

Health and Safety Plan (HASP)

For

NYSAPLS, Inc.

(Company Name)

146 Washington Ave.

(Street)

Land Surveyors Building

Albany, NY 12210

City/Town, State, Zip

(Revised 3/2016)

Introduction:

This Health and Safety Plan for the **(insert company name)** is intended to: a) enforce our commitment to the health and safety of each management, office and field employee of this company; and b) provide safe operating procedures, guidelines, and practices, specific to all company surveying operations.

The **(insert company name)** Health and Safety Plan provides detailed instructions for managers, supervisors, and employees to assist them in their individual efforts to conduct **(insert company name)** business in a safe and healthy manner consistent with current law, rule, and technology.

Commitment:

The long term business of the company depends on its ability to continuously improve its products and services while protecting its workers and the environment in which they work and live. In order to achieve this objective the company has implemented a Health and Safety Plan in equal importance to all other business functions of the company. The leadership for Health and Safety is provided as policy commitment from the company management to field operators and office staff. The guidance for Health and Safety standards permeates from senior management through line management to employees working in the field and offices. The Health and Safety management system is continually improved based on the inputs from staff, clients, and customers. The company adopts an continuously develop Health & Safety management practices in line with the requirements of the company, projects, clients and the laws as applicable from time to time.

Mission & Goal Statement:

“The MISSION of the **(insert company name)** management system is to educate employees and to adopt policies, practices and procedures that prevent and relieve human and economic losses arising from accidental causes and adverse occupational health exposures.”

The following GOALS are the desired result of the implementation of an effective Health and Safety system:

- Effective involvement of each and every employee which will aid in the elimination of all hazards that will create unreasonable risks of any nature resulting in injury or illness or damage to the environment or property.
- Increased employee awareness of the overall safe systems of working.
- An increase in the morale of all employees from knowing that their work environment is maintained as free, as is reasonably practical, from all recognized hazards.

The following OBJECTIVES will be instrumental in achieving the goals, which have been set:

- An effective Health & Safety system with a commitment for continued support from the management and every employee. This is achievable by effective orientation and training for all employees.
- Assigned responsibilities and accountability of the necessary resources to the Health and Safety system, resulting in established lines of communication involving management and employees at all levels.
- Maintenance of effective documented measures for hazard identification, correction and control by audit activities and by the maintenance and review of records.
- Empowerment of staff to stop work when the conditions are unsafe.

Contents:

1. Accident Investigation
2. Emergency Action Plan
3. Fire Prevention and Portable Fire Extinguishers
4. Chemical Hazard Communication & Global Harmonization
5. Personal Protective Equipment
6. Respirators
7. Excavation/Trench Safety
8. Bridges, Elevated surfaces and Scaffolds
9. Traffic and road construction activities
10. Heat Stress/Stroke
11. Insect, Plants and Animals
12. Hand and Power Tools
13. Distracted Drivers
14. Temporary, Contract and Part Time Employees
15. Annual Review

1. Accident Investigation

(Insert company name) will investigate all injuries, illnesses and near misses to determine the root cause and corrective measures needed to prevent future accidents of this nature.

All employees are required to report any accident within _____ hours of any injury, illness or near miss to their supervisors. Supervisors or management personnel will ask enough of the required questions to accurately fill out the companies accident report form. The form will then be reviewed by management, supervision and the employee to determine what can be done to prevent a similar incident.

2. Emergency Action Plan - Office

Reporting fire:

- **First - CALL 911**
- Notify other employees of the fire or hazard and location
- Immediately evacuate the facility
- Assemble at the designated assembly point (away from the building and not in the path of emergency responding vehicles)
- Take a head count
- Use company or personal cell phone to inform management that may not be on site

Emergency evacuation:

A full evacuation of the facility is required in case of a fire emergency. No employees are required to use a fire extinguisher or stay behind to manage critical operations.

Assembly point(s): _____

Accounting for all employees and visitors after evacuation: _____

Employees performing rescue or medical duties; and employees who need more information about the plan or an explanation of their duties under the plan can contact (Name, title and contact information)

Additional Emergency Numbers

Police: _____

Electric Power Company: _____

Gas Company: _____

Water/Sewer: _____

Corporate Offices: _____

3. Fire Prevention & Portable Fire Extinguishers

All flammable and combustibles will be stored away from any electrical panels, operating motors, open flames or spark producing equipment/tools. Any oxygen cylinders will be stored at least 20 feet away from all flammable and combustibles or separated by a half hour fire rated wall. All oily, solvent soaked or greasy cloths/rags shall be placed in a closed lid metal container until properly cleaned or disposed of.

Any employee expected to, or required to use a portable fire extinguisher will receive annual training on the proper use of the type of fire extinguisher provided, inspection of the extinguisher and the extinguishers limitations. All portable fire extinguisher training will be documented on an employee sign in sheet.

Where no employee is expected to, or required to use a portable fire extinguisher in the performance of their job duties, then they will be informed that they are not supposed to use any extinguisher and they will be trained on the company's emergency evacuation plan.

4. Chemical Hazard Communication & Global Harmonization

(Insert company name) is in compliance with the OSHA Hazard Communication Standard 29 CFR 1910.1200 including the Global Harmonization System. A separate written program has been developed to comply with the standard and is available to any employee upon request.

The companies Written Chemical Hazard Communications Program is specific to this company and includes the name and or titles of all responsible parties including tracking changes in the chemicals used, acquiring and maintaining Safety Data Sheets, labeling of containers, training and more.

5. Personal Protective Equipment (PPE)

The purpose of personal protective equipment (PPE) is to provide a barrier, which will shield or isolate individuals from the chemical and/or physical hazards that may be encountered during work activities. The specific PPE requirements for each work site and/or task will be identified prior to work being performed.

(Insert company name) will:

- a) Assess workplace and work site for hazards
- b) Certify assessment completed
- c) Select the proper PPE
- d) *Provide PPE
- e) Determine when employees are to use PPE
- f) Provide PPE training for employees and instruction in proper use
- g) Additional and retraining when:
 - a. Changes in the workplace render previous training obsolete

- b. Changes in the types of PPE to be used render previous training obsolete
- c. Inadequacies in an affected employee's knowledge or use of the assigned PPE indicate that the employee has not retained the requisite understanding or skill

*Not all PPE has to be provided by the company. However, all employee owned PPE must meet the minimum ANSI or current standards for that type of equipment and be maintained on good working condition.

Employee responsibility:

- a) Use PPE in accordance with training received, manufacturers recommendations, or other instructions
- b) Inspect the equipment before use and maintain it in a clean and reliable condition
- c) Replace defective, worn or in adequate personal protective equipment in a timely manner

6. Respirators

(Insert company name) has identified no specific hazards that would require mandatory respirator use. Employees that voluntarily use a two strap, filtering facepiece (dust mask) style respirator, shall be provided with the information in Appendix "D" of OSHA's respirator standard 29 CFR 1910.134.

Use of all other respirator types is prohibited by the company.

7. Excavation and Trench Safety

No employees shall enter an excavation or trench of 4 feet deep or more without:

- 1) Receiving basic excavation/trench safety training
- 2) Contacting the competent person on site and verifying safe entry conditions have been met
- 3) Visually observing that proper sloping/benching methods or shoring/shielding has been installed prior to entry.
- 4) Look for signs of side failure, cracks and fishers in the surrounding soil
- 5) Assure that there is a sturdy means of egress within 25 feet of the each employee working in the excavation.

Employees shall never enter an excavation/trench where:

- 1) Water is accumulating even if pumps are running. Excavation side stability, is extremely compromised in this situation.
- 2) Excavation equipment is still removing or backfilling soil
- 3) Lowering pipes, vaults, equipment or other work materials into the excavation
- 4) An atmospheric hazard exists

8. Bridges, Elevated Surfaces and Scaffolds

Bridges, elevated surfaces and scaffolds pose their own specific hazards to employees working on or around them.

General – Elevated Surfaces

For construction sites OSHA has a strict 6 foot limit on the height at which an employee can work without fall protection. Any employee working at a height of 6 feet or more must be protected from falling by various protective measures.

Protective measures include:

- A) Personal fall arrest system – harness, lanyard and secure anchor point (A secure anchor point is one that is capable of holding 5,000 lbs. or more per person attached.)
- B) Guard rail system – top rail (38' to 45" in height), mid rail (half way between top rail and working level) and a toe board (minimum 3 ½ " in height)
- C) Nets (rarely used anymore but still an option) (Special training required for installers)
- D) Floor hole covers - capable of supporting two times the intended load (includes you and tools/equipment), secured in place, having no holes larger than one inch and marked as hole cover or other similar designation to identify it as a potential hazard to workers
- E) Other potential protection includes positioning devices and restraint devices

These protective measures can be used separately or in combination to provide the best protection for the employee.

Bridge Work

When working from bridges all the elevated surface fall protection requirements apply.

Additionally, employees working over or near water, where the danger of drowning exists shall:

- Be provided with U.S. Coast Guard-approved life jacket or buoyant work vests
- Prior to and after each use, the buoyant work vests or life preservers shall be inspected for defects which would alter their strength or buoyancy. Defective units shall not be used.
- Ring buoys with at least 90 feet of line shall be provided and readily available for emergency rescue operations. Distance between ring buoys shall not exceed 200 feet.
- At least one lifesaving skiff shall be immediately available at locations where employees are working over or adjacent to water.

Scaffolds

Any employee working on a scaffold 10 feet in height or more shall be protected by standard fall protection methods. That is standard guard rails on all open sides and ends or personal fall arrest systems.

