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| BLOODBORNE PATHOGEN | Document | TFC-ESHQ-S-STD-24, REV A-5 |
| EXPOSURE CONTROL STANDARD | Page | 1 of 11 |
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1.0 PURPOSE AND SCOPE

(5.1.1, 5.1.4)

This standard addresses the evaluation of potential exposure to bloodborne pathogens. It also establishes the appropriate protective measures to be applied to protect the employees and subcontractors, who are first aid providers, and those employees and subcontractors who handle biohazard wastes in the performance of their jobs.

This standard shall constitute the written bloodborne pathogen exposure control plan in accordance with the Occupational Safety and Health Administration's 29 CFR 1910.1030, "Bloodborne Pathogens," standard.

2.0 IMPLEMENTATION

This standard is effective on the date shown in the header.

3.0 BLOODBORNE PATHOGEN EXPOSURE CONTROL STANDARD

(5.1.1, 5.1.4)

3.1 Line Manager Responsibilities

1. Line managers shall apply, as a minimum, the standards identified below.
 - In accordance with 29 CFR 1910.1030, identify employees and subcontractor personnel with potential occupational exposure to bloodborne pathogens. Employees and subcontractor personnel with 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, will be designated as "occupationally exposed."
 - Ensure that only those employees and subcontractor personnel designated as "*occupationally exposed*" are assigned tasks/procedures with potential for exposure to bloodborne pathogens.
 - Ensure the Employee Job Task Analysis (EJTA) for employees and subcontractor personnel designated as "occupationally exposed" includes the applicable bloodborne pathogens information.
 - Ensure employees and subcontractor personnel and activities covered by the bloodborne pathogen standard, 29 CFR 1910.1030, comply with the standard and this standard.
 - Ensure subcontractors having employees with occupational exposure to bloodborne pathogens develop an exposure control plan containing elements identified in 29 CFR 1910.1030. The exposure control plan may be developed from a company-level perspective or common work classifications.

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2. The company exposure control plan is reviewed at least annually and updated, as necessary, when:
 - Changes in tasks and procedures affect exposure, or
 - Employees and subcontractor personnel are assigned new or revised positions with a potential for occupational exposure.
3. A strategy shall exist for controlling hazards and reducing risk of exposure by using a variety of methods, including engineering controls, work practices, personal protective equipment and universal precautions.
4. Warning labels/signs must be affixed to containers of regulated waste and other containers used to store, transport, or ship materials, contaminated blood, or other potentially infected materials.

NOTE: Labels must have the universal biohazard symbol and be predominantly fluorescent orange or orange-red. Red bags or red containers may be used in lieu of labels.



5. Training is given to employees and subcontractor personnel at the time of initial assignment to tasks where occupational exposure may take place, and annually thereafter, in accordance with 29 CFR 1910.1030. Additional training is provided when changes such as modification of tasks or procedures or institution of new tasks or procedures affect the employee's occupational exposure.
6. An EJTA is completed to reflect change in an employee's tasks or when new tasks/procedures are introduced that affect the employee's exposure.

NOTE: If it is determined that an employee or group of employees and subcontractor personnel is no longer performing job tasks with potential exposure to blood and other potentially infected material, based on completion of the EJTA, training and medical surveillance may be discontinued.

7. First aid providers follow this standard for their facilities and ensure employees and subcontractor personnel have current training as described in this standard. This standard is reviewed annually and the EJTA of affected employees and subcontractor personnel is updated, as necessary.
8. Hepatitis B vaccination and post-exposure evaluation and follow-up will be provided as outlined in 29 CFR 1910.1030 and include the following:
 - Employees and subcontractor personnel are required to report an occupational exposure incident to their manager before the end of the work shift in which the exposure occurs.
 - Employees and subcontractor personnel report to an occupational medical contractor health care center or private physician as soon as feasible, and within 24 hours, for post-exposure medical evaluation and follow-up. Employees and

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subcontractor personnel who elect to go to a private physician for an occupational exposure must report to an occupational medical contractor health care center before returning to work.

- This plan is provided to employee representatives, official representatives of OSHA, DOE, Washington Industrial Safety and Health Administration (WISHA), or other CH2M HILL-authorized health and safety inspectors who request it.
- The Safety & Health director is notified if there is a confirmed exposure to bloodborne pathogens.

