

Safety Management Standard

Personal Protective Equipment

1. Applicability

This standard applies to all operations of URS Corporation and its subsidiary companies where the use of personal protective equipment (PPE) is anticipated.

2. Purpose and Scope

The purpose of this standard is to provide information on recognizing those conditions that require PPE. PPE is designed to protect the employee from health and safety hazards that cannot be practically removed from the work environment.

3. Implementation

Implementation of this standard is the responsibility of the URS manager directing activities of the facility, site, or project location.

4. Requirements

- A. Perform hazard assessments for those work activities that are likely to require the use of PPE.
 - 1. Use Attachment 029-1 AMER to perform the assessment.
 - 2. Reevaluate completed hazard assessments when job conditions or duties change.
- B. Eliminate the hazards identified in Attachment 029-1 AMER, if possible, through engineering or administrative controls.
- C. Select PPE that will protect employees if hazards cannot be controlled or eliminated.
 - 1. See Attachment 029-1 AMER for recommended PPE.
 - 2. Review Safety Data Sheets for chemicals used for PPE recommendations.
 - 3. If needed, consult with the applicable safety representative for assistance in selecting PPE.
- D. Provide required PPE to employees free of charge (excluding, in some instances, components of standard work attire such as steel-toed boots and prescription safety glasses), assuring proper fit, in compliance with

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applicable consensus standards or national standards, and providing a choice if more than one type of PPE is available. Where applicable, the local policy (office or project) regarding reimbursement for PPE will prevail.

- E. Provide the employees with the appropriate PPE whenever a hazard is recognized and PPE is required. However, when PPE is not required and the employee elects to wear his or her own PPE, the manager directing activities must ensure that the employee is properly trained in the fitting, donning, doffing, cleaning, and maintenance of his or her employee-owned equipment.
- F. Make employees of aware that they are responsible for PPE maintenance, care, and proper use. Employees must inform their supervisors when a need arises to use PPE for which the employee has not received training, or when a condition exists where adequate PPE is not available.
- G. Conduct and document employee training.
 - 1. Train all employees who are required to wear PPE.
 - 2. Require that training includes:
 - a. When PPE is to be worn.
 - b. The type of PPE necessary for the task to be completed.
 - c. How to properly don, doff, adjust, and wear PPE.
 - d. Limitations of PPE.
 - e. Proper care, maintenance, useful life and disposal of PPE.
 - 3. Conduct training before PPE is assigned.
 - 4. Provide refresher training when:
 - a. The workplace changes, rendering previous PPE and training obsolete.
 - b. New types of PPE are assigned to the worker.
 - c. The worker cannot demonstrate competency in PPE use.

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5. Keep written records of the employees trained and type of training provided, including the date of training.

H. PPE Specific Information

1. Head Protection

- a. Use hard hats in areas where there is the possible danger of head injury from the impact of falling or flying objects, striking against objects, electrical shock and/or burns, or any combination of these hazards. Hard hats will be worn when required by site safety procedures, client/site requirements, or when posted as an entry requirement.
- b. Adjust the hard hat suspension to fit the wearer and to keep the shell a minimum of 1.25 inches (3.2 cm) above the wearer's head. Do not store materials in the suspension. Cold weather liners and perspiration control bands may be utilized within the hard hat unless specifically excluded by the manufacturer.
- c. Wear hard hats in the forward position unless written verification and instructions from the hard hat manufacturer indicate your hard hat model has been tested and found to be compliant when worn backwards.
- d. Type I helmets are designed to protect the employee from impact and penetration caused by objects hitting the top of the head; Type II helmets extend this protection to the sides of the head as well.
- e. Class G (General) helmets provide protection against impact, penetration, and limited electrical hazards up to 2,200 volts. Class E (Electrical) helmets meet the same criteria, but electrical protection is increased to 20,000 volts. Class C (Conductive) helmets only provide impact and penetration protection.
- f. Do not use bump caps as protection against head injury, except when the only potential hazard is striking against objects and the use has been approved a Business, Country, Group, Regional Business Unit (RBU), or Strategic Business Unit (SBU) Safety Manager.

