



## The Effect of OSHA's Bloodborne Pathogens Standard on Hazardous Waste Cleanup Activities

Office of Emergency and Remedial Response  
Emergency Response Division MS-101

Quick Reference Fact Sheet

### INTRODUCTION



On December 6, 1991, the Occupational Safety and Health Administration (OSHA) promulgated the Bloodborne Pathogens Standard at 29 CFR 1910.1030 (56 FR 64004), which is designed to protect employees (primarily healthcare workers) whose jobs place them at risk of exposure to blood and other potentially infectious materials. Bloodborne pathogens are microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV) and human immunodeficiency virus (HIV). In addition to healthcare workers, the standard also may affect workers who handle waste potentially contaminated with blood or other potentially infectious material during response actions at uncontrolled hazardous waste sites.

The purpose of this Fact Sheet is to describe the additional planning, training, and medical surveillance requirements that the new OSHA standard on bloodborne pathogens imposes upon On-Scene Coordinators (OSCs) and Remedial Project Managers (RPMs) during a Superfund response action. The requirements described in this Fact Sheet are in addition to the requirements specified in 29 CFR 1910.120 (HAZWOPER). For a summary of applicable HAZWOPER requirements for response actions at uncontrolled hazardous waste sites, see *Hazardous Waste Operations and Emergency Response: Uncontrolled*

*Hazardous Waste Sites and RCRA Corrective Actions*, Publication 9285.2-08FS, available from EPA/ERT, 2890 Woodbridge Ave., Building 18 (MS-101), Edison, NJ 08837-3679, (908) 321-6740.

Office of Solid Waste and Emergency Response (OSWER) employees may be covered by OSHA's Bloodborne Pathogens Standard primarily during three field situations:

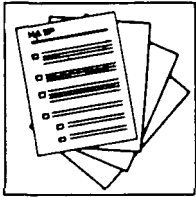
- (1) Cleanup of a hazardous waste site containing infectious waste, especially those employees with collateral first-aid responder duties (operations covered by 29 CFR 1910.120(b) - (o));
- (2) Operation of a RCRA-permitted incinerator that burns infectious waste (operations covered by 1910.120(p)); and
- (3) Response to an infectious waste spill, such as a transportation accident (operations covered by 1910.120(q)).

At times the requirements in HAZWOPER conflict or overlap with the Bloodborne Pathogens Standard. In such situations, a qualified health and safety professional should determine which provision is more appropriate. In most situations, the provision that is more protective of employee health and safety would apply. Additional assistance can be obtained from EPA's Environmental Response Team in Edison, New Jersey (see the section of this Fact Sheet entitled "Contacts" for the address and telephone number).



Both the HAZWOPER regulations and the Bloodborne Pathogen Standard require employers to provide written programs (e.g., a health and safety plan or HASP, exposure control, etc.), safety training, medical surveillance, and protective clothing and equipment. Each of these areas is discussed below.

## HEALTH AND SAFETY PLANS



Under the Bloodborne Pathogens Standard, EPA is required to develop an Exposure Control Plan that is designed to minimize occupational exposure to bloodborne pathogens. The

Standard defines occupational exposure as "reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties." Each Region also must develop an Exposure Control Plan based on the more general EPA plan developed by the Safety, Health, and Environmental Management Division (SHEMD), but reflecting any Region-specific and site-specific hazards. The Exposure Control Plan must contain the following relevant elements:

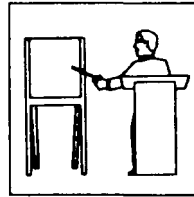
- An exposure determination, which must contain a list of all job classifications in which some or all employees have occupational exposure, and a list of all tasks and procedures where occupational exposure may occur within these job classifications;
- Schedule and implementation methods for: engineering and work practice controls, personal protective equipment, housekeeping, hepatitis B vaccination and post-exposure evaluation and follow-up, communication of hazards to employees, and recordkeeping; and

- Procedures for the evaluation of circumstances surrounding exposure incidents.

The Exposure Control Plan may be incorporated into existing programs or plans, such as the site-specific HASP or an emergency response plan, or treated as a separate document. If it is incorporated into existing documents, however, the additional elements noted above must be explicitly addressed in the parent document.

The OSHA Compliance Directive reference for this standard may be found at OSHA Instruction CPL 2-2.44B, which contains information that may prove useful when developing Exposure Control Plans. For additional information, see the section of this Fact Sheet entitled "References."

