

MIOSHA General Industry Standards

Edited for Schoolcraft College

Safety & Health Training Requirements

Michigan Department of Licensing and Regulatory Affairs
Michigan Occupational Safety & Health Administration
Consultation Education & Training Division
www.michigan.gov/miosha
(517) 322-1809



Contents

MIOSHA General Industry Safety Training Requirements

<u>Part</u>		<u>Page</u>
	Definitions	iv
11	Recording and Reporting of Occupational Injuries and Illnesses.	5
1	General Provisions	5
3	Fixed Ladders.....	5
6	Fire Exits	5
12	Welding and Cutting	6
17	Refuse Packers	7
21	Powered Industrial Trucks	8
22	Tractors	8
23	Hydraulic Power Presses	8
24	Mechanical Power Presses	8
25	Manlifts (Fed Standard 1910.68)	9
26	Metalworking Machinery	9
27	Woodworking Machinery	9
33	Personal Protective Equipment	10
433	Personal Protective Equipment (training section same as Part 33)	10
37	Accident Prevention Signs and Tags.....	10
38	Hand and Portable Powered Tools.....	11
39	Design Safety Standards for Electrical Systems	12
40	Electrical Safety-Related Work Practices	12
53	Tree Trimming and Removal	14
54	Powered Groundskeeping Equipment.....	15
56	Storage and Handling and Liquid Propane Gas (Fed Standard 1910.110)	15
58	Aerial Work Platforms	15
71	Laundry and Dry Cleaning Machinery and Operating.....	17
72	Automotive Service Operations	17
79	Diving Operations	17
81	Baking Operations	18
85	Control of Hazardous Energy Sources	18
86	Electric Power Generation, Transmission & Distribution.....	20
90	Confined Space Entry	25
92	Hazard Communication (Right to Know)	26
380	Occupational Noise Exposure	28
451	Respiratory Protection	28
472	Medical Services and First Aid	29
305	Asbestos (29 CFR 1910.1001)	30
554	Bloodborne Infectious Diseases	31
430	Hazard Communication (same as Part 92 – see GI Safety Section)	33
490	Permit Required Confined Spaces (Same as Part 90)	36

NOTE:

This training requirement guide book identifies "specific employee training requirements" that are the sole responsibility of employers or employee representatives. This guide may not include other standards' requirements for pre-employment or task training, such as training for electricians, engineers, tradesmen, etc., in order to be called "qualified persons." It also may not include requirements for employers and employees to follow manufacturers' instructions for the installation and operation of machinery.

DEFINITIONS

In this training guide, the following definitions shall apply:

Accident Prevention Program

The program by which an employer provides instruction and safety training to an employee in the recognition and avoidance of hazards.

Competent Person

A person who is experienced and capable of identifying an existing or potential hazard in surroundings or under working conditions which are hazardous or dangerous to an employee and who has the authority and knowledge to take prompt corrective measures to eliminate the hazards.

Designated Employee

A qualified person delegated to perform specific duties under the conditions existing.

Operator

An employee who has been trained, tested, and authorized by the present employer to operate (a machine).

Qualified Person

A trained person possessing a recognized degree or certificate of professional standing or who, by extensive knowledge, training, and experience, has demonstrated the ability to solve or resolve problems relating to the subject matter and work.

Administrative Rules

PART 11. RECORDING AND REPORTING OF OCCUPATIONAL INJURIES AND ILLNESSES

Employee Involvement

- R 135 (1)** Basic requirement. Your employees and their representatives must be involved in the recordkeeping system as follows:
- (a) You must inform (train) each employee of how he or she is to report an injury or illness to you.

PART 1. GENERAL PROVISIONS

Each Newly Assigned Employee

- R 11 (a)** Provide training to each newly assigned employee regarding the operating procedures, hazards, and safeguarding of the job.

Do Not Operate Until Trained

- R 12 (a)** An employee shall not operate a machine or equipment until trained in the operating procedures, hazards, and safeguarding and has been assigned to do so by the employer.

Reporting Defects

- R 187(2)** An employer shall instruct the employee to report defective equipment to the employee's supervisor.

PART 3. FIXED LADDERS

Employee Training; ladder use restriction

- R 311(1)** An employer shall ensure that all employees who use ladders that have a working height of 6 feet (1.82m) or more receive training on how to inspect ladders and how to properly use the ladders.

PART 6. FIRE EXITS

Employee Emergency Plans

Notification of emergency escape procedures and routes; designation of evacuation assistants

- R 608(1)** An employer shall assure that employees are informed of emergency escape procedures and emergency routes to approved means of egress.

R 608(2) An employer shall designate a sufficient number of persons to assist in the safe and orderly emergency evacuations of employees.

R 623(5) Before implementing the emergency action plan, an employer shall designate and train a sufficient number of persons to assist in the safe and orderly emergency evacuation of employees. The employer shall review the plan, at the following times, with each employee to whom the plan applies:

- (a) When the plan is developed.
- (b) If an employee's responsibilities or designated actions under the plan changed.
- (c) If the plan is changed.

An employer shall review, with each employee, upon initial assignment, those parts of the plan that the employee must know to protect the employee in an emergency. The written plan shall be kept at the workplace and made available for employee review.

R 624(4) An employer shall inform employees of the fire hazards of the materials and processes to which they are exposed.

R 624(5) An employer shall review, with each employee, upon initial assignment, those parts of the fire prevention plan that the employee must know to protect the employee in an emergency. The written plan shall be kept in the workplace and made available for employee review.

Part 12. WELDING AND CUTTING

Pre-Task Training

R 1211(1) An employer shall do all of the following:

- (a) Give each employee training or a test before allowing him or her to use equipment for arc and gas welding and cutting.

R 1211(2) An employee shall comply with all of the following:

- (a) Use welding and cutting equipment as trained and authorized.

Fuel Supply Requirements

R 1211(3) An employee in charge of the operation of oxygen or fuel-gas supply equipment shall be instructed and judged competent by the employer for this work before being left in charge. Rules and instructions covering the operation and maintenance of oxygen or fuel-gas supply equipment, including generators and oxygen or fuel-gas distribution piping systems, shall be readily available.

Rescue Operations

- R 1213(5)** An employee who is trained in rescue procedures, and with such equipment as is necessary to effect a rescue, if needed, shall be stationed outside the confined space during welding or cutting operations.

Refilling Cylinders

- R 1224(6)** Only the owner of the cylinder, if the owner is qualified, or a person trained, qualified, and authorized by the owner, shall refill a cylinder.

Repairs of Regulators

- R 1254** (c) Regulators shall be repaired by authorized and trained personnel, or be returned to the supplier for calibration or repairs.