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- g. Do not alter hard hats in a way that will downgrade their efficiency. Typical prohibited alterations include painting, drilling holes in shell, application of metal jewelry, etc. Replace hats with these alterations or with excessive scratches.
- h. Wear integral chinstraps when working in high-wind conditions or near helicopters.
- i. Inspect hard hats before use and remove from service if any of the following are observed: cracking, tearing, fraying, chalking, flaking, and damaged suspension systems.
- j. Remove hard hats and their components from service and replace as recommended by the manufacturer. Hard hats must be replaced after no more than 5 years.
- k. White should be the standard color for hard hats worn by URS employees unless a different color is required by a site, client or industry. Approved URS logoed hardhats are available from the URS safety equipment vendor found on the Safety page of the Source.

2. Hearing Protection

- a. Provide hearing protection in any location where powered or motorized equipment or any other noise source could reasonably be expected to exceed 85 dBA. Each task in the work area will be evaluated for potential worker noise exposure as required.
- b. Review SMS 026 – Noise and Hearing Conservation – for additional information.

3. Eye and Face Protection

- a. Use eye and/or face protection when machines or operations create the risk of eye and/or face injuries due to physical, chemical, and/or radiation sources. Safety glasses will be worn when required by site safety procedures, client/site requirements, or when posted as an entry requirement.
- b. Provide safety glasses that can be worn over corrective spectacles for employees whose vision requires the use of corrective lenses. Employees will consult with the applicable

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safety representative or project managers for policies on reimbursement for prescription safety glasses.

- c. Do not use of sunglasses in place of required safety glasses. Heavily tinted safety glasses will only be used in outdoor areas with suitable lighting. Colored or lightly tinted or gradient lenses may be used indoors as appropriate to the work conditions.
- d. Tasks involving potential projectiles (e.g., chipping, grinding and cutting) will require face shields over safety goggles. Tasks requiring power washing or handling corrosive chemicals will require a face shield over safety goggles. Tasks requiring eye protection and involving overhead work will require safety goggles or face shield over safety glasses. For welding tasks, refer to Supplemental Information B for lens selection criteria.
- e. Consult Supplemental Information A for additional information on types of eye and face protection and their various uses.

4. Hand Protection

- a. Wear gloves when the hands are exposed to hazards such as, but not limited to, chemical absorption, cuts or lacerations, abrasions, punctures, chemical burns, thermal burns, vibration, or temperature extremes.
- b. Gloves must always be provided to workers for tasks with potential hand hazards and workers assigned to those tasks shall always wear appropriate gloves.
- c. Identify hand hazards during job or task hazard analysis. A supply of appropriate gloves in various sizes must be provided to workers assigned to work on that task.
- d. Inspect chemical gloves for degradation or tears prior to use. Do not remove chemical gloves from the work area if it is visibly contaminated. Chemical gloves may be decontaminated or disposed of according to specified procedures. In some cases, inner disposable chemical gloves (e.g., nitrile) will be required for protection of hands during removal of contaminated gloves.

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- e. Select chemical-resistant gloves using manufacturer's hazard-based selection programs or other published guides that identify compatibility of glove material with chemical hazards. Selection must also consider physical requirements of the task with regard to puncture resistance and need for flexibility and dexterity in performing the task.
- f. Review SMS 064 – Hand Safety – for additional information.

5. Foot Protection

- a. Wear appropriate specialized protective footwear in the following environments:
 - i. Using harmful corrosive substances or processes.
 - ii. Having a high probability of puncture or crushing injuries.
 - iii. Performing regular assembly or disassembly of heavy system components.
 - iv. Working in wet conditions.
 - v. Working in extreme cold.
 - vi. Working around exposed electrical wires or connections.
 - vii. When using hand-operated compactors, snow blowers, pressure washers, or steam cleaners.
 - viii. Other activities or areas as designated by supervisors or safety personnel.
- b. Employees assigned to field projects who are not required to wear specified protective footwear (e.g., steel-toed boots, metatarsal protection, rubber boots, chemical resistant boots, insulated boots, etc.) will wear substantial leather, high-sided work boots. Shoes (leather, canvas, tennis, deck, or other types of material), sandals, high-heeled shoes, etc., are not allowed on field project sites. In some cases protective over-boots may be required for specific-site access.

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- I. Maintain Protective Equipment
 1. Check PPE for damage, cracks, and wear prior to each use. Replace or repair equipment not found in good condition.
 2. Decontaminate non-disposable PPE with appropriate cleaner, as necessary, to prevent degradation of the equipment. Staff will remove any non-impermeable PPE/clothing that becomes contaminated with hazardous substances. These instructions are reiterated in the emergency decontamination procedures in the Health and Safety Plans.