## TRAINING



The Bloodborne Pathogens Standard at 29 CFR 1910.1030(g)(2) requires training for individuals who have the potential to be exposed to bloodborne pathogens in the workplace.

Effective training is a critical element of any overall exposure control program and will help reduce the risk of occupational exposure, consequently reducing exposure-related infections. Many of the training requirements are similar to those in HAZWOPER, although a few additional requirements are specified in the Bloodborne Pathogens Standard. Those training elements that are not already covered by HAZWOPER should be included in training programs if employees are likely to be exposed to bloodborne pathogens. The Bloodborne Pathogens Standard requires annual training for employees, just as the HAZWOPER requires 8-hour refresher training. The additional training elements required under the Bloodborne Pathogens Standard are shown in Figure 1.

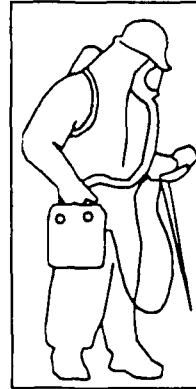
**FIGURE 1**  
**Additional Training Elements Covered  
by the Bloodborne Pathogens Standard**

29 CFR 1910.1030(g)(2)(vii) specifies certain training elements not covered in HAZWOPER.<sup>1</sup>

- An explanation of the epidemiology and symptoms of bloodborne diseases;
- An explanation of the modes of transmission of bloodborne pathogens;
- An explanation of the employer's exposure control plan and the means by which the employee can obtain a copy of the written plan;
- An explanation of methods for recognizing tasks and other activities that may involve exposure to blood or other potentially infectious materials;
- Information on the hepatitis B vaccine;
- Information on the appropriate actions to take and persons to contact in an emergency involving blood or other potentially infectious materials;
- An explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available;
- Information on the post-exposure evaluation and follow-up that the employer is required to provide for the employee following an exposure incident;
- An explanation of the signs and labels and/or color coding required to identify bloodborne pathogen hazards; and
- An opportunity for interactive questions and answers with the person conducting the training session.

<sup>1</sup> Training elements addressing PPE under 29 CFR 1910.1030(g)(2)(vii) are covered under 29 CFR 1910.120.

## PERSONAL PROTECTIVE EQUIPMENT (PPE)



The Bloodborne Pathogens Standard at 29 CFR 1910.1030(d)(3) specifies that masks, in combination with eye protection devices, such as goggles or glasses with solid side shields, or chin-length face shields, must be worn whenever a splash, spray, spatter, or drops of blood or other potentially infectious materials may be generated

and eye, nose, or mouth contamination can be reasonably anticipated.

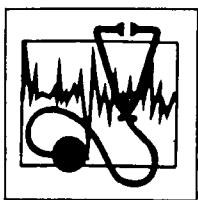
In addition, appropriate protective clothing (including, but not limited to, gowns, aprons, lab coats, clinic jackets, or similar outer garments) must be worn in occupational exposure situations. The type of PPE that is appropriate in a given situation will depend upon the task and anticipated degree of exposure potential to bloodborne pathogens. HAZWOPER PPE Levels A through C should be effective in protecting a worker from exposure to bloodborne pathogens. In instances where level C or higher is not being worn, it may be prudent to use double gloves.

Gloves are an important element of PPE when bloodborne pathogens may be present.

- Gloves must be worn when the employee may have hand contact with blood and other potentially infectious materials.
- When contaminated or damaged, disposable gloves must be replaced as soon as possible and should not be reused.
- Utility gloves may be decontaminated for re-use if the gloves are not damaged.

In extremely rare instances, such as unexpected medical emergencies, employees may not be able to put on gloves, gowns, or face masks. In these types of rare situations, where some leeway must be allowed, employees must still be cognizant of the underlying concept of universal precautions (i.e., all blood and body fluids should be treated as if they are infectious). However, as stated at 29 CFR 1910.1030(d), normal operations would dictate that, "The employer shall ensure that the employee uses appropriate personal protective equipment unless the employer shows that the employee temporarily and briefly declined to use personal protective equipment when, under rare and extraordinary circumstances, it was the employee's professional judgement that in the specific instance its use would have prevented the delivery of health care or public safety services or would have posed an increased hazard to the safety of the worker or co-worker. When the employee makes this judgement, the circumstances shall be investigated and documented in order to determine whether charges can be instituted to prevent such occurrences in the future." It is worth noting that should an exposure occur while an employee is wearing a level of protective clothing, decontamination may need to be modified to include agents (e.g., disinfectant) other than the traditional soap and water.

