

Sample Hazard Assessment Plan

OSHA requires employers to assess their workplace to determine if any actual or potential hazards require the use of personal protective equipment (PPE). The regulations require that the employer identify hazards and verify the assessment in writing. OSHA requires employers to first eliminate or reduce (if elimination is not possible) hazards through engineering controls and administrative (work practice) controls before using PPE for hazard protection.

Employers must also:

- select PPE to protect employees
- require employees to use selected PPE
- provide necessary training to employees
- not use damaged or defective PPE

This sample plan includes:

- general guidelines for hazard review and assessment
- general guidelines for eye and face protection
- general guidelines for head protection
- general guidelines for foot protection
- general guidelines for hand protection
- a certification of hazard assessment
- employee training and certification

Employers Covered

All employers are required to conduct a hazard assessment.

Related Plan

Every employer must also require employees to wear respirators when necessary to protect their health. Any employer whose employees must wear a respirator as a protective device is also required to develop and implement a separate respirator plan. A sample Respiratory Protection Plan is available from Summers Press in its *Sample Safety Plans* on CD.

Legal Sources

This sample Hazard Assessment Plan follows the OSHA requirement for a written hazard assessment found in 29 CFR 1910.132.

HAZARD ASSESSMENT PLAN

company name

street address

city

state

ZIP code

Hazard assessment certified by:

print name of preparer

title

phone number

signature

date

GENERAL REQUIREMENTS

OSHA requires employers to assess their workplaces to determine if any hazards require the use of personal protective equipment (PPE). Protective equipment must be used whenever hazards or processes of the environment, chemical hazards, radiological hazards, or mechanical irritants could cause injury or impairment through absorption, inhalation, or physical contact.

The employer must identify hazards that are either actually present or likely to be present. If such hazards exist, the employer must:

- select the types of PPE that will protect against the identified hazards
- verify the hazard assessment in writing
- inform employees of the PPE that is selected by the employer
- require employees to use the selected PPE
- ensure that any PPE provided to employees is of the correct type and properly fits each employee
- provide training to each employee who is required to use PPE
- not use damaged or defective PPE

Reassessment of Hazards

The safety officer is required to reassess the workplace hazard situation as necessary by:

- identifying and evaluating new equipment and processes;
- reviewing accident records; and
- reevaluating the suitability of previously selected PPE.

CONTROLLING HAZARDS – IN GENERAL

PPE devices alone should not be relied on to provide protection against hazards. They should be used in conjunction with guards, engineering controls, and sound manufacturing practices. In fact, employers should first attempt to eliminate or reduce hazards through engineering and administrative controls. PPE should be used if the engineering and administrative controls cannot provide complete protection.

ASSESSMENT AND SELECTION – IN GENERAL

General guidelines should be followed for assessing the foot, head, eye and face, and hand hazards that exist in an operation or process and for matching the protective devices to the particular hazard. The safety officer has the responsibility to exercise common sense and appropriate knowledge to make the assessment and selection. To assess the need for PPE, the following guidelines should be followed:

Conduct Survey

A walk-through survey of the areas in question should be conducted. The survey helps identify sources of hazards to workers. Consideration should be given to the following basic hazard categories:

- impact
- penetration
- compression (roll-over)
- chemical
- heat
- harmful dust
- light (optical) radiation

Observe Sources Of Hazards

During the walk-through survey, the safety officer should observe:

- sources of motion (e.g., machinery or processes where any movement of tools, elements, or particles could exist or movement of personnel could result in collision with stationary objects)
- sources of high temperatures that could result in burns, eye injury, ignition of protective equipment, etc.
- types of chemical exposures
- sources of harmful dust
- sources of light radiation, i.e., welding, brazing, cutting, furnaces, heat treating, high intensity lights, etc.
- sources of falling objects or potential for dropping objects
- sources of sharp objects that might pierce the feet or cut the hands
- sources of rolling or pinching objects that could crush the feet
- layout of workplace and location of workers
- any electrical hazards

Review Injury/Accident Data

In addition to the walk-through survey, injury/accident data should be reviewed to help identify problem areas.

Organize Data

Following the walk-through survey and review of injury/accident data, the information must be organized for the hazard assessment. Organization of the information aids in the analysis of the hazards in the environment. This in turn helps ensure proper selection of protective equipment.