- J. Periodically inspect worksites where employees are using PPE using Attachment 029-2 AMER. Regularity of inspections should be determined by the project manager and/or site safety representative.

5. Documentation Summary

The following information will be maintained in the project file:

- A. Completed Hazard Assessment Certification Forms (Attachment 029-1 AMER).
- B. Completed Personal Protective Equipment Inspection Sheet (Attachment 029-2 AMER).
- C. Documentation of employee training.

6. Resources

- A. U.S. Occupational Safety and Health Administration (OSHA) Standards – [Personal Protective Equipment – 29 Code of Federal Regulations \(CFR\)1910, Subpart I](#)
- B. U.S. OSHA Construction Standard - [Personal Protective Equipment – 29 CFR 1926 Subpart E](#)
- C. [U.S. OSHA Technical Links – Personal Protective Equipment](#)
- D. American National Standards Institute – [ANSI Z89.1-2003](#), Protective Headwear
- E. American National Standards Institute – ANSI Z87.1-2003 – Eye and Face Protection

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- F. American National Standards Institute /International Safety Equipment Association, ANSI/ISEA 107 - 2004 – Standard for High-Visibility Safety Apparel
- G. American National Standards Institute – ANSI Z41-1991, Protective Footwear Requirements, American Society for Testing and Materials, ASTM F-2414-2005, Standard Test Methods for Foot Protection, ASTM F-2413-2005, Standard Specification for Performance Requirements for Protective Footwear
- H. American National Standards Institute/International Safety Equipment Association (ANSI/ISEA) – 105-2011 – American National Standard for Hand Protection Selection Criteria"
- I. *Quick Selection Guide to Chemical Protective Clothing*, K Forsberg and S.Z. Mansdorf, Wiley Interscience, 2002
- J. Best Manufacturing Co. <http://www.bestglove.com/>. Information on chemical resistant gloves.
- K. [SMS 040](#) – Fall Protection
- L. [SMS 026](#) – Noise and Hearing Conservation
- M. [SMS 064](#) – Hand Safety
- N. [Attachment 029-1 AMER](#) – Hazard Assessment Form
- O. [Attachment 029-2 AMER](#) – Personal Protective Equipment Inspection Form

7. Supplemental Information

- A. [Welding Lens Selector](#)
- B. [Traffic Control Class Guidelines and Scenarios](#)

Location: _____ Job No.: _____

Date: _____ Assessment conducted by: _____

Specific tasks performed at this location: _____

If any of the indicated hazards are present, eliminate the hazard or use the indicated PPE.

Overhead Hazards

- | | | | |
|---|------------------------------|-----------------------------|---|
| 1. Suspended/elevated loads, beams, or objects that could fall or strike head | <input type="checkbox"/> Yes | <input type="checkbox"/> No | Hard hat, ANSI Z89, Class G, E or C |
| 2. Flying objects that could strike head | <input type="checkbox"/> Yes | <input type="checkbox"/> No | Hard hat, ANSI Z89, Class G, E or C |
| 3. Energized wires or equipment that could strike head | <input type="checkbox"/> Yes | <input type="checkbox"/> No | Hard hat, ANZI Z89, Class G or E (dependent on potential voltage) |
| 4. Sharp objects or corners at head level | <input type="checkbox"/> Yes | <input type="checkbox"/> No | Hard hat, ANSI Z89, Class G, E or C |

Eye Hazards

- | | | | |
|--|------------------------------|-----------------------------|--|
| 5. Chemical splashes or irritating mists | <input type="checkbox"/> Yes | <input type="checkbox"/> No | See Supplemental Information A for additional information |
| 6. Excessive dust | <input type="checkbox"/> Yes | <input type="checkbox"/> No | Safety glasses or goggles |
| 7. Smoke and/or fumes | <input type="checkbox"/> Yes | <input type="checkbox"/> No | Safety goggles |
| 8. Welding operations | <input type="checkbox"/> Yes | <input type="checkbox"/> No | Welding goggles; See Supplemental Information A and B for additional information |
| 9. Lasers/optical radiation | <input type="checkbox"/> Yes | <input type="checkbox"/> No | Have URS HSE Representative assist you in proper selection |
| 10. Projectiles | <input type="checkbox"/> Yes | <input type="checkbox"/> No | Safety goggles plus face shield |
| 11. Sawing, cutting, chipping, and/or grinding | <input type="checkbox"/> Yes | <input type="checkbox"/> No | Safety goggles plus face shield; See Supplemental Information A for additional information |