Cutting and Welding

- R 1261(1)** Cutting and welding shall be done in designated areas free of flammable or conditions favorable to fire or explosion. If it is not practical to perform the work in a designated area, a person shall be assigned responsibility for fire safety of the job and shall take the following action after inspecting the job site and designation precautions to be taken:

- (d) Have appropriate portable fire extinguishers on hand for use by trained employees.

Maintenance of Are Welding Machines

- R 1276(2)** Equipment in need of repair that constitutes a safety hazard shall not be used or put in use until repairs are made by a knowledgeable employee or outside service.
- R 1281(4)** A resistance welding machine shall be installed by a qualified employee under the direction of a licensed electrician or supervised by a welding engineer.

PART 17. REFUSE PACKERS

Pre-Assignment Training

- R 1711** (a) An employer shall provide instruction and training before assigning employee to a refuse packer unit.

Use of Refuse Packer Unit

- R 1713** (c) An employee shall use a refuse packer unit only after instructed and trained in its safe operation.

PART 21. POWERED INDUSTRIAL TRUCKS

Pre-Assignment Training

R 2152 An employer shall provide training to the employee before the employee's assignment as an operator of a powered industrial truck. Instruction shall include all of the following:

- (a) Capabilities of the equipment and attachments.
- (b) Purpose, use, and limitations of controls.
- (c) How to make daily checks.
- (d) Practice and operating assigned vehicles through the mechanical functions necessary to perform the required job.
- (e) State safety standard rules 2171 to 2193 of Part 21. Powered Industrial Trucks, being R 408.12171 to R 408.12193 of the Michigan Administrative Code.
- (f) Hazards associated with exhaust gases produced by fossil fuel powered industrial trucks (e.g. carbon monoxide, components of diesel exhaust), and hazards associated with the handling of electrolyte chemicals used for battery operated trucks (e.g. sulphuric acid), shall be provided in accordance with the Michigan Right To Know Law, "Hazard Communications" standards 29 C.F.R. '1910.1200 as adopted by R 408.19202 and R 325.77002.

Type of Permit

R 2154(4) A permit shall indicate the type of truck an operator has been trained on and is qualified to operate.

Mechanical Conditions and Maintenance

R 2161(9) All repairs shall be made by authorized personnel.

Battery Charging

R 2164(1) Where electric trucks are used, an employer shall provide a designated area for battery changing, charging, or both which shall be performed by a trained and authorized employee.

PART 22, TRACTORS

Pre-Assignment Training

R.2232 An employer or his designated representative shall provide training to an employee prior to the employee's assignment as an operator of a tractor. Instruction shall include:

- (a) Capabilities of the equipment and attachments.

- (b) Purpose, use, and limitation of the controls.
- (c) How to make daily inspections of the equipment.
- (d) Practice operating assigned tractors through the function necessary to perform the required jobs.
- (e) Use of seat belts.

Training Program

R.2234 An employer shall establish a procedure that assures that an employee is trained and qualified to operate a tractor prior to authorizing the employee to operate a tractor. A permit system may be used to comply with this rule.

Mechanical Conditions and Maintenance

R.2235(6) All repairs and modifications shall be made by authorized and qualified personnel.

PART 25, MANLIFTS

(Federal Standard 1910.68)

Use of

R.2501(b)(1) This section applies to manlifts used to carry only personnel trained and authorized by the employer in their use.

PART 26, METALWORKING MACHINERY

Job Hazards Training

R.2611 (a) An employer shall provide training to each employee as to the hazards and safe operation of the assigned job.

Use of Machinery and Equipment

R.2612 (a) An employee shall not use machinery and equipment unless authorized and trained in its use.

PART 27, WOODWORKING MACHINERY

Pre-Assignment Training

R.2799 Before an inexperienced workman is permitted to operate a woodworking machine, he shall be given careful instructions in the hazards of the machine and the safe method of operation.

PART 33, PERSONAL PROTECTIVE EQUIPMENT

Training

R.3309(1) An employer shall provide training to each employee who is required by this part to use personal protective equipment. Each employee who is required by this part to use personal protective equipment shall be trained in the following areas:

- (a) When personal protective equipment is necessary.
- (b) What personal protective equipment is necessary.
- (c) How to properly don, doff, adjust and wear the personal protective equipment.
- (d) The limitations of the equipment.
- (e) The useful life of the equipment and the proper care, maintenance and disposal of the equipment.

R.3309(2) Each affected employee shall demonstrate an understanding of the training specified in subrule (1) of this rule and the ability to use the equipment properly before being allowed to perform work requiring the use of personal protective equipment.

R.3309(3) When an employer has reason to believe that any affected employee who has already been trained does not have the understanding and skill required by subrule (2) of this rule, the employer shall retrain the employee. The existence of any of the following circumstances requires retraining:

- (a) Changes in the workplace that render previous training obsolete.
- (b) Changes in the types of personal protective equipment to be used that render previous training obsolete.
- (c) Inadequacies in an affected employee's knowledge or use of assigned personal protective equipment which indicate that the employee has not retained the requisite understanding or skill.

R.3309(4) An employer shall verify that each affected employee has received and understood the required training through a written certification that contains the name of each employee trained and the date of training and that identifies the subject of the certification.

Head Protection Use

R.3370(5) An employee shall use the provided head protection equipment in accordance with instructions and training received.

PART 37, ACCIDENT PREVENTION SIGNS AND TAGS

Danger Signs

- R.3711(3)** An employee shall be instructed that a danger sign indicates immediate danger and that special precautions are necessary.
- R.3713(3)** An employee shall be instructed that a caution sign indicates a possible hazard and that proper precaution shall be taken.
- R.3715(1)** A safety instruction sign shall be used for a general instruction or suggestion relative to safety awareness.

PART 38, HAND AND PORTABLE POWERED TOOLS

Use of Tools

- R.3811** (a) An employer shall ensure that an employee has been trained in the use of hand tools and portable powered tools before authorizing their use.

Modifying Tools

- R.3824** A tool and its power source shall not be modified, except by an authorized and trained employee or qualified outside service.
- R.3872(1)** An employer who uses powder-actuated tools shall establish and maintain, at the place of employment, a list or other record of employees qualified and trained to operate powder-actuated tools of the type provided by the employer.

Trainer

- R.3872(2)** An employee shall receive training and instruction from 1 of the following:
- (a) A dealer or distributor of powder-actuated tools who has been authorized by the tool manufacturer to provide such training.
 - (b) An authorized employee of a powder-actuated tool manufacturer.
 - (c) An employer or authorized employer representative.

Training Curriculum

- R.3873 (1)** The training of an employee to use a powder-actuated tool shall, at a minimum, include the following:
- (a) Cleaning.
 - (b) Inspection.
 - (c) Operation.
 - (d) Use Limitations.
 - (e) Powder Levels.
 - (f) Misfire Procedures.