Before climbing or working from a scaffold employees must:

- 1) Receiving basic scaffold safety training
- 2) Contact the competent person on site and verifying safe working conditions have been met
- 3) Visually inspect for stable footings, cross bracing is in place, guard rail systems are in place (if applicable), there are proper means of access (ladders, ladder end frames, stair towers) in place
- 4) If the height exceed four time the minimum base width then look for tie/guy wires connecting the scaffold to the structure for added stability
- 5) Observe weather precautions:
 - Never work on a scaffold in winds gusting or sustained over 25 miles an hour
 - Never work on a scaffold in a thunder/lightning storm (remember lightning can strike even in the absence of rain)
 - Re-inspect your base plates and mud sills after a rain storm or throughout any day where thawing and refreezing may occur

9. Traffic and Road Construction Activities

Surveyors are exposed to vehicular traffic in three usual ways; surveying a road prior to construction, working within a road construction zone and working in a closed construction site. All of these expose employees to traffic hazards as well as exposure to weather, insects and animals. For this section we will concentrate on road vehicular traffic.

By now you should be familiar with the requirements of Manual on Uniform Traffic Control Devices (MUTCD). This manual must be followed at all times you are working on or along sides of roads and highways. Specifics about apparel, such as, reflective vests, hard hats etc. as well as size and color of flagging equipment, size, placement and wording of signs are all spelled out for employers and employees to follow. Additionally, this manual provides methods of flagging to be used for single, double and multi-lane closures and roadwork by one or more flaggers.

This company will follow the Manual on Uniform Traffic Control Devices (MUTCD) on all projects.

10. Heat Stress & Heat Stroke

(Insert company name) recognizes that at times, workers may be required to work in hot environments for long periods. When the human body is unable to maintain a normal temperature, heat-related illnesses can occur and may result in serious health related problems.

An informational fact sheet will be provided to each employee on measures they should take to prevent heat-related illnesses and death. This fact sheet will be reviewed with an employee prior to their initial field assignment and periodically thereafter.

11. Insects, Plants and Animals

(Insert company name) recognizes that workers will be required to work in areas that contain insects, spiders, ticks, snakes, rodents, potentially poisonous plants and wild or stray animals. In most cases wearing light colored long pants, socks, boots of 10" high of ankle covering or more, as well as long sleeve shirt should help reduce employee exposure. A variety of insect repellents are commercially available as well. Specific precautions should be taken to avoid and prevent exposures to snakes, rodents and wild or stray animals.

OSHA Quick Cards and Fact Sheets shall be provided on:

- West Nile Virus
- Lyme Disease/Tick-Borne Diseases
- Poisonous Plants
- Rodent, Snakes & Insects

12. Hand and Power Tools

(Insert company name) has a tool inspection policy that requires every employee that removes hand or power tools for their storage area for use either in the shop or in the field to be inspected prior to use. Any defective tools will either be placed in the designated location for repair (which should be specifically marked as such) or tagged out of service with a "Danger - Do Not Use" tag or similar designation which identifies the date and reason for need of repair.

Power tools shall be inspected for damaged or frayed power cords, damaged plug ends, missing ground pin (if required), electrical wire insulation pulled out of either the tool body or plug, cracked or damaged motor protective casings that would allow water, or debris to enter the tools motor compartment. All tool guards are required to be secured "in-place" prior to use.

Hand tools shall be inspected for loose handles, damaged or splintering handles, defects or warping.

General Regulations:

- A) All hand tools shall be assigned to a responsible person. This may be on an individual basis, or a single person assigned to control the hand tools of a particular work area or shop
- B) The responsible person shall ensure that hand tools are maintained in good condition. Regular inspections shall be made of all hand tools and all defects repaired or the tool removed from service
- C) Tools shall only be issued to personnel who have the necessary knowledge and skill to operate them safely. Supervisors shall ensure that workers are competent to work safely with any tool prior to leaving them to work unsupervised
- D) Tools shall be used only for the specific purpose for which they were designed. Thus, wrenches shall not be used as hammers, screwdrivers shall not be used as levers or chisels, etc..
- E) Tools designed for striking, i.e. cold steel chisels, flogging spanners, etc., will, even in normal use, suffer mushrooming around their impact surfaces. This shall be dressed off. Dressing is best done frequently with a hand file, rather than occasionally with an abrasive wheel. 'High speed' dressing with an abrasive wheel effects the hardness or the impact surface edges, resulting in an acceleration of the mushroom effect.

F) Tools shall at all times be transported from one work location to another in adequate containers. Specifically, the following practices shall be prohibited:

- Carrying tools in the pockets of work cloths (with exception of small tools specifically designed to clip in breast pockets)
- Carrying tools in the hand when climbing ladders
- Throwing tools from one worker to another
- When working at heights where there may be other persons passing below tools shall be secured with a line so as to prevent them falling if dropped

Wrenches and Spanners

A) Wrenches and Spanners shall be used only for the work for which they have been designed and within their capacity

B) Spanners shall be selected which enclose the nut or bolt head as much as possible in any given job. In order of preference (from both the safety and efficiency point of view), spanners should be selected as follows:

- Socket Spanners
- Ring Spanners
- Open-ended Spanners
- Adjustable Spanners (monkey wrench)

For a specific size of nut or bolt only the correct sized of spanner should be used.

13. Distracted Drivers

(Insert company name) has a strict "No Texting, No Talking" policy while driving. Any communication to an employee from the offices, from an employee to the offices, as well as any personal communications, are to be completed before the employee is in travel status or safely stopped at a rest area, gas station, convenient store, coffee shop, or other safe parking area.

14. Temporary, Contract and Part Time Employees

(Insert company name) realizes that from time to time temporary employees from a staffing agency, contract employees and part time employees may be hired to perform various tasks for the company. All these employees will receive the required safety training as their permanent counterparts for the specific task they perform for the company.

(Insert company name) will work with the staffing agency to assure that the proper training has been provided prior to assignment of duties that would expose the temporary, contract or part time employee to a known hazard.

15. Annual Review

(Insert company name) will review the company's policies, programs and procedures annually. This review will determine if any changes in the work environment, assigned responsibilities or tasks warrant a change to any of the policies, program and/or procedures.

Accident Investigation Basics

Accident Investigation Team: Experts in various disciplines - Health/safety/environment, Employees doing same job, working in same area, Engineering/maintenance, Supervision/management, Purchasing, Bargaining unit reps, Etc.

Step 1: Secure the Scene: Control chemicals, De-energize, De-pressurize, Light it up, Shore it up, Ventilate

Step 2: Get Medical Care: Provide medical care to injured people before proceeding

Step3: Investigate:

- A. Isolate the scene
- B. Gather information
- C. Establish facts
- D. Determine causes
- E. Develop corrective actions
- F. Implement corrective actions

A. Isolate the Scene

- Barricade accident area. Keep everyone out!
- Only Rescue/EMS, law enforcement, investigators allowed inside.
- Preserve evidence until investigation is complete.

B. Gather Information

People: ASAP after the incident **do not interrupt medical care** to interview!

People involved in accident, eyewitnesses, people who were there before accident, people who arrived after accident, supervisors

Each person separately, do not allow witnesses to confer before interview!

Parts: Survey site; get idea of what's relevant, identify parts to examine, photo or sketch before touching, examine thoroughly in place before moving or removing, observe, document any changes you make, treat gently to avoid damage.

Equipment: (malfunctioned, substandard, faulty design, misused), contaminants, labels/tags/signs, tools (defective, misused), hazardous materials, spills, stains, signs of leakage.

Positions:

Diagram the scene (optional), use blank or graph paper, mark locations of all pertinent items: equipment, parts, spills, persons, etc., note distances, sizes, pressures, temperatures, note directions (mark north on map).

Photographs – Always items or scenes which may help anyone who was not there understand what happened. Items which will not remain, or will be cleaned up (spills, tire tracks, footprints, ice, snow).

35mm, Polaroid, disposable, digital, video cameras – OK
Digital photos not accepted as court evidence--images too easily altered

Photograph from all possible angles, use background cloth to highlight features only if it will not compromise scene. Use ruler, pen, standard sheet of paper or other object to establish proportions, use notes pages to ID shots (date, time, when taken, where taken, direction taken, by whom)

Records Review:

- Training (was appropriate training provided?, when was it provided?)
- Equipment maintenance (is regular PM or service provided?, is there a recurring type of failure?)
- Accident records - Similar incidents involving other employees?
- Policies and Procedures (up-to-date?, distributed?, enforced?)
- Inspection reports - in-house, outside agencies
- Other documents - JHA's, MSDS's, equipment manuals, disciplinary procedures
Records, purchase records, building plans, blueprints, work orders, SOP's, specific work practices
- Personnel records - job descriptions, performance standards, performance
Evaluations, disciplinary actions, physical exams, employment applications

C. Establish the Facts

Assess Witness Credibility - People act in their own best interests, visual, hearing problems, could witness have seen/heard what s/he says s/he did?, possible Rx drug, chemical substance effects, influenced by the media, under stress/less accurate, forget 50% in 24hrs.