Face Hazards

- | | | | |
|---|------------------------------|-----------------------------|---|
| 12. Chemical splashes or irritating mists | <input type="checkbox"/> Yes | <input type="checkbox"/> No | Safety goggles; See Supplemental Information A for more information; add face shield if irritating or corrosive |
| 13. Welding operations | <input type="checkbox"/> Yes | <input type="checkbox"/> No | Welding goggles or welding helmet; see Supplemental Information A and B for additional information |
| 14. Projectiles | <input type="checkbox"/> Yes | <input type="checkbox"/> No | Safety goggles plus face shield |

Hand Hazards

- | | | | |
|----------------------------------|------------------------------|-----------------------------|--|
| 15. Chemical exposure | <input type="checkbox"/> Yes | <input type="checkbox"/> No | Use chemical-resistant gloves specific to hazard; consult MSDS, chemical hazard guide, or HSE Representative |
| 16. Sharp edges, splinters, etc. | <input type="checkbox"/> Yes | <input type="checkbox"/> No | Leather or Kevlar gloves |
| 17. Temperature extremes – heat | <input type="checkbox"/> Yes | <input type="checkbox"/> No | Leather gloves, welder's gloves, hot mill gloves |

If any of the indicated hazards are present, eliminate the hazard or use the indicated PPE.

- | | | |
|--|--|---|
| 18. Temperature extremes – cold | <input type="checkbox"/> Yes <input type="checkbox"/> No | Insulated gloves |
| 19. Blood, fungus, biological agents | <input type="checkbox"/> Yes <input type="checkbox"/> No | Nitrile gloves |
| 20. Exposure to live electrical currents | <input type="checkbox"/> Yes <input type="checkbox"/> No | Electrical gloves; consult HSE representative |
| 21. Sharp tools, machine parts, etc. | <input type="checkbox"/> Yes <input type="checkbox"/> No | Leather or Kevlar gloves |
| 22. Material handling | <input type="checkbox"/> Yes <input type="checkbox"/> No | Leather gloves |

Foot Hazards

- | | | |
|---|--|--|
| 23. Heavy materials (greater than 50 pounds) handled by employees | <input type="checkbox"/> Yes <input type="checkbox"/> No | Safety shoes or boots |
| 24. Potential to crush whole foot | <input type="checkbox"/> Yes <input type="checkbox"/> No | Safety shoes or boots with metatarsal guard |
| 25. Sharp edges or points (puncture risk) | <input type="checkbox"/> Yes <input type="checkbox"/> No | Safety shoes or boots |
| 26. Exposure to electrical hazards | <input type="checkbox"/> Yes <input type="checkbox"/> No | Safety shoes or boots with:

Conductive - Protects the wearer in an environment where the accumulation of static electricity on the body is a hazard.

Static dissipative - Reduces the accumulation of excess static electricity by conducting body charge to ground while maintaining a sufficiently high level of resistance.

Electrical hazard - Provides a secondary source of protection against accidental contact with live electrical circuits, electrically energized conductors, parts or apparatus, and is manufactured with non-conductive electrical shock resistant soles and heels. |
| 27. Slippery conditions | <input type="checkbox"/> Yes <input type="checkbox"/> No | Rubber-soled boots or grips |
| 28. Chemical contamination | <input type="checkbox"/> Yes <input type="checkbox"/> No | Rubber, PVC, or polyurethane boots or boot covers with puncture and protective toe if task required |
| 29. Wet conditions | <input type="checkbox"/> Yes <input type="checkbox"/> No | Rubber boots or boot covers |
| 30. Construction/demolition | <input type="checkbox"/> Yes <input type="checkbox"/> No | Safety boots with metatarsal guard if foot-crushing hazard exists |

