

HAZARD ASSESSMENT SURVEY

For

University of Virginia Departments

Required by the Occupational Safety & Health
Administration (OSHA) Personal Protective
Equipment Standard
(29 CFR 1910.132-138)

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HAZARD ASSESSMENT AND PERSONAL PROTECTIVE EQUIPMENT (PPE) SELECTION

Work Location or Operation:	_____	
Date Worksite Assessment:	_____	
Worksite Assessment performed by:	_____	_____
	(name)	(title)
	_____	_____
	(name)	(title)

Conduct a walk through survey of the area and/or operations you supervise to identify sources of hazards or potential hazards to employees. Remember hazards should always be controlled to the fullest extent to protect employees. Engineering controls such as machine guards, ventilation or isolation of the process from the employee would be the primary means to control hazards. When these are not feasible for full employee protection, PPE may be required. Appendixes (1) **Eye and Face Protection Selection Chart**, (2) **Filter Lenses for Protection Against Radiant Energy**, and (3) **Recommended PPE for Occupations** are included to assist in the selection of appropriate PPE.

- Basic hazard categories to consider during the Hazard Assessment Survey:
- | | |
|---------------------------------|-------------------------------------|
| 1. IMPACT | 5. HEAT |
| 2. PENETRATION | 6. HARMFUL DUST |
| 3. COMPRESSION, ROLLOVER | 7. LIGHT (OPTICAL) RADIATION |
| 4. CHEMICAL | 8. ELECTRICAL |

1. IMPACT HAZARD CATEGORY

Forceful Collision or Contact; (1) Machinery or processes where any movement of tools, machine elements or particles could exist (example: milling, drilling, sawing, powder actuated fastening systems, grounds keeping). (2) Movement of personnel could result in collision with stationary or moving objects (example: material handling).

please mark yes or no

(A) Impact or potential impact hazards exist?
No? Continue with (2) PENETRATION. _____

(B) Are hazards being controlled with guards, engineering controls
or other effective means? _____

(C) If NO, is it feasible to implement these controls? _____
Recommendations: _____

(D) Is PPE currently assigned and provided for employees exposed to impact hazards? _____

If Yes:

(1) Is equipment designed, constructed safely and adequate
for the work task? _____

(2) Has equipment been properly fitted to the employee? _____

(3) Is equipment routinely cleaned and inspected by
assigned employees to ensure proper functioning
of equipment? _____

(4) Is damaged equipment promptly removed from service? _____

(5) Are employees assigned to wear PPE for impact hazards competent
in putting on, removing, adjusting, wearing, cleaning and inspecting the
equipment as well as limitations of equipment? _____

If No, recommended PPE: _____

PPE ANSI specifications (if applicable): _____

<p>A no response to (D), when PPE is necessary, will require <u>employee training</u> on selected PPE. Training should cover items D(1) through D(5)for employee proficiency.</p>
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2. PENETRATION HAZARD CATEGORY

Sources of sharp objects that could pierce feet or hands, (i.e. construction, renovation and demolition areas where debris could include nails and tacks) or cut hands, (i.e. handling cutting tools, sharp edged metal or rough lumber).

please mark yes or no

(A) Penetration or potential penetration hazards exist?
No? Continue with (3)COMPRESSION (Roll Over). _____

(B) Are hazards being controlled with guards, engineering controls or other effective means? _____

If NO, is it feasible to implement these controls? _____

Recommendations: _____

(C) Is PPE currently assigned and provided for employees exposed to penetration hazards? _____

If Yes:

(1) Is equipment designed, constructed safely and adequate for the work task? _____

(2) Has equipment been properly fitted to the employee? _____

(3) Is equipment routinely cleaned and inspected by assigned employees to ensure proper functioning of equipment? _____

(4) Is damaged equipment promptly removed from service? _____

(5) Are employees assigned to wear PPE for penetration hazards competent in putting on, removing, adjusting, wearing, cleaning and inspecting the equipment as well as limitations of the equipment? _____

If No, recommended PPE: _____

PPE ANSI specifications(if applicable): _____

A no response to (C), when PPE is necessary, will require employee training on selected PPE. Training should cover items C(1) through C(5) for employee proficiency.