Analyze Data

After workplace data has been gathered and organized, an estimate of the potential for injuries should be made. Each of the basic hazards should be reviewed and a determination made for each of the hazards found in the area as to:

- the type of hazard;
- level of risk; and
- seriousness of potential injury.

The possibility of exposure to several hazards simultaneously must be considered.

GUIDELINES FOR SELECTION AND USE OF PPE – IN GENERAL

- Become familiar with the potential hazards and the type and effectiveness of protective equipment available (e.g., splash protection, impact protection, etc.).
- Be sure to recognize the possibility of multiple and simultaneous exposure to a variety of hazards. For example, operations involving heat may also involve light radiation. Protection from both hazards must be provided.
- Select the protective equipment that ensures a level of protection greater than the minimum required to protect employees from the hazards. Adequate protection against the highest level of each of the hazards should be provided. **Protective devices do not provide unlimited protection, however.**
- Compare the hazards associated with the environment (e.g., impact velocities, masses, projectile shape, radiation intensities) with the capabilities of the available PPE.
- Fit the user with the protective device and give instructions on care and use of the PPE. It is very important that end users are made aware of all warning labels for and limitations of their PPE.

Fitting the Device

Careful consideration must be given to comfort and fit. PPE that fits poorly will not afford the necessary protection. In addition, continued wearing of the devices by employees is more likely if they fit the wearers comfortably.

Protective devices are generally available in a variety of sizes. Care must be taken to make sure that the right size is selected.

Devices with Adjustable Features

Individual adjustments should be made to provide a comfortable fit and maintain the protective device in the proper position. Particular care must be taken in fitting devices for eye protection against dust and chemical splash to ensure that they are sealed to the face. In addition, proper fitting of helmets helps ensure that they will not fall off during work operations. In some cases, a chin strap may be necessary to keep the helmet on an employee's head. (Chin straps should break at a reasonably low force, however, so as to prevent a strangulation hazard.) If manufacturer's instructions are available, they must be followed carefully.

EYE AND FACE PROTECTION – GENERAL GUIDELINES

1. Employees must use appropriate eye or face protection when exposed to hazards from:
 - flying particles
 - molten metal
 - liquid chemicals
 - acids or caustic liquids
 - chemical gases or vapors
 - potentially injurious light radiation

2. Protective eye and face devices purchased on or after July 5, 1994, must comply with ANSI Z87.1-1989 or be equally effective. Devices purchased before that date and employers subject to OSHA's construction industry standards must comply with ANSI Z87.1-1968 or be equally effective.
3. Face-shields should be worn only over primary eye protection (spectacles or goggles).
4. Persons whose vision requires the use of prescription lenses must wear either protective devices fitted with prescription lenses or protective devices designed to be worn over regular prescription eyewear.
5. Wearers of contact lenses must also wear appropriate eye and face protection devices in a hazardous environment. Dusty and chemical environments may represent an additional hazard to contact lens wearers.
6. Some occupations (not a complete list) for which eye and face protection should be routinely considered are:
 - automotive technicians
 - body shop workers
 - carpenters
 - sanders
 - electricians
 - grinding machine operators
 - machinists
 - lathe operators
 - mechanics
 - milling machine operators
 - repairers
 - sawyers
 - millwrights
 - welders
 - plumbers
 - laborers
 - pipe fitters
 - chemical process operators
 - sheet metal workers
 - chemical handlers
 - tinsmiths
 - timber cutters
 - assemblers
 - logging workers

7. The following chart provides general guidance for the selection of eye and face protection to protect against hazards associated with the listed hazard “source” operations:

EYE AND FACE PROTECTION SELECTION CHART

SOURCE	ASSESSMENT OF HAZARD	PROTECTION
IMPACT – chipping, grinding, machining, masonry work, woodworking, sawing, drilling, chiseling, powered fastening, riveting, and sanding	flying fragments, objects, large chips, particles, sand, dirt, etc.	spectacles with side protection, goggles, face-shields; for severe exposure, use face-shield
HEAT – furnace operations, pouring, casting, hot dipping, and welding	hot sparks	face-shields, goggles, spectacles with side protection; for severe exposure, use face-shield
	splash from molten metals	face-shields worn over goggles
	high temperature exposure	screen face-shields, reflective face-shields
CHEMICALS – acid and chemicals handling, degreasing, plating	splash	goggles, eyecup and cover types; for severe exposure, use face-shield
	irritating mists	special-purpose goggles
DUST – woodworking, buffing, general dusty conditions	nuisance dust	goggles, eyecup and cover types
LIGHT AND/OR RADIATION – welding: electric arc welding: gas cutting, torch; brazing, torch; soldering glare	optical radiation	welding helmets or welding shields; typical shades: gas welding 4-8, cutting 3-6, brazing 3-4
	optical radiation	welding goggles or welding face-shield; typical shades: gas welding 4-8, cutting 3-6, brazing 3-4
	optical radiation	spectacles or welding face-shield; typical shades: 1.5-3
	poor vision	spectacles with shaded or special-purpose lenses, as suitable