- R.3873 (2)** Before approving an employee as an operator of a powder-actuated tool, the

employer shall have the employee demonstrate competence by actually operating the powder-actuated tool in a safe manner.

PART 39, DESIGN SAFETY STANDARDS FOR ELECTRICAL SYSTEMS

1910.304

(g)(1)(v)(c)(2) The conditions of maintenance and supervision assure that only qualified (trained) persons will service the installation.

1910.304

(f)(1)(v)(c)(2) The conditions of maintenance and supervision assure that only qualified (trained) persons will service the installation.

PART 40, ELECTRICAL SAFETY-RELATED WORK PRACTICES

Employees at Risk and Type of Training

- R.4002(1)** The training requirements contained in this rule apply to employees who face a risk of electrical shock that is not reduced to a safe level by the electrical installation requirements of 29 C.F.R. ' 1910.303 to 1910.308.
- R.4002(2)** Employees who are in occupations that are required to be trained. Other employees who also may reasonably be expected to face comparable risk of injury due to electric shock or other electrical hazards shall also be trained.
- R.4002(3)** Employee shall be trained in, and familiar with, the safety-related work practices required by these rules that pertain to their respective job assignments.
- R.4002(4)** Employees who are regulated by the provisions of subrules (1) to (3) of this rule, but who are not qualified persons, shall also be trained in, and familiar with, any electrically related safety practices which are not specifically addressed by these rules, but which are necessary for employee safety.
- R.4002(5)** Qualified persons, that is those who are permitted to work on or near exposed energized parts, shall, at a minimum, be trained in, and familiar with, all of the following:
- (a)** The skills and techniques necessary to distinguish exposed live parts from other parts of electrical equipment.
 - (b)** The skills and techniques necessary to determine the nominal voltage of exposed live parts.
 - (c)** The clearance of distance specified in R 408.14005 and the corresponding voltages to which the qualified person will be exposed.

For the purpose of these rules, a person shall have the training that is required by the provisions of this subrule to be considered a qualified person. Qualified persons whose work on energized equipment involves either direct contact or contact by means of tools or materials shall also have the training that is needed to meet the requirements of R408.14005(2).

R.4002(6) The training that is required by this rule shall be classroom or on-the-job training. The degree of training provided shall be determined by the risk to the employee.

TABLE 1
Typical Occupational Categories of Employees Who Face a
Higher Than Normal Risk of Electrical Accident

OCCUPATION

Blue collar supervisors*	Industrial machine operators*
Electrical and electronic engineers*	Mechanics and repairers*
Electrical and electronic equipment assemblers*	Painters*
Electrical and electronic technicians*	Riggers and roustabouts*
Electricians	Stationary engineers*
	Welders

MIOSHA TRAINING REQUIREMENTS FOR GENERAL INDUSTRY SAFETY

*Workers in these groups do not need to be trained if their work or the work of those they supervise does not bring them or the employees they supervise close enough to exposed parts of electric circuits that operate at 50 volts or more to ground for a hazard to exist.

Controlling Devices

R.4004(2) (c) All persons who have access to controlling devices shall be trained in, and familiar with, the employers tagging procedure.

Working on Energized Equipment

R.4005(2) Only qualified persons may work on electrical circuit parts or equipment that have not been de-energized under the procedures specified in R 408.14004. Such persons shall be trained to work safely on energized circuits and shall be familiar with the proper use of all the following:

- (a) Special precautionary techniques.
- (b) Personal protective equipment.
- (c) Insulating and shielding materials.
- (d) Insulated tools.
- (e) Testing equipment.

PART 53, TREE TRIMMING AND REMOVAL

Pre-Assignment Training

R.5311 (a) An employer shall provide training to each new employee regarding the requirements of this standard, the job hazards and safeguards before starting his assigned job. A job briefing shall be conducted before any tree job involving unusual hazards is begun.

Operation of Equipment

R.5312 (d) An employee shall not operate any equipment unless trained in the operating procedures, hazards, and safeguards, and has been authorized to do so.

Removal of Energized Branches

R.5321(6) A branch hanging on a conductor energized at more than 10kv shall be removed after the line is de-energized or removed by an authorized and trained systems operator employee or owner employee using approved protective tools and equipment.

MIOSHA TRAINING REQUIREMENTS FOR GENERAL INDUSTRY SAFETY

Employee Assistants

- R.5336(2)** Each assisting employee on the ground shall be instructed exactly what he is to do. Other employees shall be cleared to a distance of twice the height of the tree being cut.

PART 54, POWERED GROUNDSKEEPING EQUIPMENT

Pre-Assigned Training

- R.5411 (a)** An employer shall provide training to an operator of powered groundskeeping and related equipment regarding the operating procedures, hazards, and safeguards to the assigned job.

Equipment Servicing

- R.5412 (c)** An employee shall not operate, lubricate, or provide maintenance of any equipment until trained in the operation, lubrication, maintenance procedures, hazards, and safeguards and has been authorized to do so.

PART 56, STORAGE AND HANDLING OF LIQUID PROPANE GAS

(Federal Standard 1910.110)

Assigned Personnel Training

- R.5601 (b)(16)** Personnel performing installation, removal, operation, and maintenance work shall be properly trained in such function.

Standard Watch Service

- R.5601 (d)(12)(i)** When standard watch service is provided, it shall be extended to the LP-Gas installation and personnel properly trained.

PART 58 Aerial Work Platforms

Employer responsibility

- R.5811** The employer shall do all of the following:

MIOSHA TRAINING REQUIREMENTS FOR GENERAL INDUSTRY SAFETY

- (a) Provide training to employees in the operations, hazards, safeguards, and safe practices described in these rules by a qualified person.
- (b) insure that employees do not engage in the activities to which these rules apply until such employees have received training.

Employee Responsibility

R 5812. An employee shall:

- (a) Operate an aerial device only after being trained in the operations, hazards, safeguards, and safe practices required by these rules by a qualified person and authorized by the employer.