D. Determine Causes

- a. Direct causes -Action/s or condition/s that directly caused the accident.
- b. Contributing causes - Factors which did not directly cause the incident but helped “set the stage” for the accident/injury (environment, design, system & procedures, human behavior
- c. **Root causes** - Underlying systemic factors that allowed hazardous conditions to exist

E. Develop Corrective Action

- **Distinguish direct, contributing and root causes**
- **Base recommendations on main contributing factors and root causes**
- **Be specific and objective**

Include: Description of incident and injuries, sequence of events, pertinent facts discovered, conclusions (causes), recommendations for correction

F. Implement Corrective Action

- a. Establish time table for completion
- b. Distribute report – Managers, supervisors, foreman, safety committee
- c. **Follow up!**

Accident Investigation Report Form

EMPLOYEE'S NAME:		JOB TITLE:	
SUPERVISOR'S NAME:		ACCIDENT INVESTIGATOR:	
ACCIDENT LOCATION:			
DATE OF ACCIDENT:	TIME:	DATE REPORTED:	DATE INVESTIGATED:
DESCRIPTION OF ACCIDENT:			
DESCRIPTION OF INJURY:			
WITNESSES:			
ACCIDENT DIAGRAM/PHOTOGRAPHS ATTACHED:		YES	NO
DESCRIBE DAMAGE TO EQUIPMENT OR PROPERTY:		YES	NO
COMMENT:			
FIRST AID GIVEN:		YES	NO
EMPLOYEE TREATED BY PHYSICIAN:		YES	NO
HOSPITALIZATION REQUIRED:		YES	NO
ANY RESTRICTION IN WORK DUTY:		YES	NO
ADDITIONAL INFORMATION:			

Accident Root Cause Analysis

Check **ALL** that apply to this accident

Unsafe Acts		Unsafe Conditions	
Improper work technique		Poor workstation design	
Safety rule violation		Unsafe operation method	
Improper PPE or PPE not used		Improper maintenance	
Operating without authority		Lack of direct supervision	
Failure to warn or secure		Insufficient training	
Operating at improper speeds		Lack of experience	
By-passing safety devices		Insufficient knowledge of job	
Protective equipment not in use		Slippery conditions	
Improper loading or placement		Excessive noise	
Improper lifting		Inadequate guarding of hazards	
Servicing machinery in motion		Defective tools/equipment	
Horseplay		Poor housekeeping	
Drug or alcohol use		Insufficient lighting	

CORRECTIVE ACTION:	
SUPERVISOR RESPONSIBLE FOR CORRECTIVE ACTION:	
DATE COMPLETED:	

Unsafe Act Form

Unsafe Acts require a written warning and re-training <u>before</u> the Employee resumes work			
	Date		Date
Re-Training Assigned		Unsafe Condition Guarded	
Re-Training Completed		Unsafe Condition Corrected	
Supervisor Signature		Supervisor Signature	
ACCIDENT DIAGRAM/PHOTOGRAPHS ATTACHED: _____ YES _____ NO			
FINAL REPORT PREPARED BY:		DATE:	
SAFETY COMMITTEE REVIEW:		YES	NO
		If Yes, DATE:	
SIGNED BY:			DATE:
	Safety Coordinator		
SIGNED BY:			DATE:
	Plant Manager		

Violence Incident Report

Report all incidences of threatening or harassing remarks, violent acts or unauthorized weapons in the workplace.

Date		Time	
Location			
Instigator(s)			
Victim(s)			
Factors	Intoxication	Emotional	Gang Activity
	Racial	Employment	Relationship
	Union Activity	Drugs	Other
Incident Basics	Physical Attack	Verbal Abuse	Harassment
Detailed Description			
Injuries			
Witnesses			
Disposition			
Victim(s)			
Instigator(s)			
Incident Termination			
Future Action			
Report By		Date	
Management Review		Date	

Additional Notes:

Hazard Communication & Global Harmonization System

Written Program

(29 CFR 1910.1200(e)(1))

I. GENERAL

The purpose of this instruction is to ensure that (insert company name) is in compliance with the OSHA Hazard Communication Standard 29 CFR 1910.1200 including the Global Harmonization System requirements.

(Name and/or title of employee) is the overall coordinator of the facility program acting as the representative of (name and title of (usually) the highest ranking company executive), who has overall responsibility.

In general, each employee in the facility will be apprised of the substance of the Hazard Communication Standard, the hazardous properties of chemicals they work with, and measures to take to protect themselves from these chemicals.

II. LIST OF HAZARDOUS CHEMICALS

(Name and/or title of employee) will maintain a list of all hazardous chemicals used in the facility, and update this list as necessary. The hazardous chemical list will be updated upon receipt of hazardous chemicals at the facility. A master list of hazardous chemicals present or used in the facility is maintained in the (identify location or locations). Additional lists of hazardous chemicals are maintained with Safety Data Sheets (SDS's), and are to be utilized as indexes for the easy access of desired SDS's.

III. SAFETY DATA SHEETS (SDS's)

(Name and/or title of employee) will maintain a Safety Data Sheet library on every substance on the list of hazardous chemicals in (identify location or locations). The SDS will consist of a fully completed OSHA Form 174 or equivalent and meeting the Global Harmonization Systems format that requires 16 specific sections, ensuring consistency in presentation of important protection information. (Name and/or title of employee) will ensure that each (insert title used by your company - department head/supervisor/foreman/shift leader) maintains a SDS for every hazardous material used in that area. These SDS's will be readily available to all employees at all times on all shifts. Employees are not to remove or deface individual SDS's from the department binder(s). Copies of SDS's will be made available to employees upon request to (Name and/or title of employee).

(Name and/or title of employee) is responsible for acquiring and updating SDS's. (Name and/or title of employee) will review each SDS for accuracy and completeness and will consult with purchasing agent, manufacturer or supplier if additional research is necessary. All new procurements for the facility must be cleared by (Name and/or title of employee). Whenever possible, the least hazardous substance will be procured.

SDS's that meet the requirements of the program must be fully completed and received at the facility either prior to, or at the time of receipt of the first shipment of any potentially hazardous chemical purchased received (includes sample, trial and/or one run chemicals) from a vendor. It may be necessary to discontinue procurement from vendors failing to provide approved SDS's in a timely manner.

IV. IN-HOUSE LABELS AND OTHER FORMS OF WARNING

(Name and/or title of employee(s)) are designated to ensure that all hazardous chemicals in the facility are properly labeled. Labels should list at least:

- (i) Product Identifier
- (ii) Signal Word
- (iii) Hazard Statement
- (iv) Pictogram
- (v) Precautionary Statement(s), and
- (vi) Name, address and telephone number of manufacturer, importer, or other responsible party the chemical identity, appropriate hazard warnings, and the name and address of the manufacturer, importer or other responsible party.

(Name and/or title of employee) will refer to the corresponding SDS to verify label information.

Immediate use containers, or transfer containers, described as small containers into which materials are drained for use on that shift by the employee drawing the material, do not require labeling.

To meet the labeling requirements of the program for other in-house containers, refer to the label supplied by the manufacturer. All labels for in-house containers will be approved by (Name and/or title of employee) prior to their use. **Helpful Hint:** A photo of the label on the manufacturers containers sized appropriately to the in-house container and secured with clear packing tape would be in compliance with this portion of the standard.

(Name and/or title of employee) will check on a monthly basis to ensure that all containers in the facility are labeled and that the labels are up-to-date.

MANUFACTURER, SUPPLIER, DISTRIBUTOR LABELS

(Name and/or title of employee(s)) will assure that the labels entering the facility from manufacturers, suppliers and distributors comply with the Global Harmonization System labeling requirements. The labels must have at the minimum: product identifier (name), a signal word (Hazard or Warning), pictogram, hazard statement (such as but not limited to: Toxic if inhaled/Causes severe burns and eye damage/Extremely flammable liquid, etc.) and precautionary statement (describes recommended measures that should be taken to minimize or prevent adverse effects resulting from exposure to a hazardous chemical, or improper storage or handling: Prevention/Response/Storage/Disposal) for each hazard class and category.

V. TRAINING

Each employee who works with or is potentially exposed to hazardous chemicals will receive initial training on the Hazard Communication Standard, Global Harmonization System and the safe use of those hazardous chemicals. Additional training will be provided for employees whenever a new hazard is introduced into their work areas. Hazardous chemical training is conducted by **(Name and/or title of employee)**.

The training will emphasize these elements:

- A summary of the standard and this written program;
- Hazardous chemical properties including visual appearance and odor and methods that can be used to detect the presence or release of hazardous chemicals;
- Label elements and safety data sheet format;
- Definitions of combustible dust, pyrophorics and simple asphyxiants;
- Physical and health hazards associated with potential exposure to workplace chemicals;
- Procedures to protect against hazards, e.g., engineering controls, work practices, personal protective equipment and emergency procedures.
- Hazardous chemical spills and leak procedures; and
- Where SDS's are located, how to understand their content, and how employees may obtain and use appropriate hazard information.

(Name and/or title of employee) will monitor and maintain records of employee training and advise the facility manager on training needs. Hazard Communication training shall be documented. This documentation should include information such as, but not limited to: trainers name, date, employee printed name and signature, employee clock or ID # if used at the facility, to topic and the method training was provided (audiovisuals, classroom instruction, etc.).

VI. CONTRACTOR EMPLOYERS

(Name and/or title of employee), upon notification from **(Name and/or title of employee)**, will advise outside contractors of any chemical hazards which may be encountered in the normal course of their work on the premises.

Each contractor bringing chemicals or hazardous materials on-site must provide **(Name and/or title of employee)** with the appropriate hazard information (ie: SDS's) on these substances, including the labels used and the precautionary measures to be taken when working with these chemicals.

VII. NON-ROUTINE TASKS

Maintenance, repair, any employee or contractor contemplating a non-routine task, (ie: a task or work involving chemicals or materials infrequently used or not previously covered by the hazard communication training), will consult with **(Name and/or title of employee)** and will ensure that employees are informed of chemical hazards associated with the performance of these tasks and appropriate protection measures. This will be accomplished by a meeting of department head/supervisor/foreman/shift leader and with the affected employees before such work has begun.

VIII. ADDITIONAL INFORMATION

Further information on this written program, the hazard communication standard and applicable Safety Data Sheets is available by contacting **(Name and/or title of employee(s))**. (Requested information may be obtained and provided by the contact person listed above, or, they may provide the contact name, address, e-mail contact and phone number of the manufacturer or supplier of the hazardous substance or chemical for the requested information.)

Global Harmonized System Labels

Chemical manufacturers and importers must provide a label on shipping containers that includes:

- (i) Product Identifier
- (ii) Signal Word
- (iii) Hazard Statement
- (iv) Pictogram
- (v) Precautionary Statement(s), and
- (vi) Name, address and telephone number of manufacturer, importer, or other responsible party

Product Identifier – Clorox, WD-40, Bleach, Hydrofluoric Acid, etc.