3. COMPRESSION (ROLL OVER) HAZARD CATEGORY

Sources for falling or dropping objects, moving objects (i.e. - material handling, warehouses and construction, renovation or demolition sites.) Pinch or grab points for hands.

please mark yes or no

(A) Compression (roll over) hazards exist? _____
No? Continue with (4) CHEMICAL. _____

(B) Are hazards being controlled with guards, engineering controls or other effective means? _____

If NO, is it feasible to implement these controls? _____

Recommendations: _____

(C) Is PPE currently assigned and provided for employees exposed to compression (roll over) hazards? _____

If Yes:

(1) Is equipment designed, constructed safely and adequate for the work task? _____

(2) Has equipment been properly fitted to the employee? _____

(3) Is equipment routinely cleaned and inspected by assigned employees to ensure proper functioning of equipment? _____

(4) Is damaged equipment promptly removed from service? _____

(5) Are employees assigned to wear PPE for compression (roll over) hazards and falling objects competent in putting on, removing, adjusting, wearing, cleaning and inspecting the equipment as well as limitations of the equipment? _____

If No, recommended PPE: _____

PPE ANSI specifications (if applicable): _____

<p>A no response to (C), when PPE is necessary, will require <u>employee training</u> on selected PPE. Training should cover items C (1) through C(5) for employee proficiency.</p>
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4. CHEMICAL HAZARD CATEGORY

Chemical handling (i.e. - mixing, diluting, application. lab procedures).

(A) Chemical hazards or potential chemical release hazards exist? **please mark yes or no**
No? Continue with (5) HEAT. _____

(B) Are operations performed in poorly ventilated areas? _____

(C) Could work operations involve an accidental release or spill? _____

(D) Are hazards being controlled with engineering controls (i.e. ventilation, chemical process containment)? _____

If no, is it feasible to implement these controls? _____

Recommendations: _____

(E) Is PPE currently assigned and provided for employees exposed to chemical

hazards? _____

If Yes:

(1) Is equipment designed, constructed safely and adequate for the work task? _____

(2) Has equipment been properly fitted to the employee? _____

(3) Is equipment routinely cleaned and inspected by assigned employees to ensure proper functioning of equipment? _____

(4)a. Is damaged equipment promptly removed from service? _____

(4)b. Is contaminated equipment or spills properly disposed of? _____
Consult with Material Safety Data Sheet (MSDS) Spill and Disposal Precautions Section or Office of EHS Chemical Waste Division (2-4911).

(5) Are employees assigned to wear PPE for chemical hazards competent in putting on, removing, adjusting, wearing, cleaning and inspecting the equipment as well as limitations of the equipment? _____

If No, recommended PPE: _____

PPE ANSI specifications (if applicable): _____

A no response to (E) when PPE is necessary, will require <u>employee training</u> on selected PPE. Training should cover items E(1) through E(5) for employee proficiency.

5. HEAT HAZARD CATEGORY

Sources of high heat temperature that could result in burn, eye injuries or ignition of PPE.

please mark yes or no

(A) Heat hazards present? _____
No? Continue with (6) HARMFUL DUST. _____

(B) Are hazards being controlled with guards, engineering controls or other effective means? _____

If NO, is it feasible to implement these controls? _____

Recommendations: _____

(C) Is PPE currently assigned and provided for employees exposed to heat hazards? _____

If Yes:

- (1) Is equipment designed, constructed safely and adequate for the work task? _____
- (2) Has equipment been properly fitted to the employee? _____
- (3) Is equipment routinely cleaned and inspected by assigned employees to ensure proper functioning of the equipment? _____
- (4) Is damaged equipment promptly removed from service? _____
- (5) Are employees assigned to wear PPE for heat hazards competent in putting on, removing, adjusting, wearing, cleaning and inspecting the equipment as well as limitations of the equipment? _____

If No, recommended PPE: _____

PPE ANSI specifications (if applicable): _____

A no response to (C), when PPE is necessary, will require employee training on selected PPE. Training should cover items C(1) through C(5) for employee proficiency.

6. HARMFUL DUST HAZARD CATEGORY

Sources (i.e. - machine operations, carpentry shop, plastic fabrication, demolition activities).

please mark yes or no

- (A) Harmful dust hazards exist?
No? Continue with (7) LIGHT (OPTICAL) RADIATION. _____

- (B) Are hazards being controlled with guards, engineering controls or other effective means? _____

If NO, is it feasible to implement these controls? _____

Recommendations: _____

- (C) Is PPE currently assigned and provided for employees exposed to harmful dust hazards? _____

If Yes:

- (1) Is equipment designed, constructed safely and adequate for the work task? _____

- (2) Has equipment been properly fitted to the employee? _____
- (3) Is equipment routinely cleaned and inspected by assigned employees to ensure proper functioning of the equipment? _____
- (4) Is damaged equipment promptly removed from service? _____
- (5) Are employees assigned to wear PPE for harmful dust competent in putting on, removing, adjusting, wearing, cleaning and inspecting the equipment as well as limitations of the equipment? _____

If No, recommended PPE: _____
 PPE ANSI specifications (if applicable): _____

A no response to (C), when PPE is necessary, will require employee training on selected PPE. Training should cover items C(1) through C(5) for employee proficiency.