Training; Permits

R 5815(1) An employer shall provide to each employee who will operate the aerial work platform with instruction and training regarding the equipment before a permit is issued or reissued. Such instruction and training shall include the following:

- (a) Instruction by a qualified person in the intended purpose and function of each of the controls.
 - (b) Training by a qualified person or reading and understanding the manufacturer's or owner's operating instructions and safety rules.
 - (c) Understanding by reading or by having a qualified person explain, all decals, warnings, and instructions displayed on the aerial work platform.
 - (d) Reading and understanding the provisions of this subrule and subrules (1) to (9) of this rule or be trained by a qualified person on their content.
- (2) An employer shall provide the operator of an aerial work platform with an aerial work platform permit.
 - (3) The requirements of subrule (1)(a), (b), (c), and (d) of this rule shall be met before an employee is issued a permit.
 - (4) A permit shall be carried by the operator or be available at the job site/work place and shall be displayed upon request by a department of labor and economic growth representative.
 - (5) A permit shall indicate the type of aerial work platforms an operator has been trained on and is qualified to operate.
 - (6) A permit to operate an aerial work platform is valid only when performing work for the employer who issued the permit. A permit shall be issued for a period of not more than 3 years.
 - (7) A permit shall contain all of the following information (see sample permit):
 - (a) Firm name.
 - (b) Operator's name.
 - (c) Name of issuing authority. (Authorized by).
 - (d) The following types of aerial work platforms the operator is authorized to operate:

MIOSHA TRAINING REQUIREMENTS FOR GENERAL INDUSTRY SAFETY

- (i) Vehicle-mounted elevating work platform such as:
 - (1) Extensible boom aerial devices.
 - (2) Aerial ladders.
 - (3) Articulating boom aerial devices.
 - (4) Vertical towers.
 - (ii) Manually propelled elevating work platforms.
 - (iii) Boom-supported elevating work platforms.
 - (iv) Self-propelled elevating work platforms.
- (e) Date issued.
- (f) Expiration date.
- (9) The manufacturer's operating instructions and safety rules shall be provided and maintained in a legible manner on each unit by the employer

PART 71, LAUNDRY AND DRY CLEANING MACHINERY AND OPERATING

Pre-Assignment Training

- R.7111** **(a)** An employer shall provide training to an employee as to the hazards and safe operation of the assigned job.

Use of Equipment

- R.7112** **(b)** An employee shall not use machinery or equipment unless authorized and trained in its use.

PART 72, AUTOMOTIVE SERVICE OPERATIONS

Pre-Assignment Training

- R.7211** **(a)** An employer shall provide training to an employee as to the hazards, safe operations of the job, and applicable rules of this part.

Use of Equipment

- R.7212** **(b)** An employee shall use tools and equipment only when authorized and trained in their use.

Rim Wheel Servicing

- R.7235 (1)** An employer shall ensure that each employee who is engaged in servicing multi-piece and single-piece rim wheels demonstrates and maintains his or her ability to service the rims safely and in accordance with these rules.

MIOSHA TRAINING REQUIREMENTS FOR GENERAL INDUSTRY SAFETY

PART 81, BAKING OPERATIONS

- R.8111** (a) An employer shall provide training to an employee as to the hazards and safe practices of the assigned job.

PART 85, CONTROL OF HAZARDOUS ENERGY SOURCES

1910.147

- (c)(1)** **Energy control program.** The employer shall establish a program consisting of energy control procedures, employee training, and periodic inspections to ensure that before any employee performs any servicing or maintenance on a machine or equipment where the unexpected energizing, start-up, or release of stored energy could occur and cause injury, the machine or equipment shall be isolated from the energy source, and rendered inoperative.

Training and Communication

1910.147

- (c)(7)(i)** The employer shall provide training to ensure that the purpose and function of the energy control program are understood by employees and that the knowledge and skills required for the safe application, usage, and removal of the energy controls are acquired by employees. The training shall include the following:
- (a)** Each authorized employee shall receive training in 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 energy isolation and control.
 - (b)** Each affected employee shall be instructed in the purpose and use of the energy control procedure.
 - (c)** All other employees whose work operations are or may be in an area where energy control procedures may be utilized, shall be instructed about the procedure, and about the prohibition relating to attempts to restart or re-energize machines or equipment which are locked out or tagged out.

MIOSHA TRAINING REQUIREMENTS FOR GENERAL INDUSTRY SAFETY

Use of Tags

1910.147

- (c)(7)(ii)** When tagout systems are used, employees shall also be trained in the following limitations of tags:
- (a)** Tags are essentially warning devices affixed to energy isolating devices, and do not provide the physical restraint on those devices that are provided by a lock.
 - (b)** 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.
 - (c)** 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.
 - (d)** Tags and their means of attachment must be made of materials which will withstand the environmental conditions encountered in the workplace.
 - (e)** Tags may evoke a false sense of security, and their meaning needs to be understood as part of the overall energy control program.
 - (f)** Tags must be securely attached to energy isolating devices so that they cannot be inadvertently or accidentally detached during use.

Employee Retraining

1910.147

- (c)(7)(iii)**
- (a)** Retraining shall be provided for all authorized and affected employees whenever there is a change in their job assignments, a change in machines, equipment, or processes that present a new hazard, or when there is a change in the energy control procedure.
 - (b)** Additional retraining shall also be conducted whenever a periodic inspection under paragraph (c)(6) of this section reveals, or whenever the employer has reason to believe, that there are deviations from or inadequacies in the employee's knowledge or use of the energy control procedures.
 - (c)** The retraining shall reestablish employees' proficiency and introduce new or revised control methods and procedures, as necessary.

Certification of Training

1910.147

- (c)(7)(iv)** The employer shall certify that employee training has been accomplished and is being kept up-to-date. The certification shall contain each employee's name and dates of training.

PART 86, ELECTRIC POWER GENERATION, TRANSMISSION AND DISTRIBUTION

Training

1910.269

- (a)(2) (i)** Employees shall be trained and familiar with the safety-related work practices, safety procedures and other safety requirements in this section that pertain to their respective job assignments. Employees shall also be trained in and familiar with any other safety practices, including applicable emergency procedures (such as pole top and manhole rescue), that are not specifically addressed by this section but that are related to their work and are necessary for their safety.
- (ii)** Qualified employees shall also be trained and competent in:
 - (A)** The skills and techniques necessary to distinguish exposed live parts from other parts of electric equipment.
 - (B)** The skills and techniques necessary to determine the nominal voltage of exposed live parts.
 - (C)** The minimum approach distances specified in this section corresponding to the voltages to which the qualified employee will be exposed, and
 - (D)** The proper use of the special precautionary techniques, personal protective equipment, insulating and shielding materials, and insulated tools for working on or near exposed energized parts of electric equipment.

NOTE: For the purpose of this section, a person must have this training in order to be considered a qualified person.

- (iii)** The employer shall determine, through regular supervision and through inspections conducted on at least an annual basis, that each employee is complying with the safety-related work practices required by this section.
- (iv)** An employee shall receive additional training (or retraining) under any of the following conditions:
 - (A)** If the supervision and annual inspections required by paragraph (a)(2)(iii) of this section indicate that the employee is not complying with the safety-related work practices required by this section, or
 - (B)** If new technology, new types of equipment or changes in procedures necessitate the use of safety-related work practices that are different from those which the employee would normally use, or
 - (C)** If he or she must employ safety-related work practices that are not normally used during his or her regular job duties.