Signal word - Indicate the relative level of severity of hazard and alerts the reader to a potential hazard on the label

- Danger - used for more severe hazards
- Warning - used for less severe

Hazard statement - Describes the nature of the hazard(s) of a chemical, including, where appropriate, the degree of hazard

- Toxic if inhaled
- Causes severe burns and eye damage
- Extremely flammable liquid

Pictograms – see separate sheet










Precautionary Statements - Describes recommended measures that should be taken to minimize or prevent adverse effects resulting from exposure to a hazardous chemical, or improper storage or handling:

- Prevention
- Response
- Storage
- Disposal

Name, address and telephone number - of manufacturer, importer, or other responsible party

Global Harmonized Pictograms

HCS Pictograms and Hazards

Health Hazard  <ul style="list-style-type: none"> ▪ Carcinogen ▪ Mutagenicity ▪ Reproductive Toxicity ▪ Respiratory Sensitizer ▪ Target Organ Toxicity ▪ Aspiration Toxicity 	Flame  <ul style="list-style-type: none"> ▪ Flammables ▪ Pyrophorics ▪ Self-Heating ▪ Emits Flammable Gas ▪ Self-Reactives ▪ Organic Peroxides 	Exclamation Mark  <ul style="list-style-type: none"> ▪ Irritant (skin and eye) ▪ Skin Sensitizer ▪ Acute Toxicity ▪ Narcotic Effects ▪ Respiratory Tract Irritant ▪ Hazardous to Ozone Layer (Non-Mandatory)
Gas Cylinder  <ul style="list-style-type: none"> ▪ Gases Under Pressure 	Corrosion  <ul style="list-style-type: none"> ▪ Skin Corrosion/Burns ▪ Eye Damage ▪ Corrosive to Metals 	Exploding Bomb  <ul style="list-style-type: none"> ▪ Explosives ▪ Self-Reactives ▪ Organic Peroxides
Flame Over Circle  <ul style="list-style-type: none"> ▪ Oxidizers 	Environment (Non-Mandatory)  <ul style="list-style-type: none"> ▪ Aquatic Toxicity 	Skull and Crossbones  <ul style="list-style-type: none"> ▪ Acute Toxicity (fatal or toxic)

Hazard Communication Standard

Training Requirements

Beside training your employees on the company's written Chemical Hazard Communication Program, the list below contains the minimum required topics for the training on Global Harmonization.

☐ Training on label elements must include information on:

- Type of information the employee would expect to see on the new labels, including the
 - ✓ **Product identifier:** how the hazardous chemical is identified. This can be (but is not limited to) the chemical name, code number or batch number. The manufacturer, importer or distributor can decide the appropriate product identifier. The same product identifier must be both on the label and in Section 1 of the SDS (Identification).
 - ✓ **Signal word:** used to indicate the relative level of severity of hazard and alert the reader to a potential hazard on the label. There are only two signal words, “Danger” and “Warning.” Within a specific hazard class, “Danger” is used for the more severe hazards and “Warning” is used for the less severe hazards. There will only be one signal word on the label no matter how many hazards a chemical may have. If one of the hazards warrants a “Danger” signal word and another warrants the signal word “Warning,” then only “Danger” should appear on the label.
 - ✓ **Pictogram:** OSHA’s required pictograms must be in the shape of a square set at a point and include a black hazard symbol on a white background with a red frame sufficiently wide enough to be clearly visible. A square red frame set at a point without a hazard symbol is not a pictogram and is not permitted on the label. OSHA has designated eight pictograms under this standard for application to a hazard category.
 - ✓ **Hazard statement(s):** describe the nature of the hazard(s) of a chemical, including, where appropriate, the degree of hazard. For example: “Causes damage to kidneys through prolonged or repeated exposure when absorbed through the skin.” All of the applicable hazard statements must appear on the label. Hazard statements may be combined where appropriate to reduce redundancies and improve readability. The hazard statements are specific to the hazard classification categories, and chemical users should always see the same statement for the same hazards, no matter what the chemical is or who produces it.
 - ✓ **Precautionary statement(s):** means a phrase that describes recommended measures that should be taken to minimize or prevent adverse effects resulting from exposure to a hazardous chemical or improper storage or handling.
 - ✓ **Name, address and phone number of the chemical manufacturer, distributor, or importer**
- How an employee might use the labels in the workplace. For example,
 - ✓ Explain how information on the label can be used to ensure proper storage of hazardous chemicals.
 - ✓ Explain how the information on the label might be used to quickly locate information on first aid when needed by employees or emergency personnel.

- General understanding of how the elements work together on a label. For example,
 - ✓ Explain that where a chemical has multiple hazards, different pictograms are used to identify the various hazards. The employee should expect to see the appropriate pictogram for the corresponding hazard class.
 - ✓ Explain that when there are similar precautionary statements, the one providing the most protective information will be included on the label.

☐ Training on the format of the SDS must include information on:

- Standardized 16-section format, including the type of information found in the various sections
 - ✓ For example, the employee should be instructed that with the new format, Section 8 (Exposure Controls/Personal Protection) will always contain information about exposure limits, engineering controls and ways to protect yourself, including personal protective equipment.
- How the information on the label is related to the SDS ✓ For example, explain that the precautionary statements would be the same on the label and on the SDS.

All training, OSHA requires employers to present information in a manner and language that their employees can understand. If employers customarily need to communicate work instructions or other workplace information to employees in a language other than English, they will also need to provide safety and health training to employees in the same manner. Similarly, if the employee's vocabulary is limited, the training must account for that limitation. By the same token, if employees are not literate, telling them to read training materials will not satisfy the employer's training obligation.

OSHA's Hazard Communication website (<http://www.osha.gov/dsg/hazcom/index.html>) has the following QuickCards and OSHA Briefs to assist employers with the required training.

- Label QuickCard (English/Spanish)
- Pictogram QuickCard (English/Spanish)
- Safety Data Sheet QuickCard (English) (Spanish)
- Safety Data Sheet OSHA Brief
- Label/Pictogram

Material Safety Data Sheets

MSDS are grouped for quick reference, product and emergency information at the beginning and technical information at the end. Sixteen sections arranged in four main categories.

Four Main Categories:

- **Product Information** – Sections 1, 2 & 3
- **Exposure Situations** – Sections 4, 5 & 6
- **Hazard Protection and Control** – Sections 7, 8, 9 & 10
- **Other Specific Information** – Sections 11, 12, 13, 14, 15 & 16

Product Information Sections:

1. Chemical product name & company I.D. (synonyms, date prepared)
2. Composition/Information of Ingredients and Exposure Limits

PPM – parts per million - the concentration in air

TWA – time weighted average

TLV – threshold limit value

PEL – permissible exposure limit

TWA, TLV, PEL are acceptable concentrations of a material averaged over an 8 hour work day that a person can be exposed to without adverse effect

- **STEL** – short term exposure limit – an acceptable concentration for most people that they can be exposed to for up to a 15 minute period
- **Ceiling Value** – a concentration of a material that should never be exceeded during any part of a working exposure

3. Hazard Identification & Emergency Overview – potential symptoms following contact, health effects and chronic effects

Exposure Situations Sections:

4. First Aid – exposure situations

5. Fire Fighting Measures

- **Flammable Limits** – range of vapor in air that will produce fire when an ignition source is present
- **LEL** – lower explosive limit & **UEL** upper explosive limit – between these figures can produce an explosion when an ignition source is present
- **Flash Point** – the lowest temperature that a liquid gives off enough vapor to form an ignitable mixture with air and produce a flame if an ignition source is present
- **Auto Ignition** – temperature at which a material will spontaneously ignite or burn without an ignition source

Also contains fire fighting guidance and extinguisher recommendations

6. Accidental Release or Spills – designed for those trained in responding to emergencies

Hazard Protection and Control Sections:

7. Handling and Storage – general and specific practices for safe handling and storage

8. Exposure Control/Personal Protection – engineering controls and personal protective equipment (PPE)

9. Physical and Chemical Properties

10. Stability and Reactivity

Other Specific Information Sections:

11. Toxicological Information – genetic effects, irritations and reproductive problems

12. Ecological Information – land, water, air – information for environmental professionals on how to evaluate accidental spills and leaks

13. Disposal Considerations - limitations, restrictions, recommended disposal practices

14. Transportation Information – shipping name, I.D.#, US and international regulations

15. Regulatory Information – US regulations

16. Other Information – other special considerations not previously addressed

Hazard Assessment & Personal Protective Equipment (PPE) Selection Worksheet

[illegible]

Personal Protective Equipment

Under a regulation of the Occupational Safety and Health Administration (OSHA), an employer must meet specific requirements concerning "personal protective equipment" (PPE), such as gloves, goggles, hard hats, face shields and ear muffs. The regulation also gives employees specific rights concerning PPE. Below you will find basic information about the regulation and strategies that unions can use to get employers to eliminate hazards, if possible, and protect their employees from hazards that are not eliminated.

What must your employer do under the Personal Protective Equipment (PPE) regulation?

1. Your employer must conduct a hazard assessment

OSHA requires employers to:

- a)** Survey the workplace to identify hazards, (this survey must be in writing and must be available to workers or their representatives upon request),
- b)** Determine whether any hazard requires PPE,
- c)** Pay special attention to working conditions or processes that can produce the following hazards:

- Falling objects
- Objects that could puncture the skin
- Objects that could roll over workers' feet
- Toxic chemicals
- Heat
- Harmful dust
- Radiation

d) Reassess hazards whenever necessary, especially when new equipment is installed or following accidents. Any reassessment must be in writing and must be available to workers on request.