8. The chart below provides general guidance for the selection of eye protection to protect against radiant energy:

FILTER LENSES FOR PROTECTION AGAINST RADIANT ENERGY

MINIMUM OPERATIONS	ELECTRODE SIZE 1/32 INCH	ARC CURRENT	PROTECTIVE SHADE
Shielded metal arc welding	less than 3	less than 60	7
	3-5	60-160	8
	5-8	160-250	10
	more than 8	250-550	11
Gas metal arc welding and flux cored arc welding		less than 60	7
		60-160	10
		160-250	10
		250-500	10
Gas tungsten arc welding		less than 50	8
		50-150	8
		150-500	10
Air carbon Arc cutting	(light)	less than 500	10
	(heavy)	500-1000	11
Plasma arc welding		less than 20	6
		20-100	8
		100-400	10
		400-800	11
Plasma arc cutting	(light)	less than 300	8
	(medium)	300-400	9
	(heavy)	400-800	10
Torch brazing			3
Torch soldering			2
Carbon arc welding			14

OPERATIONS	PLATE THICKNESS (INCHES)	PLATE THICKNESS (MM)	PROTECTIVE SHADE	
Gas Welding:				
	Light	under 1/8 in.	under 3.2 mm	4
	Medium	1/8 to 1/2 in.	3.2 to 12.7 mm	5
Heavy	over 1/2 in.	over 12.7 mm	6	
Oxygen cutting:				
	Light	under 1 in.	under 25 mm	3
	Medium	1 to 6 in.	25 to 150 mm	4
Heavy	over 6 in.	over 150 mm	5	

HEAD PROTECTION – GENERAL GUIDELINES

1. Protective helmets purchased on or after July 5, 1994, must comply with ANSI Z89.1-1986 or be equally effective. Helmets purchased before that date and employers subject to OSHA's construction industry standards must comply with ANSI Z89.1-1969 or be equally effective.
2. Employees must wear protective helmets when working in areas where there is a potential for a head injury from falling objects. All helmets must be designed to provide this protection.

Some examples include:

- working below other workers who are using tools and materials that could fall
 - working around or under conveyor belts that are carrying parts or materials
 - working below machinery or processes that might cause material or objects to fall
 - working on exposed energized conductors
3. Examples (not a complete list) of occupations for which some form of head protection should be routinely considered are:
 - laborers
 - auto body shop workers
 - carpenters
 - electricians
 - automotive technicians
 - sawyers
 - linemen
 - welders
 - mechanics
 - laborers
 - freight handlers
 - repairers
 - plumbers
 - timber cutters
 - pipe fitters
 - logging workers
 - stock handlers
 - assemblers
 - packers
 - warehouse laborers
 - wrappers

4. When selecting head protection, electrical shock and burn hazards must be guarded against as well as dangers from falling objects. Protective helmets designed to reduce electrical shock hazards must be worn by each affected employee when electrical conductors or other electrical hazards could contact the head.

In selecting head protection, knowledge of potential electrical hazards is essential.

- Class A helmets – in addition to impact and penetration resistance, provide electrical protection from low-voltage conductors. (They are proof tested to 2,200 volts.)
- Class B helmets – in addition to impact and penetration resistance, provide electrical protection from high-voltage conductors. (They are proof tested to 20,000 volts.)
- Class C helmets – provide impact and penetration resistance, but they are usually made of aluminum, which conducts electricity. They should not be used around electrical hazards.