NOTE: MIOSHA would consider tasks that are performed less often than once per year

to necessitate retraining before the performance of the work practices involved.

- (v) The training required by paragraph (a)(2) of this section shall be of the classroom or on-the-job type.
- (vi) The training shall establish employee proficiency in the work practices required by this section and shall introduce the procedures necessary for compliance with this section.
- (vii) The employer shall certify that each employee has received the training required by paragraph (a)(2) of this section. This certification shall be made when the employee demonstrates proficiency in the work practices involved and shall be maintained for the duration of the employee's employment.

NOTE: Employment records that indicate that an employee has received the required training are an acceptable means of meeting this requirement.

1910.269

(a)(3)(b) Medical services and first aid. The employer shall provide medical services and first aid as required in 1910.151. In addition to the requirements of 1910.151, the following requirements also apply:

- (1) Cardiopulmonary resuscitation and first aid training.® When employees are performing work on or associated with exposed lines or equipment energized at 50 volts or more, persons trained in first aid including cardiopulmonary resuscitation (CPR) shall be available as follows:
 - (i) For field work involving two or more employees at a work location, at least two trained persons shall be available. However, only one trained person need be available if all new employees are trained in first aid, including CPR, within three months of their hiring dates.
 - (ii) For fixed work locations such as generating stations, the number of trained persons available shall be sufficient to ensure that each employee exposed to electric shock can be reached within four minutes by a trained person. However, where the existing number of employees is insufficient to meet this requirement (at a remote substation, for example), all employees at the work location shall be trained.

(c) Job briefing. The employer shall ensure that the employee in charge conducts a job briefing with the employees involved before they start each job. The briefing shall cover at least the following subjects: hazards associated with the job, work procedures involved, special precautions, energy source controls and personal protective equipment requirements.

- (1) **Number of briefings.** If the work or operations to be performed during the work day or shift are repetitive and similar, at least one job briefing shall be conducted before the start of the first job of each day or shift. Additional job briefings shall be held if significant changes, which might affect the safety of the employees, occur during the course of the work.

- (2) **Extent of briefing.** A brief discussion is satisfactory if the work involved is routine and if the employee, by virtue of training and experience, can reasonably be expected to recognize and avoid the hazards involved in the job. A more extensive discussion shall be conducted if:
 - (i) the work is complicated or particularly hazardous, or
 - (ii) the employee cannot be expected to recognize and avoid the hazards involved in the job.

NOTE: The briefing is always required to touch on all the subjects listed in the introductory text to paragraph (c) of this section.

- (3) **Working alone.** An employee working alone need not conduct a job briefing. However, the employer shall ensure that the tasks to be performed are planned as if a briefing were required.

1910.269

- (d)(2)
 - (i) The employer shall establish a program consisting of energy control procedures, employee training and periodic inspections to ensure that, before any employee performs any servicing or maintenance on a machine or equipment where the unexpected energizing, start up or release of stored energy could occur and cause injury, the machine or equipment is isolated from the energy source and rendered inoperative.
 - (vi) The employer shall provide training to ensure that the purpose and function of the energy control program are understood by employees and that knowledge and skills required for the safe application, usage and removal of energy controls are acquired by employees. The training shall include the following:
 - (A) Each authorized employee shall receive training in the recognition of applicable hazardous energy sources, the type and magnitude of energy available in the workplace, and in the methods and means necessary for energy isolation and control.
 - (B) Each affected employee shall be instructed in the purpose and use of the energy control procedure.
 - (C) All other employees whose work operations are or may be in an area where energy control procedures may be used shall be instructed about the procedures and about the prohibition relating to attempts to restart or reenergize machines or equipment that are locked out or tagged out.
 - (vii) When tagout systems are used, employees shall also be trained in the following limitations of tags:
 - (A) 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.
 - (B) 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.

- (C) 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.
- (D) Tags and their means of attachment must be made of materials which will withstand the environmental conditions encountered in the workplace.
- (E) Tags may evoke a false sense of security and their meaning needs to be understood as part of the overall energy control program.
- (F) Tags must be securely attached to energy isolating devices so that they cannot be inadvertently or accidentally detached during use.

(viii) Retraining shall be provided as follows:

- (A) Retraining shall be provided for all authorized and affected employees whenever there is a change in their job assignments, a change in machines, equipment or processes that present a new hazard or whenever there is a change in the energy control procedures.
- (B) Retraining shall also be conducted whenever a periodic inspection under paragraph (d)(2)(v) of this section reveals, or whenever the employer has reason to believe, that there are deviations from or inadequacies in an employee's knowledge or use of the energy control procedures.
- (C) The retraining shall reestablish employee proficiency and shall introduce new or revised control methods and procedures, as necessary.

(ix) The employer shall certify that employee training has been accomplished and is being kept up to date. The certification shall contain each employee's name and dates of training.

1910.269(e) (2) Training. Employees who enter enclosed spaces or who serve as attendants shall be trained in the hazards of enclosed space entry, in enclosed space entry procedures and in enclosed space rescue procedures.

(7) **Attendants.** While work is being performed in the enclosed space, a person with first aid training meeting paragraph (b) of this section shall be immediately available outside the enclosed space to render emergency assistance if there is reason to believe that a hazard may exist in the space or if a hazard exists because of traffic patterns in the area of the opening used for entry. That person is not precluded from performing other duties outside the enclosed space if these duties do not distract the attendant from monitoring employees within the space.

NOTE: See paragraph (t)(3) of this section for additional requirements on attendants for work in manholes.

- (k) (6) (ii) The employer shall train each employee who is exposed to the hazards of flames or electric arcs in the hazards involved.
 - (o) (1) (ii) Employees shall be trained in safe work practices upon their initial assignment to the test area, with periodic review and updates provided as required by paragraph (a)(2) of this section.
 - (g) (3) **Live-line bare-hand work.** In addition to other applicable provisions contained in this section, the following requirements apply to live-line bare-hand work:
 - (i) Before using or supervising the use of the live-line bare-hand technique on energized circuits, employees shall be trained in the technique and in the safety requirements of paragraph (q)(3) of this section.
 - (ii) Before any employee uses the live-line bare-hand technique on energized high-voltage conductors or parts, the following information shall be ascertained:
 - (A) The nominal voltage rating of the circuit on which the work is to be performed,
 - (B) The minimum approach distances to ground of lines and other energized parts on which work is to be performed, and
 - (C) The voltage limitations of equipment to be used.
- (t) (3) **Attendants for manholes.**
 - (i) While work is being performed in a manhole containing energized electric equipment, an employee with first aid and CPR training meeting paragraph (b)(1) of this section shall be available on the surface in the immediate vicinity to render emergency assistance.
 - (ii) Occasionally, the employee on the surface may briefly enter a manhole to provide assistance, other than emergency assistance.