2. The employer shall verify that the required workplace hazard assessment has been performed through a written certification that identifies the:

- Workplace evaluated;
- Person certifying that the evaluation has been performed;
- Date(s) of the hazard assessment; and,
- which identifies the document as a certification of hazard assessment

3. Your employer must select appropriate equipment

The employer must ensure that all PPE used is the right kind of equipment for the job, and that it is maintained properly -- even when workers are using their own equipment. Every employer must ensure that:

- PPE provides a level of protection above the minimum required to protect the worker,
- All PPE fits properly,

- No defective or damaged PPE is used,
- All PPE is properly cleaned and maintained on a regular basis.

4. Your employer must train workers who use PPE

Employers must train all workers who use PPE. Training must cover:

- *When* PPE is necessary,
- *Which* PPE is necessary,
- How to know if it fits properly,
- How to put on, remove, adjust and wear PPE,
- How to dispose of PPE,
- The limitations of using PPE.

Training must be given whenever working conditions change, or when new or different PPE is used, or if a worker does not understand or remember any topic in the training. Employers must certify in writing that each worker has received and has understood the training.

When should personal protective equipment be used?

OSHA is very clear that PPE must be provided as a last resort, when other measures cannot provide enough protection. The employer is required to first make efforts to eliminate or minimize hazardous working conditions. The best way to protect workers against hazards is to control problems at the source.

Are there problems with using personal protective equipment?

Wearing PPE can be uncomfortable (especially in hot weather) or awkward, and many people complain that it gets in the way of doing the job. Although PPE cannot usually completely protect the wearer, people often get a false sense of security when they use it. Also, PPE protects only the person wearing it and many people may not be able to wear PPE due to certain types of medical conditions. Problems such as incorrect fit, use of the wrong PPE for the job, use of damaged or poorly maintained PPE or inconsistent PPE use can all result in less than adequate protection. It is always preferable for the employer to remove or minimize hazards.

Types of Personal Protective Equipment

The PPE regulation (also known as a standard) covers all private-sector workers in general industry who are exposed to hazardous processes, conditions, and toxic substances. The legal citation for the general PPE standard is 29 CFR 1910.132. (CFR stands for Code of Federal Regulations.) There are additional standards that cover different specialized types of PPE. (They are discussed below). Similar and separate PPE standards cover construction, shipyard, maritime and longshore workers. Public-sector workers in New York State are also covered by the PPE standards under PESH (Public Employee Safety & Health).

Here is what OSHA requires for specific types of PPE and where you can find it in the Code of Federal Regulations.

EYE AND FACE PROTECTION 29 CFR 1910.133

Goggles and face protection must be used when workers are at risk from flying particles, liquid chemicals, acids or caustic liquids, chemical gases or vapors. Workers must also be protected from radiation during welding, torching, soldering, and brazing, or other operations that emit light. Goggles and face protection must meet certain design criteria for safety.

HEAD PROTECTION 29 CFR 1910.135

Hard hats must be worn where there is a danger of falling objects. Specialized hard hats are required to reduce electrical shock hazards. The OSHA standard contains a chart to aid in head gear selection.

FOOT PROTECTION 29 CFR 1910.136

Safety shoes with impact protection are required in work areas where heavy objects or tools could be accidentally dropped on the feet. Safety shoes with compression protection must be worn where objects could roll over workers' feet, and in operations involving skid trucks, hand trucks, dollies, etc. Safety shoes with puncture protection are required when working around nails, wire, tacks, scrap metal, and other objects that could pierce the feet.

HAND PROTECTION 29 CFR 1910.138

Gloves are required to protect workers from cuts, scrapes, punctures, burns, chemical absorption, or temperature extremes. It is crucial that the type of glove being used is the right one for the job since incorrect gloves may provide no protection. This is a particular problem with chemical absorption where incorrect gloves may allow certain chemicals to reach your skin - and you may be unaware that it is happening. Charts that can assist in determining the right gloves for the job are available from glove manufacturers.

HEARING PROTECTION 29 CFR 1910.95

Appropriate ear muffs or ear plugs must be made available as a last resort if it is not possible to make the workplace less noisy. This requirement is a small part of the Occupational Noise Exposure standard, which requires employers to ensure that workers are exposed to less than 90 decibels of noise over an 8-hour day. If noise levels reach 85 decibels over an 8-hour day, the employer must develop a hearing conservation program as outlined by the regulation. If no other method of eliminating or reducing the noise exposure is found, the employer must supply PPE.

RESPIRATORS 29 CFR 1910.134

Appropriate respirators must be worn as a last resort, if it is not possible to ventilate the work area properly. Known as the Respirator Protection standard, this regulation requires that employers develop a written, comprehensive respiratory protection program for all workers who are required to use respirators on the job.

WHAT EMPLOYERS SHOULD DO

1. *Participate in the hazard assessment process.* The standard does not specify how employers must conduct the assessment, nor the qualifications of the person conducting the assessment. Union members should try to accompany the person who does the assessment when they inspect the workplace. If the employer has already conducted the assessment, the union has a right to request a copy. The assessment should be reviewed to make sure that it shows why the hazard could not be eliminated in other ways. Set up a committee to help evaluate the quality and appropriateness of PPE that is used.

2. Check to see that the right equipment is supplied for the job. Make sure that the PPE the employer wants to use is designed to guard against the specific hazards to which the workers are exposed. Proper gloves to protect the skin from chemical exposure are crucial. Check the charts available from the glove manufacturers and fight to ensure that the employer is supplying the correct gloves. In the case of respirators, certain respirators are required for specific jobs and a program must be in place to ensure the right respirator is used. Information about the proper use of any PPE should be available from the manufacturer, including how long it can be worn effectively before it should be discarded or cleaned.

3. If PPE must be worn, negotiate over who pays for it. It has generally been assumed that when OSHA stated that, "personal protective equipment ... shall be provided", they intended that the employer must pay for most safety equipment. This assumption, however, was successfully challenged by an employer lawsuit. OSHA is now completing a clarification of this requirement to be published in the Federal Register. Once published, it will require employers to pay for all PPE except certain types of footwear and eyewear. Unions may want to negotiate contract language requiring the employer to pay for all PPE, as many unions have done.

4. Make sure that adequate training is given to workers. Unions frequently negotiate with employers over who will provide training, what topics will be covered, and how the class will be taught: length of class; methods of teaching, including hands-on demonstration and practice; teaching in a language and manner that workers can understand.

5. Remind employers to supply various sizes of PPE. OSHA says that workers must have PPE that fits properly. Poorly fitting PPE may cause additional hazards. In the case of respirators, an effective program is required to ensure the correct fit is achieved.

6. Make sure employers provide proper decontamination areas or other appropriate procedures following use of PPE. Contaminated protective clothing and other PPE should be removed prior to entering the clean side of any locker room or changing facility where street clothes are stored. Often, contaminated PPE must be disposed of as hazardous waste; therefore, proper disposal facilities must be on hand for contaminated PPE that cannot be cleaned.

7. Make sure adequate cleaning and storage facilities are available for all PPE that is issued. Workers must have the training, supplies, and time to properly clean and store protective equipment that is issued to them.

8. Make sure no workers use either damaged or defective PPE. Workers should know how to inspect all PPE to make sure that it is not damaged. Defective PPE should be replaced as soon as the defect occurs.

9. Investigate accidents. Make sure that all of the elements of the PPE standard were followed.

Personal Protective Equipment (PPE) Requirements

Location/Job Title											
Job Function/ Operation	Safety Shoes	Safety Glasses	*Chemical Splash Goggles	Face Shield	*Apron or Smock	*Gloves	Dust Particle Mask	*Respirator	Hard Hat	*Hearing Protection	Other (harness, lanyard, etc.) or special needs

X = Required

P = Required in posted area/operations

R = Generally recommended

A = As recommended by the applicable Material Safety Data Sheet (MSDS)

* See supervisor for recommended type

Personal Protective Equipment (PPE) For Job/Task or Location

Job/Task or Location

Job/Task or Location	Safety Shoes or Boots	Safety Glasses	Reflective Vest	Hard Hat	Gloves*	Light Colored Long Pants	Filtering Facepiece	Respirator*	Hearing Protection*	Other (Indicate below)

R = Required **REC** = Recommended **P** = Required for posted areas/operations **A** = As recommended by Safety Data Sheet
***** See supervisor for recommended type **Other** = (e.g., safety harness, lanyard, other special needs)

I have received training on the Personal Protective Equipment (PPE) required in the performance of the above noted job/tasks or location. This training included how to don and remove said equipment, the limitations, proper care, maintenance and useful life of various types of equipment. I understand the importance of the proper use, care and maintenance of required PPE, and the method of obtaining replacement equipment. I further agree to use PPE as set forth above. *My failure to follow such safety rules may result in disciplinary action up to and including termination.*

Print Name _____ **Signature** _____ **Date** _____

PPE Payment

Examples of PPE for Which Employer Payment Is Required

[If used to comply with an OSHA standard]

- ◆ Metatarsal foot protection, Special boots for longshoremen working logs
- ◆ Rubber boots with steel toes, Shoe covers--toe caps and metatarsal guards
- ◆ Non-prescription eye protection
- ◆ Prescription eyewear inserts/lenses for full face respirators.
- ◆ Prescription eyewear inserts/lenses for welding and diving helmets.
- ◆ Goggles, Face shields, Laser safety goggles
- ◆ Fire fighting PPE (helmet, gloves, boots, proximity suits, full gear)
- ◆ Hard hat, Bump caps
- ◆ Hearing protection
- ◆ Welding PPE
- ◆ Items used in medical/laboratory settings to protect from exposure to infectious agents (Aprons, lab coats, goggles, disposable gloves, shoe covers, etc)
- ◆ *Non-specialty gloves - Payment is required if they are PPE, i.e. for protection from dermatitis, severe cuts/abrasions - Payment is not required if they are only for keeping clean or for cold weather (with no safety or health consideration).*
- ◆ Rubber sleeves, Aluminized gloves
- ◆ Chemical resistant gloves/aprons/clothing
- ◆ Barrier creams (unless used solely for weather-related protection)
- ◆ Rubber insulating gloves
- ◆ Mesh cut proof gloves, mesh or leather aprons
- ◆ SCBA, atmosphere-supplying respirators (escape only)
- ◆ Respiratory protection
- ◆ Fall protection, Ladder safety device belts, Window cleaners safety straps
- ◆ Climbing ensembles used by linemen (e.g., belts and climbing, hooks)
- ◆ Personal flotation devices (life jacket)
- ◆ Encapsulating chemical protective suits
- ◆ Reflective work vests

Examples of PPE and Other Items Exempted From the Employer Payment Requirements

- ◆ Non-specialty safety-toe protective footwear (e.g., steel-toe shoes/ boots)
- ◆ Non-specialty prescription safety eyewear
- ◆ Sunglasses/sunscreen
- ◆ Sturdy work shoes - [Lineman's boots, Logging boots required under Sec.1910.266(d)(1)(v)]
- ◆ Ordinary cold weather gear (coats, parkas, cold weather gloves, winter boots).
- ◆ Ordinary rain gear
- ◆ Back belts
- ◆ Long pants, Long sleeve shirts
- ◆ Dust mask/respirators used under the voluntary use provisions in Sec. 1910.134

Training Topic: _____

Name of Trainer: _____ Date: _____

Name (Print)	Name (Signature)	Work Area or Unit

In accordance with 29 CFR 1910.132(F)(2), this training attendance sheet certifies that safety training was provided and understood by employees on the specified topic (above).

