers of Hazardous Chemicals

Labels, Material Safety Data Sheets (MSDS), Training

Rules Apply To: **Any chemical that employees may be exposed to under normal conditions in the workplace or in a foreseeable emergency.**

The Written Program

Must Be Available: **Your personal copy of the written program can be found in the back of this training module. In addition, there will be a copy in the MSDS book and in the main office.**

Section 2. Training Modules

Module 9. Hazard Communication Program

Written Program (cont.)

Three subject areas: **Labels, MSDS, Training**

Other subject areas: **Hazardous chemicals list, non-routine procedures, pipe and piping systems, mobile unit procedures, multi-employer procedures.**

Label Requirements

Primary Container: **Used by the chemical manufacture, distributor, or importer to store hazardous chemicals.**

Label information:

1. Identification of chemical
2. Appropriate warning hazard
3. Manufacturer's name and address

Secondary Container: **Used by the employer to store hazardous chemicals**

Label information:

1. Identification of chemical
2. Appropriate warning hazards

May use words, pictures, symbols or combination to provide general information about hazards

Portable Container: **Used to transfer or immediately use hazardous chemicals.**

Label information:

None - if used immediately. Includes drugs dispensed by a pharmacy to health care provider for direct administration to a patient.

Stationary Process Container: **Usually a large unmovable tank or vessel used to store hazardous chemicals.**

Label information:

Signs, placards, process sheets, batch tickets, operating procedures, other written materials.

Must identify chemical and appropriate hazard warning

Pipes and Piping Systems: **Those pipes and piping systems containing or transporting hazardous chemicals must be labeled according to Division 2/Z, Hazardous Materials.**

Never Deface or Remove Labels:

Unless container is immediately marked with the required information.

There is no need to affix a new label if old label meets labeling requirements.

Material Safety Data Sheets (MSDS)

The MSDS is the primary written means of conveying information concerning chemical hazards to employers and employees.

For All Hazardous Chemicals: **Found in the MSDS book in your work area and in the main office.**

Section 2. Training Modules

Module 9. Hazard Communication Program

Material Safety Data Sheets (MSDS) (cont.)

MSDS Content: **Hazard communication rules require that 12 different information items be included on an MSDS.**

1. **Identity -** of chemicals presenting physical or chemical hazards. The chemical name is required on the MSDS and the label must be referencable.
2. **Physical and chemical characteristics -** such as vapor pressure, flash-point, and chemical solubility
3. **Physical hazard -** such as reactivity, explosibility, and fire potential.
4. **Health hazard -** including signs and symptoms of illness, and medical conditions which might be aggravated by exposure.
5. **Primary routes of chemical entry -** into the body.
6. **Permissible exposure limits -** published and/or recommended for the chemical.
7. Whether the chemical is listed as a **carcinogen.**
8. **Precautions necessary for safe use.**
9. Known **control measures,** including engineering, work practices, and personal protective equipment necessary to protect against the hazards.
10. **Emergency and first aid** procedures
11. **Date of MSDS preparation** or date of last change in contents.
12. **Name, address, and phone number** of the person responsible for the MSDS.

Information & Training

When to Train: **Every employee will be trained;**

1. Initial assignment (new employee, new job, new department etc.)
2. Whenever a new hazard is introduced

Information included:

1. Hazard communication rules
2. Hazardous tasks
3. Location of written program

Specific Training For Those Who Work With Hazardous Chemicals:

1. Methods to detect hazardous chemicals
2. Physical and health hazards
3. Measures to protect employees
4. Specific company hazard communication program procedures

Written Hazard Communication Program

General Information

The management staff are committed to the prevention of incidents or happenings which result in injury and/or illness, and to comply with all applicable federal and state health and safety rules. Therefore we require that management spare no effort in providing a safe and healthful work environment for all employees; that all levels of supervision are accountable for the health and safety of those employees under their direction; and through this written hazard communication program share assigned responsibility to ensure performance under that responsibility.

In order to comply with Oregon Occupational Health and Safety Code Hazard Communication, 1910.1200, the following written Hazard Communication Program has been established.

All areas of the company are included in this program. The written program will be available in the first aid area for review by any interested employee. We will meet the requirements of this rule as follows:

Container Labeling

The employee responsible for chemical purchases will verify that all containers will:

* Be clearly labeled as to the contents.
* Note the appropriate hazard warning.
* List the manufacturer's name and address.

It is the policy of this company that no container will be released for use until the above data is verified.

The employer will ensure that all secondary containers are labeled with either an extra copy of the original manufacturer's label or with a generic label which has identification and hazard warning blocks.