NOTE 1: An attendant may also be required under paragraph (e)(7) of this section. One person may serve to fulfill both requirements. However, attendants required under paragraph (e)(7) of this section are not permitted to enter the manhole.

(x) Definitions

Qualified employee (qualified person). One knowledgeable in the construction and operation of the electric power generation, transmission and distribution equipment involved, along with the associated hazards.

NOTE 1: An employee must have the training required by paragraph (a)(2)(ii) of this section in order to be considered a qualified employee.

NOTE 2: Except under paragraph (g)(2)(v) of this section, an employee who is undergoing on-the-job training and who, in the course of such training, has demonstrated an ability to perform duties safely at his or her level of training and who is under the direct supervision of a qualified person is considered to be a qualified person for the performance of those duties.

PART 90, CONFINED SPACE ENTRY

Training

1910.146(d)(8) Designate the persons who are to have active roles (as for example, authorized entrants, attendants, entry supervisors or persons who test or monitor the atmosphere in a permit space) in entry operations, identify the duties of such employee and provide each said employee with the training required by paragraph (g) of this section

1910.146(g) The employer shall provide training so that all employees whose work is regulated by this section acquire the understanding, knowledge and skills necessary for the duties assigned under this section.

- (2)** Training shall be provided to each affected employee:
 - (i)** Before the employee is first assigned duties under this section
 - (ii)** Before there is a change in assigned duties
 - (iii)** Whenever there is a change in permit space operations that presents a hazard about which an employee has not previously been trained
 - (iv)** Whenever the employer has reason to believe either that there are deviations from the permit space entry procedures required by paragraph (d)(3) of this section or that there are inadequacies in the employee's knowledge or use of these procedures.
- (3)** The training shall establish employee proficiency in the duties required by this section and shall introduce new or revised procedures, as necessary, for compliance with this section.
- (4)** The employer shall certify that the training required by paragraphs (g)(1) through (g)(3) of this section has been accomplished. The certification shall contain each employee's name, the signatures or initials of the trainers, and the dates of training. The certification shall be available for inspection by employees and their authorized representatives.

PART 92/PART 430, HAZARD COMMUNICATION

(Federal Standard 1910.1200)

(a) Purpose

- (1)** The purpose of this section is to ensure that the hazards of all chemicals produced or imported are evaluated, and that information concerning their hazards is transmitted to employers and employees. This transmittal of information is to be accomplished by means of comprehensive hazard communication programs, which are to include container labeling and other forms of warning, material safety data sheets and employee training.
- (2)** This occupational safety and health standard is intended to address comprehensively the issue of evaluating the potential hazards of chemicals, and communicating information concerning hazards and appropriate protective measures to employees, and to preempt any legal requirements of a state, or political subdivision of a state, pertaining to this subject. Evaluating the potential hazards of chemicals, and communicating information concerning hazards and appropriate protective measures to employees, may include, for example, but is limited to, provisions for: developing and maintaining a written hazard communication program for the workplace, including lists of hazardous chemicals present; labeling of containers of chemicals in the workplace, as well as of containers of chemicals being shipped to other workplaces; preparation and distribution of material safety data sheets to employees and downstream employers; and development and implementation of employee training programs regarding hazards of chemicals and protective measures. Under section 18 of the Act, no state or political subdivision of a state may adopt or enforce, through any court or agency any requirement relating to the issue addressed by this Federal standard, except pursuant to a Federally approved state plan.

(b) Scope and application

- (1)** This section requires chemical manufacturers or importers to assess the hazards of chemicals which they produce or import, and all employers to provide information to their employees about the hazardous chemicals to which they are exposed, by means of a hazard communication program, labels and other forms of warning, material safety data sheets, and information and training. In addition, this section requires distributors to transmit the required information to employers. (Employers who do not produce or import chemicals need only focus on those parts of this rule that deal with establishing a workplace program and communicating information to their workers. Appendix E of this

section is a general guide for such employers to help them determine their compliance obligations under the rule.)

- (3) (iii) Employers shall ensure that laboratory employees are provided information and training in accordance with paragraph (h) of this section, except for the location and availability of the written hazard communication program under paragraph (h)(2)(iii) of this section; and,
- (4) (iii) Employers shall ensure that employees are provided with information and training in accordance with paragraph (h) of this section (except for the location and availability of the written hazard communication program under paragraph (h)(2)(iii) of this section), to the extent necessary to protect them in the event of a spill or leak of a hazardous chemical from a sealed container.

(h) Employee information and training

- (1) Employers shall provide employees with effective information and training on hazardous chemicals in their work area at the time of their initial assignment, and whenever a new physical or health hazard the employees have not previously been trained about is introduced into their work area. Information and training may be designed to cover categories of hazards (e.g., flammability, carcinogenicity) or specific chemicals. Chemical-specific information must always be available through labels and material safety data sheets.
- (2) Information. Employees shall be informed of:
 - (i) The requirements of this section;
 - (ii) Any operations in their work area where hazardous chemicals are present; and,
 - (iii) the location and availability of the written hazard communication program, including the required list(s) of hazardous chemicals, and material safety data sheets required by this section.
- (3) Training. Employee training shall include at least:
 - (i) Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area (such as monitoring conducted by the employer, continuous monitoring devices, visual appearance or odor of hazardous chemicals when being released, etc.);
 - (ii) The physical and health hazards of the chemicals in the work area;
 - (iii) The measures employees can take to protect themselves from these hazards, including specific procedures the

- employer has implemented to protect employees from exposure to hazardous chemicals, such as appropriate work practices, emergency procedures and personal protective equipment to be used; and,
- (iv) The details of the hazard communication program developed by the employer, including an explanation of the labeling system and the material safety data sheet, and how employees can obtain and use the appropriate hazard information.

PART 380, OCCUPATIONAL NOISE EXPOSURE

- R.38021** (4) The employer shall provide training in the use and care of all hearing protectors provided to employees.
- R.38023** (1) The employer shall institute a training program for all employees who are exposed to noise at or above an 8-hour time-weighted average of 85 decibels, and shall ensure employee participation in such program.
- (2) The training program shall be repeated annually for each employee included in the hearing conservation program. Information provided in the training program shall be updated to be consistent with changes in protective equipment and work processes.
- (3) The employer shall ensure that each employee is informed of the following:
- (a) The effects of noise on hearing;
 - (b) The purpose of hearing protectors, the advantages, disadvantages, and attenuation of various types, and instructions on selection, fitting, use, and care; and
 - (c) The purpose of audiometric testing, and an explanation of the test procedures.