## MEDICAL SURVEILLANCE



The Bloodborne Pathogens Standard at 29 CFR 1910.1030(f)(1) provides several additional requirements that are applicable when employees are exposed to bloodborne pathogens. First, the hepatitis B vaccine and vaccination series must be made available at no cost to all employees who have occupational exposure, or the potential for exposure (e.g., first-aid responders as a collateral duty on a hazardous waste site), and there must be post-exposure evaluations and follow-ups for all employees who have had an exposure incident. The vaccine must be available after training is complete and within 10 working days of the initial assignment to all

employees who have occupational exposure. Declining the pre-exposure shot must be done in writing, as required by the Bloodborne Pathogens Standard at 29 CFR 1910.1030 (f)(2)(iv), with the understanding that it is still available at a later date.

Second, there are specific reporting requirements when there is an exposure incident. An "exposure incident" is defined at 29 CFR 1910.1030(b) as "a specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that results from the performance of an employee's duties." Following the report of an exposure incident, the employer must make a confidential medical evaluation and follow-up immediately available to the exposed employee. Evaluation and follow-up must include:

- Identification of the route(s) of exposure and the circumstances under which the exposure incident occurred;
- Identification and documentation of the source individual, unless identification is infeasible or prohibited by state or local law;
- Collection, documentation, and testing of blood for HBV and HIV serological status (source individual's blood must be tested and results made available to the exposed employee, even if source individual cannot be identified). Specifics can be found at 29 CFR 1910.1030 (f)(3)(ii) and (f)(3)(iii);
- Post-exposure prophylaxis;
- Counseling; and
- Evaluation of reported illnesses.

Finally, medical records must be kept for each employee with occupational exposure. These records should include a copy of: the status and dates of the employee's hepatitis B vaccination; all examination and medical test results, and specifications of follow-up procedures; the healthcare professional's written opinion; and a copy of the written information provided by the employer to the healthcare professional.

## CONCLUSION

The new OSHA standard on bloodborne pathogens contains requirements for health and safety planning, training, medical surveillance, and personal protective equipment. These requirements are in addition to the HAZWOPER requirements whenever the HAZWOPER and Bloodborne Pathogens standard overlap. Blood and other potentially infectious material should always be treated as if they are infectious; the hepatitis B virus and the HIV are extremely serious hazards. The health and safety requirements specified in this Fact Sheet are a summary of the minimum standards that must be followed when there is occupational exposure to bloodborne pathogens. Anyone working with waste contaminated with blood or other potentially infectious material should refer to the latest EPA national and Regional policies, programs, and Standard Operating Practices.

## REFERENCES

*Occupational Exposure to Bloodborne Pathogens*, OSHA 3127 (1992).

*Occupational Exposure to Bloodborne Pathogens: Precautions for Emergency Responders*, OSHA 3130 (1992).

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## CONTACTS

EPA/Environmental Response Team  
2890 Woodbridge Avenue  
Building 18, Mail Code MS 101  
Edison, NJ 08837-3679  
(908) 321-6740

EPA/Safety, Health, and Environmental  
Management Division (SHEMD)  
Mail Code PM 273  
401 M Street, SW  
Washington, DC 20460  
(202) 260-1640 or (202) 260-1647

Occupational Safety and Health  
Administration  
200 Constitution Avenue, NW  
Room N-3647  
Washington, DC 20210  
(202) 219-8036

OSHA Notification Service (Complaint  
Hotline) for Emergency Situations  
1-800-321-6742

OSHA Publications Office  
200 Constitution Avenue, NW  
Room N-3101  
Washington, DC 20210  
(202) 219-4667

**OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION  
REGIONAL OFFICES**

Region I (CT, MA, ME, NH, RI, VT)  
133 Portland Street, 1st Floor  
Boston, MA 12114  
(617) 565-7164

Region VI (AR, LA, NM, OK, TX)  
525 Griffin Street, Room 602  
Dallas, TX 75202  
(214) 767-4731

Region II (NJ, NY, PR, VI)  
201 Varick Street, Room 670  
New York, NY 10014  
(212) 337-2378

Region VII (IA, KS, MO, NE)  
911 Walnut Street, Room 406  
Kansas City, MO 64106  
(816) 426-5861

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Philadelphia, PA 19104  
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**NOTE:** Refer to the Regional Area Office first; call the National Office if your inquiry cannot be adequately addressed.)