Material Safety Data Sheets (MSDSs)

Copies of all the MSDSs for all hazardous chemicals to which employees of this company may be exposed will be kept in the first aid area.

MSDSs will be available to all employees in their work area for review during each work shift. If MSDSs are not available or new chemicals in use do not have an MSDS, immediately contact employee responsible for purchasing chemicals.

Employee Information and Training

Prior to starting work, each new employee will attend a health and safety orientation and will receive information and training on the following:

* An overview of the requirements contained in 1910.1200 Hazard Communication Rules.
* Chemicals present in their workplace operations.
* Location and availability of our written hazard communication program.
* Physical and health effects of the hazardous chemicals.
* Methods and observation techniques used to determine the presence or release of hazardous chemicals in the work area.
* How to reduce or prevent exposure to these hazardous chemicals through use of control/work practices and personal protective equipment.
* Steps the company has taken to reduce or prevent exposure to these chemicals.
* Safety emergency procedures to follow if the employee is exposed to these chemicals.

Written Hazard Communication Program

* How to read labels and review MSDSs to obtain appropriate hazard information.

After attending the training class, each employee will sign a"Training Record" form to verify that they attended the training, received our written materials, and understood this company's policies on hazard communication.

For agricultural employees performing hand labor operations, provision and review of the OR-OSHA "Safe Practices When Working Around Hazardous Agricultural Chemicals" brochure, Form 1951, and access to the MSDS information meets training requirements. Agricultural employees who directly handle hazardous chemicals must be provided with all information and training noted above.

Prior to a new hazardous chemical being introduced into any area of this company, each employee of that area will be given information as outlined above. The employee who purchases the chemical is responsible for ensuring that MSDSs on any new chemicals are available.

Hazardous Chemicals List

The "Chemical List" is a list of all known hazardous chemicals used by our employees. More information on each chemical noted is available by reviewing MSDSs located in the first aid area or in the immediate work area.

Hazardous Non-routine Tasks

Periodically, employees must perform hazardous non-routine tasks. Before starting work on such projects, each affected employee will be given information by the employer about hazardous chemicals to which they may be exposed during such activity.

This information will include:

* Specific chemical hazards.

* Protective/safety measures employees must take.

* Measures the company has taken to reduce the hazards, including ventilation, respirators, presence of another employee, and emergency procedures.

Non-routine tasks performed by employees of this company are documented and kept with the "Written Program".

Chemicals in Pipes

Work activities are often performed by employees in areas where chemicals are transferred through pipes. If this is the case, prior to starting work in these areas, employees will contact the employer for information regarding the chemical in the pipes, or the insulation material on the pipe, potential hazards and safety precautions to be taken.

Informing Contractors

It is the responsibility of the employer to provide contractors (with employees) the following information:

* Hazardous chemicals to which they may be exposed while on the job site, and the procedures for obtaining MSDSs.

* Precautions employees may take to lessen the possibility of exposure, by using appropriate protective measures, and an explanation of the labeling system used.

Also, it is the responsibility of the employer to identify and obtain MSDSs for the chemicals the contractor is bringing into the workplace.

_____ _____

Owner Signature Date

Written Hazard Communication Program

Chemical List

Number	Chemical Name	Labeled	MSDS On File	Verified By	Date
Ch 1	_____	☐	☐	_____	_____
Ch 2	_____	☐	☐	_____	_____
Ch 3	_____	☐	☐	_____	_____
Ch 4	_____	☐	☐	_____	_____
Ch 5	_____	☐	☐	_____	_____
Ch 6	_____	☐	☐	_____	_____
Ch 7	_____	☐	☐	_____	_____
Ch 8	_____	☐	☐	_____	_____
Ch 9	_____	☐	☐	_____	_____
Ch 10	_____	☐	☐	_____	_____
Ch 11	_____	☐	☐	_____	_____
Ch 12	_____	☐	☐	_____	_____
Ch 13	_____	☐	☐	_____	_____
Ch 14	_____	☐	☐	_____	_____
Ch 15	_____	☐	☐	_____	_____
Ch 16	_____	☐	☐	_____	_____
Ch 17	_____	☐	☐	_____	_____
Ch 18	_____	☐	☐	_____	_____
Ch 19	_____	☐	☐	_____	_____
Ch 20	_____	☐	☐	_____	_____
Ch 21	_____	☐	☐	_____	_____
Ch 22	_____	☐	☐	_____	_____
Ch 23	_____	☐	☐	_____	_____
Ch 24	_____	☐	☐	_____	_____
Ch 25	_____	☐	☐	_____	_____
Ch 26	_____	☐	☐	_____	_____
Ch 27	_____	☐	☐	_____	_____
Ch 28	_____	☐	☐	_____	_____
Ch 29	_____	☐	☐	_____	_____
Ch 30	_____	☐	☐	_____	_____