PART 451, RESPIRATORY PROTECTION

- R.4512** (k) Training and Information. This paragraph requires the employer to provide effective training to employees who are required to use respirators. The training must be comprehensive, understandable, and recur annually, and more often if necessary. This paragraph also requires the employer to provide the basic information on respirators in Appendix D of this section to employees who wear respirators when not required by this section or by the employer to do so.
- (1) The employer shall ensure that each employee can demonstrate knowledge of at least the following:
- (i) Why the respirator is necessary and how improper fit, usage, or

- maintenance can compromise the protective effect of the respirator;
- (ii) What the limitations and capabilities of the respirator are;
 - (iii) How to use the respirator effectively in emergency situations, including situations in which the respirator malfunctions;
 - (iv) How to inspect, put on and remove, use, and check the seals of the respirator;
 - (v) What the procedures are for maintenance and storage of the respirator;
 - (vi) How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators; and
 - (vii) The general requirements of this section.
- (2) The training shall be conducted in a manner that is understandable to the employee.
- (3) The employer shall provide the training prior to requiring the employee to use a respirator in the workplace.
- (4) An employer who is able to demonstrate that a new employee has received training within the last 12 months that addresses the elements specified in paragraph (k)(1)(i) through (vii) is not required to repeat such training provided that, as required by paragraph (k)(1), the employee can demonstrate knowledge of those element(s). Previous training not repeated initially by the employer must be provided no later than 12 months from the date of the previous training.
- (5) Retraining shall be administered annually, and when the following situations occur:
- (i) Changes in the workplace or the type of respirator render previous training obsolete;
 - (ii) Inadequacies in the employee's knowledge or use of the respirator indicate that the employee has not retained the requisite understanding or skill; or
 - (iii) Any other situation arises in which retraining appears necessary to ensure safe respirator use.
- (6) The basic advisory information on respirators, as presented in Appendix D of this section, shall be provided by the employer in any written or oral format, to employees who wear respirators when such use is not required by this section or by the employer.

PART 472, MEDICAL SERVICES AND FIRST AID

- Rule 4401** (1) The employer shall ensure the ready availability of medical personnel for advice and consultation on matters of plant health.

- (2) In the absence of an infirmary, clinic, or hospital in near proximity to the workplace which is used for the treatment of all injured employees, a person or persons shall be adequately trained to render first aid. First-aid supplies as approved by the consulting physician shall be readily available.

PART 305, ASBESTOS

- R.1910.1001 (7)**
- (i) The employer shall institute a training program for all employees who are exposed to airborne concentrations of asbestos at or above the action level and/or excursion limit to ensure their participation in the program.
 - (ii) Training shall be provided prior to or at the time of initial assignment and at least annually thereafter.
 - (iii) The training program shall be conducted in a manner which the employee is able to understand. The employer shall ensure that each employee is informed of the following:
 - (A) The health effects associated with asbestos exposure;
 - (B) The relationship between smoking and exposure
 - (C) The quantity, location, manner of use, release, and specific nature of operations which could result in exposure to asbestos;
 - (D) The engineering controls and work practices associated with the employees job assignment;
 - (E) The specific procedures implemented to protect employees from exposure to asbestos, such as appropriate work practices, emergency and clean-up procedures, and personal protective equipment to be used;
 - (F) The purpose, proper use, and limitations of respirators and protective clothing;
 - (G) The purpose and a description of the medical surveillance program required by paragraph (1) of this section;
 - (H) The content of this standard, including appendices.
 - (I) The names, addresses and phone numbers of public health organizations which provide information, materials, and/or conduct programs concerning smoking cessation. The employer may distribute the list of such organizations contained in Appendix 1 to this section, to comply with this requirement.
 - (J) The requirements for posting signs and affixing labels and the meaning of the required legends for such signs and labels.

PART 554, BLOODBORNE INFECTIOUS DISEASES

- R.325.70016** (1) An employer shall ensure that all category A employees participate in a training program provided at no cost to the employees and during working hours.
- (2) Training shall be provided at the time of initial assignment to category A work or within 90 days after the effective date of these rules, whichever is later, and at least annually thereafter. If an employee has received training on bloodborne pathogens in the year preceding the effective date of these rules, only training with respect to requirements of this rule that were not included in the previous training need to be provided.
- (3) An employer shall provide additional training when changes, such as the modification of tasks or procedures of the institution of new tasks or procedures, affect an employee's occupational exposure. The additional training may be limited to addressing the new exposures created.
- (4) Material appropriate in content and vocabulary on the educational level, literacy, and language background of employees shall be used.
- (5) The training program shall contain all of the following elements:
- (a) Accessibility of the copy of these rules and an explanation of the contents of these rules, including appendices.
 - (b) A general explanation of the epidemiology and symptoms of blood-borne diseases.
 - (c) An explanation of the modes of transmission of bloodborne pathogens.
 - (d) An explanation of the employer's exposure control plan, including the standard operating procedures, and how an employee can access the written plan.
 - (e) An explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious material.
 - (f) An explanation of the use and limitations of practices that will prevent or reduce exposure, including appropriate engineering controls, work practices, and personal protective equipment.
 - (g) Information on all of the following with respect of personal protective clothing and equipment:
 - (i) Types.
 - (ii) Proper use.
 - (iii) Limitations.
 - (iv) Location.
 - (v) Removal.
 - (vi) Handling.

- (vii) Decontamination.
 - (viii) Disposal.
 - (h) An explanation of the basis for selecting protective clothing and equipment.
 - (i) Information on the hepatitis B vaccine and post exposure prophylaxis, including all of the following information:
 - (i) Availability.
 - (ii) Efficacy.
 - (iii) Safety.
 - (iv) The benefits of being vaccinated.
 - (v) Method of administration.
 - (vi) That vaccination is free of charge.
 - (j) Information on the appropriate actions to take and persons to contact in an emergency involving blood or other potentially infectious material.
 - (k) An explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident, and the medical follow-up and counseling that will be made available.
 - (l) An explanation of the signs and labels or color coding required by the provisions of R 325.70014.
- (6) Employees in HIV or HBV research laboratories and HIV/HBV production facilities shall receive the following initial training in addition to the training requirements specified in subrule (5) of this rule:
- (a) Employees shall be trained in and demonstrate proficiency in, standard microbiological practices and techniques and in the practices and operations specific to the facility before being allowed to work with HIV and HBV.
 - (b) Employees shall be experienced in the handling of human pathogens or tissue cultures before working with HIV and HBV.
 - (c) A training program shall be provided to employees who have not had experience in handling human pathogens. Initial work activities shall not include the handling of infectious agents. A progression of work activities shall be assigned as techniques are learned and proficiency is developed. An employee shall participate in work activities that involve infectious agents only after proficiency has been demonstrated.
- (7) Training shall be conducted in the following manner:

- (a) All employees in category A positions shall receive initial training and annual retraining.
- (b) Training sessions shall afford employees ample opportunity for discussion and the answering of questions by a knowledgeable trainer.
- (c) The training shall include opportunities for supervised practice with personal protective equipment and other equipment which is designed to reduce the likelihood for exposure and which will be used in the employee's work.
- (d) The person or persons who conduct training shall be knowledgeable in all of the following areas:
 - (i) The information presented in the training session.
 - (ii) The employer's exposure control plan.
 - (iii) Conditions of the work environment that affect the implementation of the exposure control plan.
- (e) An employer shall maintain written documentation of attendance at training.
- (f) An employer may reduce the training specified in subrule (5) of this rule to allow for the previous training of an employment or another academic source. In such cases, the previous training shall be evaluated and documented. At a minimum, an employer shall provide an employee with workplace-specific training that covers the exposure control plan and SOPs.

PART 430. HAZARD COMMUNICATION (Same as Part 92 – GI Safety)

1910.1200 (a) Purpose.

- (1) The purpose of this section is to ensure that the hazards of all chemicals produced or imported are evaluated, and that information concerning their hazards is transmitted to employers and employees. This transmittal of information is to be accomplished by means of comprehensive hazard communication programs, which are to include container labeling and other forms of warning, material safety data sheets and employee training.
- (2) This occupational safety and health standard is intended to address comprehensively the issue of evaluating the potential hazards of chemicals, and communicating information concerning hazards and appropriate protective measures to employees, and to preempt any legal requirements of a state, or political subdivision of a state, pertaining to this subject. Evaluating the

potential hazards of chemicals, and communicating information concerning hazards and appropriate protective measures to employees, may include, for example, but is not limited to, provisions for: developing and maintaining a written hazard communication program for the workplace, including lists of hazardous chemicals present; labeling of containers of chemicals being shipped to other workplaces; preparation and distribution of material safety data sheets to employees and downstream employers; and development and implementation of employee training programs regarding hazards of chemicals and protective measures. Under section 18 of the Act, no state or political subdivision of a state may adopt or enforce, through any court or agency any requirement relating to the issue addressed by this Federal standard, except pursuant to a Federally approved state plan.

(b) Scope and application

- (1) This section requires chemical manufacturers or importers to assess the hazards of chemicals which they produce or import, and all employers to provide information to their employees about the hazardous chemicals to which they are exposed, by means of a hazard communication program, labels and other forms of warning, material safety data sheets, and information and training. In addition, this section requires distributors to transmit the required information to employers. (Employers who do not produce or import chemicals need only focus on those parts of this rule that deal with establishing a workplace program and communicating information to their workers. Appendix E of this section is a general guide for such employers to help them determine their compliance obligations under the rule.)
- (3) (iii) Employers shall ensure that laboratory employees are provided information and training in accordance with paragraph (h) of this section, except for the location and availability of the written hazard communication program under paragraph (h)(2)(iii) of this section; and,
- (4) (iii) Employers shall ensure that employees are provided with information and training in accordance with paragraph (h) of this section (except for the location and availability of the written hazard communication program under paragraph (h)(2)(iii) of this section), to the extent necessary to protect them in the event of a spill or leak of a hazardous chemical from a sealed container.

(h) Employee information and training

- (1) Employers shall provide employees with effective information and training on hazardous chemicals in their work area at the time of their initial assignment, and whenever a new physical or health hazard the employees have not previously been trained about is introduced into their work area. Information and training may be designed to cover categories of hazards (e.g., flammability, carcinogenicity) or specific chemicals. Chemical-specific information must always be available through labels and material safety data sheets.
- (2) Information. Employees shall be informed of:
 - (i) The requirements of this section;
 - (ii) Any operations in their work area where hazardous chemicals are present; and,
 - (iii) The location and availability of the written hazard communication program, including the required list(s) of hazardous chemicals, and material safety data sheets required by this section.
- (3) Training. Employee training shall include at least:
 - (i) Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area (such as monitoring conducted by the employer, continuous monitoring devices, visual appearance or odor of hazardous chemicals when being released, etc.);
 - (ii) The physical and health hazards of the chemicals in the work area;
 - (iii) The measures employees can take to protect themselves from these hazards, including specific procedures the employer has implemented to protect employees from exposure to hazardous chemicals, such as appropriate work practices, emergency procedures and personal protective equipment to be used; and,
 - (iv) The details of the hazard communication program developed by the employer, including an explanation of the labeling system and the material safety data sheet and how employees can obtain and use the appropriate hazard information.

PART 490, PERMIT-REQUIRED CONFINED SPACES (Same as Part 90 – GI Safety)

- 1910.146** (d) (8) Designate the persons who are to have active roles (as for example, authorized entrants, attendants, entry supervisors or persons who test or monitor the atmosphere in a permit space) in entry operations, identify the duties of such employee and provide each said employee with the training required by paragraph (g) of this section.
- (g) The employer shall provide training so that all employees whose work is regulated by this section acquire the understanding, knowledge and skills necessary for the duties assigned under this section.
- (2) Training shall be provided to each affected employee:
- (i) Before the employee is first assigned duties under this section
 - (ii) Before there is a change in assigned duties
 - (iii) Whenever there is a change in permit space operations that presents a hazard about which an employee has not previously been trained
 - (iv) Whenever the employer has reason to believe either that there are deviations from the permit space entry procedures required by paragraph (d)(3) of this section or that there are inadequacies in the employee's knowledge or use of these procedures.
- (3) The training shall establish employee proficiency in the duties required by this section and shall introduce new or revised procedures, as necessary, for compliance with this section.
- (4) The employer shall certify that the training required by paragraphs (g)(1) through (g)(3) of this section has been accomplished. The certification shall contain each employee's name, the signatures or initials of the trainers, and the dates of training. The certification shall be available for inspection by employees and their authorized representatives.

Employees Required to be Trained Include:

- 1910.146 (h) Authorized entrants

- 1910.146 (i) Attendants
- 1910.146 (j) Entry supervisors
- 1910.146 (k) Rescue services, CPR, First Aid



Michigan Occupational Safety & Health Administration
Consultation Education & Training Division
7150 Harris Drive, P.O. Box 30643
Lansing, Michigan 48909-8143

For further information or to request consultation, education and training services
call (517) 322-1809
or

visit our website at www.michigan.gov/miosha



www.michigan.gov/lara

LARA is an equal opportunity employer/program. Auxiliary aids, services and other reasonable accommodations are available upon request to individuals with disabilities.