Appendix D to Sec. 1910.134

(Mandatory) Information for Employees Using Respirators When Not Required Under the Standard

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

You should do the following:

1. Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirators limitations.
2. Choose respirators certified for use to protect against the contaminant of concern. NIOSH, the National Institute for Occupational Safety and Health of the U.S. Department of Health and Human Services, certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will tell you what the respirator is designed for and how much it will protect you.
3. Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke.
4. Keep track of your respirator so that you do not mistakenly use someone else's respirator.

[63 FR 1152, Jan. 8, 1998; 63 FR 20098, April 23, 1998]

Employee Name

Employee Signature

Witness Name

Witness Signature and Title

Date

Trenches and Excavations

Trenches and excavations expose employees to some of the most deadly hazards in construction. Even with the current regulations in place, OSHA enforcement activities and company safe work practices hundreds of employees are injured and killed in trenches each year.

Hazards associated with trenches and excavations are:

- Cave-ins
- Asphyxiation due to lack of oxygen
- Inhalation of toxic materials
- Fire
- Moving machinery near the edge of the excavation can cause a collapse
- Accidental severing of underground utility lines

Definitions:

Excavation – a man-made cut, cavity, trench, or depression formed by earth removal.

Trench – a narrow excavation. (The depth is greater than the width, but not wider than 15 feet.)

Benching – a technique of removing soil to provide step-like sides to an excavation based on the soil type and site conditions.

Shield - a structure able to withstand a cave-in and protect employees

Shoring - a structure that supports the sides of an excavation and protects against cave-ins

Sloping - a technique that employs a specific angle of incline on the sides of the excavation. The angle varies based on assessment of impacting site factors

Employee Protection

Employees should be protected from cave-ins by using an adequately designed protective system.

Protective systems must be able to resist all expected loads to the system.

Protection system can be designed by a competent person, qualified person or Registered Professional Engineer for excavations from 0 to 20 feet deep using the methods and tabulated information in the OSHA standards or manufactures recommendations supplied with trench shoring or shields.

Protection systems for any excavation 20 feet deep or more can only be designed by a Registered Professional Engineer.

Factors Involved in Designing a Protective System

- Soil classification
- Depth of cut
- Water content of soil
- Changes due to weather and climate
- Other operations in the vicinity

Shoring – General

- Provides a framework to work in and uses wales, cross braces and uprights
- Supports excavation walls
- OSHA tables provide acceptable shoring data and must be familiar with them
- Must know soil type
- Must know depth and width of excavation

Hydraulic Trench Support (Shoring)

- Using hydraulic jacks the operator can easily drop the system into the hole
- Once in place, hydraulic pressure is increased to keep the forms in place
- Trench pins are installed in case of hydraulic failure
- Usually used in combination with specific trench grade sheeting/planks

Trench Shield

- Free standing shield often referred to as a trench box
- Can rest on a bench not more than 2 feet from the excavation bottom
- Only approx. 1 foot on each side of the shield to avoid dangerous shifting or entrapping an employee when in the trench around or next to pipes, vaults and equipment
- Inspected prior to use
- Can be stacked if designed to do so
- Most have been approved to be slightly raised on one end and dragged for continuous work
- NO employees can be in the trench box/shield when it is being raised, lowered dragged or moved

Protection from Vehicles

The weight and vibration of moving equipment or traffic may cause a cave-in.

- Install barricades
- Hand/mechanical signals to indicate trench edge
- Stop logs
- Grade soil away from excavation
- Fence or barricade trenches left overnight
- Trenches 6' deep or more into which a person may accidentally travel must be protected

Spoils

- Don't place spoils within 2 feet from edge of excavation - Measure from nearest part of the spoil to the excavation edge
- Place spoils so rainwater runs away from the excavation
- Place loose rock containing spoils well away from the excavation – rocks may roll striking a worker

OTHER HAZARDS

Water Accumulation

Water accumulation not only contributes to the degradation of the soil but also creates an engulfment/entrapment hazard to all employees and equipment operating in or near the trench.

- Never enter a trench with accumulating water
- Pumps should be activated to drain and continuously pump water from the excavation
- If pumps are fuel engine operated be sure to place all motors/engines and generators where they will not create an atmospheric hazard in the trench.

Hazardous Atmosphere

Test excavations more than 4 feet before an employee enters the excavation for:

- Oxygen deficiency
- High combustible gas concentration
- Carbon Monoxide
- Hydrogen Sulfide
- High levels of other hazardous substances that may have seeped into the soil from surrounding areas

Means of Egress

- A stairway, ladder, or ramp must be present in excavations that are 4 or more feet deep, and within 25 feet of the employees.
- A ladder must extend 3 feet above the top of the excavation – sometimes planking or 3/4inch plywood boards are placed at the top to help distribute the weight of the workers entering and exiting the excavation

Competent Person

Must have had specific training in and be knowledgeable about:

- Soils classification
- The use of protective systems
- The requirements of the standard
- Must be capable of identifying hazards, and
- **MUST BE authorized** to immediately
 - Stop work
 - Remove employees from the hazard
 - Eliminate hazards before allowing employees to re-enter

Inspections of Excavations

A competent person must make daily inspections of excavations, areas around them and protective systems:

- Before work starts and as needed,
- After rainstorms, high winds or other occurrence which may increase hazards,
- When you can reasonably anticipate an employee will be exposed to hazards.

Site Evaluation Planning

Before beginning excavation:

- Contact utilities – 811 Dig Safe
- Evaluate soil conditions
- Determine soil type – Types A, B or C
- Construct protective systems – based on soil type and work being performed
- Test for low oxygen, hazardous fumes and toxic gases
- Provide safe in and out access
- Determine the safety equipment needed

Prepare for Rescue

Even though you believe you have taken all the precautions necessary for a safe excavation entry you should always train your employees on what to do in an emergency.

- Stop all operating equipment – vibration may trigger a second collapse or hazard
- Call 911
- Control the site keeping away and making room for rescue vehicles
- Gather information for the rescue team
 - In Case of trench collapse they will need to know:
 - How many workers are involved
 - How deep is the trench
 - What type of soil
 - How deep is the worker buried
 - How long have they been buried
 - Approx. where the worker is
 - In case of any other hazards (atmospheric, severed utility, water accumulation, etc.)
 - As safely as possible eliminate or reduce the hazards
 - Do Not endanger yourself or other workers to eliminate hazards
 - Gather information for rescue personnel
 - Wait for rescue services
 - Call utilities if their assistance is needed
- Start water pumps, divert additional water away from the excavation (keep exhaust fumes from entering the trench)
- If you need to approach the side of the trench put down planking and plywood sheets to distribute weight so you don't cause a secondary collapse
- Do not attempt to rescue the downed worker unless you have been trained and have proper rescue equipment available – rescuers frequently become victims and delays the eventual rescue of the original downed worker
- DO NOT try to dig the worker out or remove soil near a downed worker with a backhoe or any other heavy equipment – decapitation and dismemberment has occurred in such past rescue attempts

Scaffold Safety

The Basics

A scaffold is an elevated, temporary work platform.

Three basic types:

- **Supported scaffolds** -- platforms supported by rigid, load bearing members, such as poles, legs, frames, & outriggers
- **Suspended scaffolds** -- platforms suspended by ropes or other non-rigid, overhead support
- **Aerial Lifts** -- such as “cherry pickers” or “boom trucks”

Employees working on scaffolds are exposed to these hazards:

- Falls from elevation – caused by slipping, unsafe access, and the lack of fall protection
- Struck by falling tools / debris
- Electrocution – from overhead power lines
- Scaffold collapse - caused by instability or overloading
- Bad planking giving way

Supported Scaffolds

Protecting Workers From Falls

If a worker on a scaffold can fall more than 10 feet, protect them by:

- Guardrails:
 - Install along open sides & ends
 - Front edge of platforms not more than 14 inches from the work, unless using guardrails and/or PFAS
 - Top rails - 38 to 45 inches tall
 - Midrails halfway between toprail and platform
 - Toe-boards at least 3-1/2 inches high
- **and/or**
- Personal Fall Arrest Systems (PFAS)
 - Harness, lanyard and secure anchor point
 - Secure anchor point supports 5,000lbs per person attached

Falling Object Protection

- Wear hardhats
- Barricade area below scaffold to forbid entry into that area
- Use panels or screens if material is stacked higher than the toe-board
- Build a canopy or erect a net below the scaffold that will contain or deflect falling objects

Overhead Power Lines

The possibility of electrocution is a serious consideration when working near overhead power lines

The clearance between scaffolds and power lines shall be as follows: Scaffolds shall not be erected, used, dismantled, altered, or moved such that they or any conductive material handled on them might come closer to exposed and energized power lines than as follows:

***Insulated Lines**

<u>Voltage</u>	<u>Minimum Distance</u>	<u>Alternatives</u>
Less than 300 volts	3 feet (0.9m)	-----
300 volts to 50kv	10 feet (3.1m)	-----
More than 50kv	10 feet (3.1m)	2 times the length of the line insulator, but never less than 10ft

***Uninsulated lines**

<u>Voltage</u>	<u>Minimum Distance</u>	<u>Alternatives</u>
Less than 50kv	10 feet (3.1m)	-----
More than 50kv	10 feet (3.1m) plus 0.4 inches (1.0cm) for Each 1kv over 50kv	2 times the length of the line insulator, but never less than 10ft

Exception: Scaffolds and materials may be closer to power lines than specified above where such clearance is necessary for performance of work, and only after the utility company, or electrical system operator, has been notified of the need to work closer and the utility company, or electrical system operator, has de-energized the lines, relocated the lines, or installed protective coverings to prevent accidental contact with the lines.