7. LIGHT (OPTICAL) RADIATION HAZARD CATEGORY

Sources (i.e., welding, brazing, cutting, furnaces, heat treating, high intensity lights, lasers).

please mark yes or no

(A) Light (optical) radiation hazards exist?
 No? Continue with (8) ELECTRICAL. _____

(B) Are hazards being controlled with guards, engineering controls or other effective means ? _____

If NO, is it feasible to implement these controls? _____

Recommendations: _____

(C) Is PPE currently assigned and provided for employees exposed to light (optical) radiation hazards? _____

If Yes:

(1) Is equipment designed, constructed safely and adequate for the work task? _____

(2) Has equipment been properly fitted to the employee? _____

(3) Is equipment routinely cleaned and inspected by assigned employees to ensure proper functioning of the equipment? _____

(4) Is damaged equipment promptly removed from service? _____

- (5) Are employees assigned to wear PPE for light (optical) radiation hazards competent in putting on, removing, adjusting, wearing, cleaning and inspecting the equipment as well as limitations of the equipment? _____

If No, recommended PPE: _____

PPE ANSI specifications (if applicable): _____

A no response to (C), when PPE is necessary, will require employee training on selected PPE. Training should cover items C(1) through C(5) for employee proficiency.

8. ELECTRICAL HAZARDS CATEGORY

Sources (i.e., working with or close to exposed energized parts).

- | | |
|---|------------------------------|
| | please mark yes or no |
| (A) Are employees' work areas or work tasks located a safe distance away from energized parts? | _____ |
| (B) If electrical hazards are present can the work area become wet or be susceptible to inclement weather? | _____ |
| (C) Are employees instructed to de-energize equipment before performing repairs with lock-out/tag-out procedures? | _____ |
| (D) Are electrical power tools, electrical cords, plugs and receptacles routinely inspected for defects? | _____ |
| (E) Is damaged equipment promptly removed from use? | _____ |

- Remember** ☞ Employees must be provided with non conductive head protection (class A and B) whenever there is danger of head injury from electric shock or burns due to contact with exposed energized parts.
- ☞ Employees must be provided with eye and face protective equipment whenever there is danger of injury from electric arcs or flashes or from flying objects resulting from electrical explosion.
- ☞ All unsafe electrical hazard conditions must be reported and corrected.

Reference: OSHA 1910.331-335 Electrical Safety Related Work Practices.
 Training requirements must be met for qualified and unqualified employees on

safeguards and electrical personal protective equipment.

APPENDIX (1)

[Eye Protection Guidelines](#) - American National Standard Z87.1-2003; Courtesy of National Institute of Occupational Safety and Health

APPENDIX (2)

Filter Lenses for Protection Against Radiant Energy – OSHA 1910.133 Eye and Face Protection Chart

Operations	Electrode Size 1/32 in.	Arc Current	Minimum(*) 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

Filter Lenses for Protection Against Radiant Energy

Operations	Plate thickness-inches	Plate thickness-mm	Minimum(*) Protective Shade
Gas Welding:			
Light	Under 1/8	Under 3.2	4
Medium	1/8 to 1/2	3.2 to 12.7	5
Heavy	Over 1/2	Over 12.7	6
Oxygen cutting:			
Light	Under 1	Under 25	3
Medium	1 to 6	25 to 150	4
Heavy	Over 6	Over 150	5

Footnote(*) As a rule of thumb, start with a shade that is too dark to see the weld zone. Then go to a lighter shade which gives sufficient view of the weld zone without going below the minimum. In oxyfuel gas welding or cutting where the torch produces a high yellow light, it is desirable to use a filter lens that absorbs the yellow or sodium line in the visible light of the (spectrum) operation.

Footnote(**) These values apply where the actual arc is clearly seen. Experience has shown that lighter filters may be used when the arc is hidden by the workpiece.

APPENDIX (3)

29 CFR Part 1910.132-.138 Personal Protective Equipment For General Industry – Some Occupations (Not A Complete List) For Which The Following Personal Protective Equipment (PPE) Should Be Routinely Considered

OCCUPATION	EYE AND FACE	HEAD	FOOT
Assemblers	x	X	x
Carpenters	x	X	x
Chemical Process Operators and Handlers	x		
Craters			x
Drywall installer and Lathers			x
Electricians	x	X	x
Freight Handlers		X	x
Gardeners and Grounds-Keepers	* x		x
Grinding Machine Operators	x		
Laborers	x	X	x
Lathe and Milling Machine Operators	x		
Lineman		X	
Machinists	x	X	x
Mechanics and Repairers	x	X	x
Millwrights	x		
Packers		x	x
Plumbers and Pipe Fitters	x	X	x
Punch and Stamping Press Operators			x
Sanders	x		
Sawyers	x	X	x
Sheet metal Workers	x		
Shipping and Receiving Clerks			x
Stock Clerks			x
Stock Handlers		X	x

Structural Metal Workers	x		x
Timber Cutting and Logging Workers	x	X	x
Warehouse Laborers		X	x
Welders	x	X	x
Wrappers		X	x

**Personal Protective Equipment (PPE)
Training Roster**

PPE Reviewed: _____

Date: _____ **Trainer:** _____

Name (please print clearly)	Signature	Work Center or Division