HEAD PROTECTION – SELECTION

An assessment of this facility has been completed in accordance with the above Head Protection – General Guidelines, including the applicable ANSI standards. Employees _____ required to wear head protection.
are/are not

PPE of the type specified will be used in the specific situations and locations listed below:

FOOT PROTECTION – GENERAL GUIDELINES

1. Employees must wear protective footwear (safety shoes and boots) when working in areas where there is a danger of foot injuries from:
 - falling or rolling objects
 - objects piercing the sole
 - exposure of employees' feet to electrical hazards

Protective footwear purchased on or after July 5, 1994, must comply with ANSI Z41.1-1991 or be equally effective. Protective footwear purchased before that date and employers subject to OSHA's construction industry standards must comply with ANSI Z41.1-1967 or be equally effective.

2. Protective footwear must provide both impact and compression protection. Safety shoes or boots with impact protection would be required, for example, for workers carrying or handling materials such as packages, objects, parts, or heavy tools that could be dropped, and for other workers performing activities during which objects might fall onto the feet. Safety shoes or boots with compression protection would be required, for example, for work activities involving skid trucks (manual material handling carts), around bulk rolls (such as paper rolls), and heavy pipes, all of which could potentially roll over an employee's feet.
3. Where necessary, safety shoes must also provide puncture protection. An example would be the situation where sharp objects (such as nails, wire, tacks, screws, large staples, scrap metal, etc.) could be stepped on by employees and cause a foot injury.
4. In some special situations, metatarsal protection is required. In others, electrical conductive or insulating safety shoes would be necessary.

5. Some occupations (not a complete list) for which foot protection should be routinely considered are:

- automotive technicians
- shipping clerks
- receiving clerks
- stock clerks
- carpenters
- electricians
- machinists
- mechanics
- repairers
- plumbers
- pipe fitters
- structural metal workers
- body shop workers
- helpers
- assemblers
- drywall installers
- lathe operators
- packers
- wrappers
- craters
- punch operators
- stamping press operators
- gas station attendants
- sawyers
- welders
- laborers
- freight handlers
- gardeners
- groundskeepers
- timber cutters
- logging workers
- stock handlers
- warehouse laborers

FOOT PROTECTION – SELECTION

An assessment of this facility has been completed in accordance with the above Foot Protection – General Guidelines, including the applicable ANSI standards. Employees

_____ required to wear foot protection.
are/are not

PPE of the type specified will be used in the specific situations and locations listed below:

HAND PROTECTION – GENERAL GUIDELINES

1. Employers must require employee use of appropriate hand protection whenever employees' hands are exposed to hazards from:
 - skin absorption of harmful substances
 - severe cuts or lacerations
 - severe abrasions
 - punctures
 - chemical burns
 - thermal burns
 - harmful temperature extremes

2. Employers will select appropriate hand protection based on an evaluation of:
 - the performance of the hand protection relative to the tasks to be performed;
 - the conditions present;
 - the duration of use; and
 - the actual and potential hazards identified.

3. Gloves are often relied on to prevent cuts, abrasions, burns, and skin contact with chemicals that can cause local or systemic effects following skin exposure. We are unaware of any gloves that provide complete protection against all potential hand hazards. Commonly available glove materials provide only limited protection against many chemicals. It is important to:
 - select the most appropriate glove for a particular application;
 - determine how long it can be worn; and
 - determine whether it can be reused.

HAND PROTECTION – SELECTION

An assessment of this facility has been completed in accordance with the above Hand Protection – General Guidelines, including the applicable ANSI standards. Employees _____ required to wear hand protection.
are/are not

PPE of the type specified will be used in the specific situations and locations listed below:

REQUIRED TRAINING – IN GENERAL

The employer must provide training to each employee required to use PPE. Training will include:

- when PPE is necessary
- what PPE is necessary
- how to wear PPE
- the limitations of PPE
- proper care, maintenance, useful life, and disposal of PPE

The employer must certify in writing that the employee has received and understands the training. The certification record will identify:

- each employee trained
- the dates of training
- the document that establishes Certification of Training in the use of PPE

When an employee who is already trained no longer has the understanding or skill to be protected from hazards, the employer must retrain the employee. Circumstances requiring retraining include:

- changes in the workplace that render previous training obsolete
- changes in the types of PPE that render previous training obsolete
- the employee's failure to continue to correctly use the assigned PPE

TRAINING CERTIFICATION RECORD

For _____
identify subject of PPE training

company

_____ date _____ trainer

This certifies that the following employees received training on the proper use of necessary PPE on the dates listed below:

Date	Name	Social Security No.	Signature
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____