Scaffold Supports – mudsills and base plates shall be used for stability. No bricks or holed masonry blocks shall be used for support. The point loading may cause cracking and crumbling of bricks and scaffold collapse.

Scaffold Components, Stability and Construction:

- Use scaffold grade wood (planking) only
- Component pieces used must match and be of the same type
- Erect on stable level ground
- No painting the planking (opaque finishes may be used for weatherproofing)
- ONLY the end of the planks may be painted for company identification purposes
- All wheels must be locked (if equipped)
- All bracing must be secured
- Components, ground stability and scaffold areas must be inspected by a competent person – before use and periodically as weather, loading, use and construction activities demand
- The height of the scaffold should not be more than 4 times its minimum base dimension unless guys, ties or braces are used
- Each end of a platform, unless cleated or otherwise restrained by hooks, must extend over its support by at least 6 inches

Proper Scaffold Access

- Provide access when scaffold platforms are more than 2 feet above or below a point of access
 - Permitted types of access:
 - *Ladders, such as extension, portable, hook-on, attachable, and built-ins
 - When using ladders, bottom rung no more than 24 inches high
 - Stair towers
 - Ramps and walkways
 - May use building stairs and come out window
 - Can use some end frames (but must be designed as "ladder end frame")
 - Can access from another scaffold or structure
 - **No access by crossbraces**
- *If extension ladders are used they must be on firm level ground and extend at least three feet past the intended work platform for stability and handhold for mounting and dismounting. Ladders should be tied off for additional stability

Work Level Platforms must be:

- Fully planked or decked with no more than 1 inch gaps
- Able to support its weight & 4 times maximum load
- At least 18 inches wide
- No large gaps on working edge between scaffold and work
- Each abutted end of plank must rest on a separate support surface
- Overlap platforms at least 12 inches over supports unless restrained to prevent movement

Suspension Scaffolds

Platforms Suspended by Ropes or Wires.

- Competent person **MUST**:
 - Evaluate connections to ensure the supporting surfaces can support load
 - Inspect ropes for defects before shift
- Employees **MUST** be trained to recognize hazards
- Secured/tied to prevent swaying
- Support devices must rest on surfaces that can support four times the load
- Personal Fall Arrest System (PFAS) **MUST** have anchors independent of the scaffold support system
- Rope or wire must be capable of supporting 6 times the load

Mobile/Moving Scaffolds

Mobile or moving scaffolds are used primarily for indoor finish work and are sometimes referred to as a "Bakers" scaffold. These scaffolds normally are equipped with lockable caster/wheels and do not usually rise above 10 feet however, occasionally they can.

Competent person must be on site to inspect and supervise erection, dismantling and intended use.

Employees can't be on a moving scaffold unless the surface is level, free of floor holes and debris that may cause instability and toppling. When working from the platform all casters/wheels must be locked.

If the height to minimum base width ratio is more than 2 to 1, outriggers should be installed on one or both sides of scaffold to increase stability.

Competent Person

A Competent Person is one whom, by way of training and/or experience, is knowledgeable of applicable standards, is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees and who has authorization to take prompt corrective measures to eliminate them".

The competent person is often the person that trains workers to recognize hazards and selects qualified workers to conduct work.

The competent person inspects scaffolds for visible defects before each shift, periodically throughout the day and after any alterations.

Aerial Lifts - (Vehicle Mounted Elevating and Rotating Work Platforms)

Scissor Lifts that rise up and down over its own footprint are required to be equipped with a full guardrail system. If the guardrail system is intact then no additional fall protection is required unless it is required by an individual's company policy.

All Other Aerial Lifts - Bucket truck, boom lifts, articulating or knuckle boom lifts

Strictly observe the 10 foot clearance distance from all overhead power lines. If a shorter distance is needed to perform work the lines must be de-energized or insulated by the appropriate utility company.

Aerial ladders shall be secured in the lower traveling position by the locking device on top of the truck cab, and the manually operated device at the base of the ladder before the truck is moved for highway travel.

Lift controls shall be tested each day prior to use to determine that such controls are in safe working condition.

Only authorized persons shall operate an aerial lift.

Belting off to an adjacent pole, structure, or equipment while working from an aerial lift shall not be permitted.

Employees shall always stand firmly on the floor of the basket, and shall not sit or climb on the edge of the basket or use planks, ladders, or other devices for a work position.

A body harness shall be worn and a lanyard attached to the boom or basket when working from an aerial lift.

Boom and basket load limits specified by the manufacturer shall not be exceeded.

The brakes shall be set and when outriggers are used, they shall be positioned on pads or a solid surface. Wheel chocks shall be installed before using an aerial lift on an incline provided they can be safely installed.

An aerial lift truck shall not be moved when the boom is elevated in a working position with men in the basket, except for equipment which is specifically designed for this type of operation.

Articulating boom and extensible boom platforms, primarily designed as personnel carriers, shall have both platform (upper) and lower controls. Upper controls shall be in or beside the platform within easy reach of the operator. Lower controls shall provide for overriding the upper controls. Controls shall be plainly marked as to their function. Lower level controls shall not be operated unless permission has been obtained from the employee in the lift, except in case of emergency.

The insulated portion of an aerial lift shall not be altered in any manner that might reduce its insulating value.

Before moving an aerial lift for travel, the boom(s) shall be inspected to see that it is properly cradled and outriggers are in stowed position except as provided in paragraph (b)(2)(viii) of this section.

All aerial lifts shall be inspected prior to use including: mechanical components, hydraulics, proximity to overhead power lines, chocked wheels, out rigger set up and cribbing, as well as, control lever operation and response.

OSHA[®] FactSheet

Protecting Workers from the Effects of Heat

At times, workers may be required to work in hot environments for long periods. When the human body is unable to maintain a normal temperature, heat illnesses can occur and may result in death. It is also important to consider that hot work environments may exist indoors. This fact sheet provides information to employers on measures they should take to prevent worker illnesses and death caused by heat stress.

What is Heat Illness?

The following are illnesses that may result from exposure to heat in the workplace.

Heat Stroke is the most serious heat-related health problem. Heat stroke occurs when the body's temperature regulating system fails and body temperature rises to critical levels (greater than 104°F). ***This is a medical emergency that may result in death!*** The signs of heat stroke are confusion, loss of consciousness, and seizures. Workers experiencing heat stroke have a very high body temperature and may stop sweating. If a worker shows

Occupational Factors that May Contribute to Heat Illness

- High temperature and humidity
- Low fluid consumption
- Direct sun exposure (with no shade) or extreme heat
- Limited air movement (no breeze or wind)
- Physical exertion
- Use of bulky protective clothing and equipment

signs of possible heat stroke, ***get medical help immediately***, and call 911. Until medical help arrives, move the worker to a shady, cool area and remove as much clothing as possible. Wet the worker with cool water and circulate the air to speed cooling. Place cold wet cloths, wet towels or ice all over the body or soak the worker's clothing with cold water.

Heat Exhaustion is the next most serious heat-related health problem. The signs and symptoms of heat exhaustion are headache, nausea, dizziness, weakness, irritability, confusion, thirst, heavy sweating and a body temperature greater than 100.4°F. Workers with heat exhaustion should be removed from the hot area and given liquids to drink.

Cool the worker with cold compresses to the head, neck, and face or have the worker wash his or her head, face and neck with cold water. Encourage frequent sips of cool water. Workers with signs or symptoms of heat exhaustion should be taken to a clinic or emergency room for medical evaluation and treatment. Make sure that someone stays with the worker until help arrives. If symptoms worsen, call 911 and get help immediately.

Heat Cramps are muscle pains usually caused by the loss of body salts and fluid during sweating. Workers with heat cramps should replace fluid loss by drinking water and/or carbohydrate-electrolyte replacement liquids (e.g., sports drinks) every 15 to 20 minutes.

Heat Rash is the most common problem in hot work environments. Heat rash is caused by sweating and looks like a red cluster of pimples or small blisters. Heat rash may appear on the neck, upper chest, groin, under the breasts and elbow creases. The best treatment for heat rash is to provide a cooler, less humid work environment. The rash area should be kept dry. Powder may be applied to increase comfort. Ointments and creams should ***not*** be used on a heat rash. Anything that makes the skin warm or moist may make the rash worse.

Prevention Made Simple: Program Elements

Heat Illness Prevention Program key elements include:

- A Person Designated to Oversee the Heat Illness Prevention Program
- Hazard Identification
- Water. Rest. Shade Message
- Acclimatization
- Modified Work Schedules
- Training
- Monitoring for Signs and Symptoms
- Emergency Planning and Response

Designate a Person to Oversee the Heat Stress Program

Identify someone trained in the hazards, physiological responses to heat, and controls. This person can develop, implement and manage the program.