Written Hazard Communication Program
Non-routine Task List

1. Task Description: _____

_____

Specific chemical hazards: _____

_____

Protective/safety measures employees must take: _____

_____

Measures the company has taken to reduce the hazards, including ventilation, respirators, presence of another employee, and emergency procedures: _____

_____

_____

_____

2. Task Description: _____

_____

Specific chemical hazards: _____

_____

Protective/safety measures employees must take: _____

_____

Measures the company has taken to reduce the hazards, including ventilation, respirators, presence of another employee, and emergency procedures: _____

_____

_____

_____

3. Task Description: _____

_____

Specific chemical hazards: _____

_____

Protective/safety measures employees must take: _____

_____

Measures the company has taken to reduce the hazards, including ventilation, respirators, presence of another employee, and emergency procedures: _____

_____

_____

_____

Section 2. Training Modules

Module 10. Machine Guarding

Introduction:

Crushed hands and arms, severed fingers, blindness -- the list of possible machinery-related injuries is as long as it is horrifying. There seem to be as many hazards created by moving machine parts as there are types of machines. Safeguards are essential for protecting workers from needless and preventable injuries.

A Rule to Remember:

Any machine part, function, or process which may cause injury must be safeguarded. Where 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.

Where Mechanical Hazards Occur:

Dangerous moving parts in three basic areas require safeguarding:

The point of operation

That point where work is performed: cutting, shaping, boring, forming

Power transmission apparatus:

All components of the mechanical system which transmit energy to the part of the machine performing the work.
Includes: flywheels, pulleys, belts, connecting rods, couplings, cams, spindles, chains, cranks, gears.

Other moving parts:

All parts of the machine which move while the machine is working.
Includes: reciprocating, rotating, transverse, feed mechanisms, auxiliary parts.

Hazardous Mechanical Motions and Actions

A wide variety of mechanical motions and actions may present hazards to the worker. These can include the movement of rotating members, reciprocating arms, moving belts, meshing gears, cutting teeth, and any parts that impact or shear. These different types of hazardous mechanical motions and actions are basic in varying combinations to nearly all machines, and recognizing them is the first step toward protecting workers from the danger they present.

Motions

Rotating motion: collars, couplings, cams, clutches, flywheels, shaft ends, spindles, meshing gears.

In-running nip point hazards:

There are three main types of in-running nips:
* *Parts rotating in opposite direction*
* *Rotating and tangentially moving parts*
* *Rotating and fixed parts*

Reciprocating motions: moving in and out, left and right, forward and back

Transverse motion: moving in one direction, over a roller or sprocket etc., and then in the opposite direction

Actions

Cutting: as with table saws, band saws, lathes, drill press, planner etc.

Shearing: shear

Bending: formers, benders, presses

Punching: punch press

Miscellaneous: "iron worker"

Section 2. Training Modules

Module 10. Machine Guarding

Methods of Machine Guarding:

There are many ways to safeguard machines. The type of operation, the size or shape of stock, the method of handling, the physical layout of the work area, the type of material, and production requirements or limitations will help to determine the appropriate safeguarding method for the individual machine.

As a general rule, power transmission apparatus is best protected by fixed guards that enclose the danger areas. For hazards at the point of operation, where moving parts actually perform work on stock, several kinds of safeguarding may be possible. One must always choose the most effective and practical means available.

Safeguarding strategies are grouped under five general classifications

1. **Guards:** Guards are barriers which prevent access to danger areas.

   Fixed Guards:
   - * *permanent part of the machine.*
   - * *not dependent upon moving parts to perform its intended function.*
   - * *constructed of sheet metal, screen, wire cloth, bars, plastic, or other substantial material.*
   - * *usually preferable to all other types because of its relative simplicity and permanence.*

   Interlocked Guards: When this type of guard is opened or removed, the tripping mechanism and/or power automatically shuts off or disengages, and the machine cannot cycle or be started until the guard is back in place.
   - * *guard the dangerous part before the machine can be operated.*
   - * *keep the guard closed until the dangerous part is at rest.*
   - * *prevent operation of the machine if the interlocking device fails.*
   - * *they may use electrical, mechanical, hydraulic, or pneumatic power or any combination of these.*
   - * *they should not prevent "inching" by remote control if required.*
   - * *all movable guards should be interlocked to prevent occupational hazards.*

   Adjustable Guards: Adjustable guards are useful because they allow flexibility in accommodating various sizes of stock. Example: adjustable guard on horizontal band saw or table saw.