Fall Hazards

- | | | |
|---|--|---------------------------------------|
| 31. Elevations above 4 feet (general industry) or 6 feet (construction) without guardrails | <input type="checkbox"/> Yes <input type="checkbox"/> No | ANSI A-10.14 Type 1 full-body harness |
| 32. Suspended scaffolds, boatswain's chairs, float scaffolds, or suspended staging | <input type="checkbox"/> Yes <input type="checkbox"/> No | ANSI A-10.14 Type 1 full-body harness |
| 33. Working in trees | <input type="checkbox"/> Yes <input type="checkbox"/> No | ANSI A-10.14 Type 1 full-body harness |
| 34. Working in vehicle-mounted elevating work platforms (e.g., bucket trucks, aerial lifts) | <input type="checkbox"/> Yes <input type="checkbox"/> No | ANSI A-10.14 Type 1 full-body harness |

Water Hazards

35. Working on or above water where a risk of drowning exist Yes No U.S. Coast Guard approved personal floatation device; Type I, II, or III

Excessive Heat or Flame

36. Full body chemical protective clothing in temperatures greater than 80 °F Yes No Cooling vest
37. Work around molten metal or flame Yes No Nomex or heat reflective clothing
38. Welding activities Yes No Welding leathers for those areas that are exposed to flame, spark, or molten metal

Respiratory Hazards

39. Airborne particulates, gases, vapors, or mists in excess of established exposure limits Yes No Refer to SMS 042 or URS HSE Representative for respirator selection guidance

Excessive Noise

40. Exposure to noise Yes No Ear plugs, muffs or both

Body and Leg Protection

41. Chemical exposure Yes No Contact URS HSE Representative for assistance in proper selection
42. Using chainsaw, cutting brush Yes No Chainsaw chaps
43. Exposure to snakes Yes No Snake chaps
44. Exposure to vehicle traffic or heavy equipment Yes No See SMS 032 and SMS 029 NA – Supplemental Information C for additional guidance

I certify that the above inspection was performed to the best of my knowledge and ability, based on the hazards present on: _____

Name _____ Signature _____

	Health, Safety and Environment PERSONAL PROTECTIVE EQUIPMENT INSPECTION SHEET	Attachment 029-2 NA Issue Date: July 2000 Revision 9: March 2012
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Name of Inspector _____ Date Inspected _____

Hard Hats	
1. The brim or shell does not show signs of exposure and excessive wear, loss of surface gloss, chalking, or flaking.	<input type="checkbox"/> Yes <input type="checkbox"/> No
2. Suspension system in hard hat does not show signs of deterioration, including cracking, tearing, or fraying.	<input type="checkbox"/> Yes <input type="checkbox"/> No
3. The brim or shell is not cracked, perforated, or deformed.	<input type="checkbox"/> Yes <input type="checkbox"/> No
4. Employees use hard hats in marked areas.	<input type="checkbox"/> Yes <input type="checkbox"/> No
5. Areas requiring hard hat usage are marked.	<input type="checkbox"/> Yes <input type="checkbox"/> No
Safety Shoes	
6. Safety shoes used by employees do not show signs of excessive wear.	<input type="checkbox"/> Yes <input type="checkbox"/> No
7. Areas requiring safety shoes are marked.	<input type="checkbox"/> Yes <input type="checkbox"/> No
Work Gloves	
8. Gloves are available and worn when needed.	<input type="checkbox"/> Yes <input type="checkbox"/> No
9. Gloves are appropriate for the task.	<input type="checkbox"/> Yes <input type="checkbox"/> No
10. Gloves do not show signs of excessive wear such as cracks, scrapes, or lacerations, thinning or discoloration, or break-through to the skin.	<input type="checkbox"/> Yes <input type="checkbox"/> No
Protective Clothing	
11. Protective clothing (including traffic control apparel) is worn by employees when required.	<input type="checkbox"/> Yes <input type="checkbox"/> No
Hearing Protection	
12. Noise hazard areas are posted.	<input type="checkbox"/> Yes <input type="checkbox"/> No
13. Employees are using earplugs or muffs when using noise producing equipment or working in posted noise hazard areas.	<input type="checkbox"/> Yes <input type="checkbox"/> No
Safety Glasses/Goggles	
14. Eye hazard areas are marked or posted.	<input type="checkbox"/> Yes <input type="checkbox"/> No
15. Employees use safety glasses/goggles when working in eye hazard areas or working with equipment that produces an eye hazard.	<input type="checkbox"/> Yes <input type="checkbox"/> No
16. Face shields are used when required and worn over safety goggles.	<input type="checkbox"/> Yes <input type="checkbox"/> No

REMARKS (All "No" answers indicate a hazard which needs to be fixed.)
