

LEVELS OF PROTECTION FOR HTRW ACTIVITIES

Level A

1. Level A is to be selected when the greatest level of skin, respiratory, and eye protection is required. Level A protection should be used when:
 - a. the hazardous substance has been identified and requires the highest level of protection for skin, eyes, and the respiratory system based on either the measured (or potential for) high concentration of atmospheric vapors, gases, or particulates; or the site operations and work functions involve a high potential for splash, immersion, or exposure to unexpected vapors, gases, or particulates of materials that are harmful to skin or capable of being absorbed through the skin;
 - b. substances with a high degree of hazard to the skin are known or suspected to be present, and skin contact is possible; or
 - c. operations must be conducted in confined, poorly ventilated areas, and the absence of conditions requiring Level A have not yet been determined.
2. The following constitute Level A equipment (*italics indicate use is optional*):
 - a. positive pressure, full face-piece self-contained breathing apparatus (SCBA), or positive pressure supplied air respirator with escape SCBA, approved by the National Institute for Occupational Safety and Health (NIOSH);
 - b. totally-encapsulating chemical-protective suit:
 - c. *coveralls*;
 - d. *long underwear*;
 - e. gloves, outer, chemical-resistant;
 - f. gloves, inner, chemical-resistant;
 - g. boots, chemical-resistant, steel toe and shank;
 - h. *hard hat (under suit)*; and
 - i. disposable protective suit, gloves and boots (depending on suit construction, may be worn over totally-encapsulating suit).

Level B

1. Level B is used when the highest level of respiratory protection is necessary but a lesser level of skin protection is needed. Level B protection should be used when:
 - a. the type and atmospheric concentration of substances have been identified and require a high level of respiratory protection, but less skin protection;
 - b. the atmosphere contains less than 19.5% oxygen; or
 - c. the presence of incompletely identified vapors or gases is indicated by a direct-reading organic vapor detection instrument, but vapors and gases are not suspected of containing high levels of chemicals harmful to skin or capable of being absorbed through the skin.

Note: this involves atmospheres with IDLH concentrations of specific substances that present severe inhalation hazards and that do not represent a severe skin hazard; or that do not meet the criteria for use of air-purifying respirators.

2. The following constitute Level B equipment (*italics indicate use is optional*):

- a. positive pressure, full-facepiece self-contained breathing apparatus (SCBA), or positive pressure supplied air respirator with escape SCBA (NIOSH approved);
- b. hooded chemical-resistant clothing (overalls and long-sleeved jacket; coveralls; one or two-piece chemical-splash suit; disposable chemical-resistant overalls);
- c. *coveralls*;
- d. gloves, outer, chemical-resistant;
- e. gloves, inner, chemical-resistant;
- f. boots, outer, chemical-resistant steel toe and shank;
- g. *boot-covers, outer, chemical-resistant (disposable)*;
- h. hard hat; and
- i. *face shield*.

Level C

1. Level C is used when the concentration(s) and type(s) of airborne substance(s) is known and the criteria for using air purifying respirators are met. Level C protection should be used when:

- a. the atmospheric contaminants, liquid splashes, or other direct contact will not adversely affect or be absorbed through any exposed skin;
- b. the types of air contaminants have been identified, concentrations measured, and an air-purifying respirator is available that can remove the contaminants; and
- c. all criteria for the use of air-purifying respirators are met.

2. The following constitute Level C equipment (*italics indicate use is optional*):

- a. full-face or half-mask, air purifying respirators (NIOSH approved);
- b. hooded chemical-resistant clothing (overalls; two-piece chemical-splash suit; disposable chemical-resistant overalls);
- c. *coveralls*;
- d. gloves, outer, chemical-resistant;
- e. gloves, inner, chemical-resistant;
- f. *boots, (outer), chemical-resistant steel toe and shank*;
- g. *boot-covers, outer, chemical-resistant (disposable)*;
- h. *hard hat*;
- i. *escape mask*; and
- j. *face shield*.

Level D

1. Level D is a work uniform affording minimal protection: used for nuisance contamination only. Level D protection should be used when:

- a. the atmosphere contains no known hazard; and
- b. work functions preclude splashes, immersion, or the potential for unexpected inhalation of or contact with hazardous levels of any chemicals.

2. The following constitute Level D equipment (*italics indicate use is optional*):
- a. coveralls;
 - b. *gloves*;
 - c. boots/shoes, chemical-resistant steel toe and shank;
 - d. *boots, outer, chemical-resistant (disposable)*;
 - e. *safety glasses or chemical splash goggles*;
 - f. *hard hat*;
 - g. *escape mask*; and
 - h. *face shield*.

Note: combinations of personal protective equipment other than those described for Levels A, B, C, and D protection may be more appropriate and may be used to provide the proper level of protection.

APPENDIX M