Hazard Identification

Hazard identification involves recognizing heat hazards and the risk of heat illness due to high temperature, humidity, sun and other thermal exposures, work demands, clothing or PPE and personal risk factors.

Identification tools include: OSHA's Heat [Smartphone App](#); a Wet Bulb Globe Thermometer (WBGT) which is a measure of heat stress in direct sunlight that takes into account temperature, humidity, wind speed, sun and cloud cover; and the National Weather Service [Heat Index](#). Exposure to full sun can increase heat index values up to 15°F.

Water.Rest.Shade

Ensure that cool drinking water is available and easily accessible. (Note: Certain beverages, such as caffeine and alcohol can lead to dehydration.)

Encourage workers to drink a liter of water over one hour, which is about one cup every fifteen minutes.

Provide or ensure that fully shaded or air-conditioned areas are available for resting and cooling down.

Acclimatization

Acclimatization is a physical change that allows the body to build tolerance to working in the heat. It occurs by gradually increasing workloads and exposure and taking frequent breaks for water and rest in the shade. Full acclimatization may take up to 14 days or longer depending on factors relating to the individual, such as increased risk of heat illness due to certain medications or medical conditions, or the environment.

New workers and those returning from a prolonged absence should begin with 20% of the workload on the first day, increasing incrementally by no more than 20% each subsequent day.

During a rapid change leading to excessively hot weather or conditions such as a heat wave, even experienced workers should begin on the first day of work in excessive heat with 50% of the normal workload and time spent in the hot environment, 60% on the second day, 80% on day three, and 100% on the fourth day.

Modified Work Schedules

Altering work schedules may reduce workers' exposure to heat. For instance:

- Reschedule all non-essential outdoor work for days with a reduced heat index.
- Schedule the more physically demanding work during the cooler times of day;
- Schedule less physically demanding work during warmer times of the day;
- Rotate workers and split shifts, and/or add extra workers.
- Work/Rest cycles, using established industry guidelines.
- Stop work if essential control methods are inadequate or unavailable when the risk of heat illness is very high.

Keep in mind that very early starting times may result in increased fatigue. Also, early morning hours tend to have higher humidity levels.

Training

Provide training in a language and manner workers understand, including information on health effects of heat, the symptoms of heat illness, how and when to respond to symptoms, and how to prevent heat illness.

Monitoring for Heat Illness Symptoms

Establish a system to monitor and report the signs and symptoms listed on the previous page to improve early detection and action. Using a buddy system will assist supervisors when watching for signs of heat illness.

Emergency Planning and Response

Have an emergency plan in place and communicate it to supervisors and workers. Emergency plan considerations include:

- What to do when someone is showing signs of heat illness. This can make the difference between life and death.
- How to contact emergency help.
- How long it will take for emergency help to arrive and training workers on appropriate first-aid measures until help arrives.
- Consider seeking advice from a healthcare professional in preparing a plan.

Engineering Controls Specific to Indoor Workplaces

Indoor workplaces may be cooled by using air conditioning or increased ventilation, assuming that cooler air is available from the outside. Other methods to reduce indoor temperature include: providing reflective shields to redirect radiant heat, insulating hot surfaces, and decreasing water vapor pressure, e.g., by sealing steam leaks and keeping floors dry. The use of fans to increase the air speed over the worker will improve heat exchange between the skin surface and the air, unless the air temperature is higher than the skin temperature. However, increasing air speeds above 300 ft. per min. may actually have a warming effect. Industrial hygiene personnel can assess the degree of heat stress caused by the work environment and make recommendations for reducing heat exposure.

Additional information

For more information on this and other issues affecting workers or heat stress, visit: www.osha.gov/heat; www.cdc.gov/niosh/topics/heatstress; and www.noaa.gov/features/earthhobs_0508/heat.html.

Workers have the right to working conditions that do not pose a risk of serious harm, to receive information and training about workplace hazards and how to prevent them, and to file a complaint with OSHA to inspect their workplace without fear of retaliation.

For more information about workers' rights, see OSHA's workers page at www.osha.gov/workers.html.

This is one in a series of informational fact sheets highlighting OSHA programs, policies or standards. It does not impose any new compliance requirements. For a comprehensive list of compliance requirements of OSHA standards or regulations, refer to Title 29 of the Code of Federal Regulations. This information will be made available to sensory-impaired individuals upon request. The voice phone is (202) 693-1999; teletypewriter (TTY) number: (877) 889-5627.

For assistance, contact us. We can help. It's confidential.



www.osha.gov (800) 321-OSHA (6742)



U.S. Department of Labor

Facts about Sun Exposure and Heat Stress

- Sun exposure at any age can cause skin cancer and eye damage.
- Some adults are at extra risk of sun damage if they freckle or burns before tanning, have many moles, have fair skin or light-colored hair, or spend a lot of time outdoors.
- High temperature and humidity, direct sun and heat, limited air movement, physical exertion, and poor physical condition can cause heat stress.
- Symptoms of heat-related illness include headache, dizziness, weakness, moist or dry hot skin, confusion, vomiting and seizures.

Tips to Beat the Summer Sun and Heat

- Wear clothing that blocks light, and covers as much skin as possible. Clothing should be light and loose-fitting to protect against heat stress.
- Use sunscreen with an SPF of 15 or higher, applying it liberally, and reapplying it every 2 hours when sweating heavily.
- Wear a wide-brim hat and sunglasses that block UV rays.
- Limit direct sun exposure and seek shade whenever possible.
- Drink plenty of cool water.
- Avoid caffeinated drinks, which make the body lose water, and also avoid heavy meals.
- Take frequent, short breaks in cool, shaded areas.
- Build up tolerance to the heat and work activity without over-exertion.
- Perform the heaviest work during the coolest part of the day.
- Tell co-workers if feeling ill.



Rodents, Snakes and Insects

Insects, Spiders and Ticks

- To protect yourself from biting and stinging insects, wear long pants, socks, and long-sleeved shirts.
- Use insect repellents that contain DEET or Picaridin.
- Treat bites and stings with over-the-counter products that relieve pain and prevent infection.
- Avoid fire ants; their bites are painful and cause blisters.
- Severe reactions to fire ant bites (chest pain, nausea, sweating, loss of breath, serious swelling or slurred speech) require immediate medical treatment.

Rodents and Wild or Stray Animals

- Dead and live animals can spread diseases such as Rat Bite Fever and Rabies.
- Avoid contact with wild or stray animals.
- Avoid contact with rats or rat-contaminated buildings. If you can't avoid contact, wear protective gloves and wash your hands regularly.
- Get rid of dead animals as soon as possible.
- If bitten/scratched, get medical attention immediately.

Snakes

- Watch where you place your hands and feet when removing debris. If possible, don't place your fingers under debris you are moving. Wear heavy gloves.
- If you see a snake, step back and allow it to proceed.
- Wear boots at least 10 inches high.
- Watch for snakes sunning on fallen trees, limbs or other debris.
- A snake's striking distance is about 1/2 the total length of the snake.
- If bitten, note the color and shape of the snake's head to help with treatment.
- Keep bite victims still and calm to slow the spread of venom in case the snake is poisonous. Seek medical attention as soon as possible.
- Do not cut the wound or attempt to suck out the venom. Apply first aid: lay the person down so that the bite is below the level of the heart, and cover the bite with a clean, dry dressing.

For more complete information:



Occupational
Safety and Health
Administration

U.S. Department of Labor

www.osha.gov (800) 321-OSHA

OSHA 3274-09N-05

Poisonous Plants

Poison ivy, western poison oak and poison sumac have poisonous sap (urushiol) in their roots, stems, leaves and fruits. The sap is released when the plant is bruised, making it easier to contact Rhus- dermatitis in the early spring and summer when the leaves are tender. Therefore, brushing against an intact plant will not cause a reaction. However, these plants are very fragile. Stems or leaves can be damaged by the wind, animals or insects. The sap (urushiol) may be deposited on the skin by direct contact with the plant or by contact with contaminated objects, such as clothing, shoes, tools, and animals.

Approximately 85 percent of the general population will develop an allergy if exposed to these plants. The sensitivity to the sap usually develops after several encounters with poison ivy, oak, or sumac. Forestry workers even have developed rashes or lung irritations from inhaling the smoke of burning plants.

Potential Hazards:

- **Poison Ivy:**

Grows everywhere in United States except Hawaii and Alaska. In the East, Midwest, and the South, it grows as a vine. In the Northern and Western United States, it grows as a shrub. Each leaf has three leaflets. Leaves are green in the summer and red in the fall. In the late summer and fall, white berries may grow from the stems.

- **Poison Oak:**

Oak-like fuzzy leaves in clusters of three. It has two distinct kinds: Eastern poison oak (New Jersey to Texas) grows as a low shrub. Western poison oak (Pacific Coast) grows to six-foot-tall clumps or vines up to 30 feet long. It may have clusters of yellow berries.

- **Poison Sumac:**

Grows in standing water in peat bogs in the Northeast and Midwest and in swampy areas in parts of the Southeast. Each leaf has clusters of seven to 13 smooth-edged leaflets. The plants can grow up to 15 feet tall. The leaves are orange in spring, green in summer and red, and orange or yellow in fall. There may be clumps of pale yellow or cream-colored berries.

Signs and Symptoms

- Itching

- Redness
- Burning sensation
- Swelling
- Blisters
- Rash (may take up to 10 days to heal)

Possible Solutions and Control

- Wear long-sleeved shirts and long pants, tucked into boots. Wear cloth or leather gloves.
- Apply barrier creams to exposed skin.
- Educate workers on the identification of poison ivy, oak, and sumac plants.
- Educate workers on signs and symptoms of contact with poisonous ivy, oak, and sumac.
- Keep rubbing alcohol accessible. It removes the oily resin up to 30 minutes after exposure.