   Self-Adjusting Guards: The openings of these barriers are determined by the movement of the stock. As the operator moves the stock into the danger area, the guard is pushed away, providing an opening which is only large enough to admit the stock. After the stock is removed, the guard returns to the rest position. Example: Self-adjusting guard on band saw, table saw, radial arm saw, jointer.

2. **Devices:** A safety device may perform one of several function.

   * It may stop the machine if a hand or any part of the body is inadvertently placed in the danger area;
   * Restrain or withdraw the operator's hands from the danger area during operation;
   * Require the operator to use both hands on machine controls; or
   * Provide a barrier which is synchronized with the operating cycle of the machine in order to prevent entry to the danger area during the hazardous part of the cycle.

   Presence-Sensing Devices (Photoelectric (optical)): Uses a system of light sources and controls which can interrupt the machine's operating cycle.

   Radio Frequency (capacitance): Uses a radio beam that is part of the machine control circuit. When the capacitance field is broken, the machine will stop or will not activate.

   Electromechanical: Has a probe or contact bar which descends to a predetermined distance when the operator initiates the machine cycle. If there is an obstruction preventing it from descending its full predetermined distance, the control circuit does not actuate the machine cycle.

   Pullback: Pullback devices utilize a series of cables attached to the operator's hands, wrists, and/or arms. This type of device is primarily used on machines with stroking action. When the slide/ram is up between cycles, the operator is allowed access to the point of operation.

Section 2. Training Modules

Module 10. Machine Guarding

2. Devices (cont.)

Restraint: The restraint (holdout) device utilizes cables or straps that are attached to the operator's hands at a fixed point. The cables or straps must be adjusted to let the operator's hands travel within a predetermined safe area. There is not extending or retracting action involved. Consequently, hand-feeding tools are often necessary if the operation involves placing material into the danger area.

Safety Trip Controls: Provide a quick means for deactivating the machine in an emergency situation. A **pressure-sensitive bar**, when depressed, will de-activate the machine.

Two-Hand Controls: Requires constant, concurrent pressure by the operator to activate the machine. With this type of device, the operator's hands are required to be at a safe location (on the control buttons) and at a safe distance from the danger area.

Two-Hand Trip: This device requires concurrent application of both the operator's control buttons to activate the machine cycle, after which the hands are free.

Gate: A gate is a movable barrier which protects the operator at the point of operation before the machine cycle can be started. They are usually designed to operate with each machine cycle.

3. Location and Distance: The machine or its dangerous moving parts are positioned so that hazardous areas are not accessible or do not present a hazard during normal operation. Examples: walls, fences, height (above worker), size of stock (single end feeding, punching), controls (positioned at a safe distance).

4. Feeding and Injection Methods

Automatic and Semiautomatic Feed Methods

Automatic and Semiautomatic Ejection Methods

Robots

5. Miscellaneous Aids: May not give complete protection from machine hazards, but may provide the operator with an extra margin of safety. Examples: Awareness barriers, ropes, shields, holding tools, push sticks or blocks.

Cooperation and Assistance

Safety in the workplace demands cooperation and alertness on everyone's part. Supervisors, operators, and other workers who notice hazards in need of safeguarding, or existing systems that need repair or improvement, should notify the proper authority immediately.

Owner/Supervisor Responsibility

Owners/Supervisors have special responsibilities with regard to safety in the workplace; encouraging safe work habits and correcting unsafe ones; explaining to the worker all the potential hazards associated with the machines and processes in the work area; and being responsive to employer request for action or information regarding machine hazards. The first-line supervisor plays a pivotal role in communicating the safety needs of the worker to management and the employer's safety rules and policies to the workers.

Use Experts

Sometimes the solution to a machine safeguarding problem may require expertise that is not available in a given establishment. You are encouraged to find out where help is available and, when necessary, to request it.

The machine's manufacturer is often a good place to start when looking for assistance with a safeguarding problem. Manufacturers can often supply the necessary literature or advice. Insurance carriers, too, will often make their safety specialists available to the establishments whose assets they insure. Union safety specialists can also lend significant assistance.

Oregon OSHA offers consultation services, providing for on-site evaluation of workplaces and the recommendation of possible hazard controls. OR-OSHA's consultation program is completely separate from the inspection effort; no citations are issued and not penalties are proposed.

In Compliance with the Americans with Disabilities Act (ADA), this publication is available in alternative formats by calling the OR-OSHA Public Relations Manager at (503) 378-3272 (V/TTY).