3.2 Safety/Industrial Hygienists

Safety/industrial hygienists shall provide technical assistance to managers and employees and subcontractor personnel through development, review, and approval of the EJTA. Provide assistance in developing, reviewing, or conducting training for first aid providers.

3.3 Employees and Subcontractor Personnel

Employees and subcontractor personnel shall apply, as a minimum, the standards identified below.

1. Employees and subcontractor personnel who are designated first aid providers will be identified as such in their EJTA. Employees and subcontractor personnel will receive the appropriate training for providing first aid response. Employees have the right to review this standard.

NOTE: All personnel trained to use the automated external defibrillator (AED) will be trained in precaution portion of bloodborne pathogens.

2. Management and the shift supervisor of exposure are notified before the end of the shift in which the exposure occurs, and report to the occupational medical contractor health care center or private physician within 24 hours.

3.4 Exposure Determination

Standards relating to job classifications and job tasks with potential contact with blood or other potentially infected material are identified in Table 1. The table lists the employee job classifications along with the tasks performed in which occupational exposure could occur. Occupational exposure means REASONABLY ANTICIPATED skin, eye, mucous membrane, parenteral contact with blood or other potentially infectious materials that may result from the performance of employment related duties.

Table 1. Potential Exposure Situations.

| Job Classification Where all Employees and Subcontractor Personnel, Potentially Exposed | Tasks Performed |
|--|---|
| Health Physics Technicians | Radiological survey of injury resulting in broken skin. |
| | Sampling saliva and fluids from mucous membranes resulting from a potential ingestion or inhalation. |
| | Housekeeping which would involve exposure to sharps such as broken glass/lids to cans |
| Job Classification Where Only Some Employees and Subcontractor Personnel, Potentially Exposed | Tasks Performed |
| Various job classifications: facility designated first-aid providers (TFC-ESHQ-S-STD-04) | Giving first aid for bleeding injuries or when other bodily fluids are involved |
| | Giving cardiopulmonary resuscitation (CPR) using AED |
| | Decontamination of injured personnel |
| | Waste disposal |
| Job Classification Where Only Some Employees and Subcontractor Personnel, Potentially Exposed | Tasks Performed |
| Janitors | Housekeeping which would involve exposure to sharp objects such as broken glass, lids to cans, etc. |
| Nuclear Chemical Operator Mask Station Respirator Issuer | Handling and cleaning used respirators which may contain fluids from the respirator user. |

3.5 Implementation Schedule and Method

1. Universal precautions will be observed at this facility. Human blood and certain body fluids are treated as potentially infected with human immunodeficiency virus (HIV), hepatitis B virus, or other bloodborne pathogen. Engineering and work practice controls will be implemented to eliminate or minimize exposure to employees and subcontractor personnel at this facility. Where occupational exposure remains after institution of these controls and practices, personal protective clothing and equipment shall be worn.
2. Engineering controls. Examples of the types of engineering controls that are used are as follows: (1) CPR masks, (2) brooms and dustpans, and (3) trash cans/containers that are properly labeled. In those containers that are other potentially infected material, the labels will be marked "Biohazard" and will be fluorescent orange or red-orange with lettering and symbols in a contrasting color. The labels shall be affixed as close as feasible to the container by string, wire, adhesive, or other method that prevents their loss or unintentional removal. Red bags or red containers may be substituted for labels.
3. Work practices. Examples of work practices that will be used to control potential exposures to bloodborne pathogens are as follows: (1) NOT picking up broken glass by hand, but instead, picking up with dust pan and broom and placing in appropriately marked trash can stating that trash contains broken glass; (2) taping the edge of metal

lids (e.g., soup cans) or placing in can and bending can before throwing away in trash; (3) prohibiting eating, drinking, smoking, applying lip balm, and handling contact lenses in work areas where there is a reasonable likelihood of occupational exposure; (4) keeping food and drink away from refrigerators, freezers, shelves, or cabinets or on countertops or bench tops where blood or potentially infectious materials are present. These work practices should be associated with the work done by personnel in your facility/project.

- Hand washing facilities. Such facilities must be made available to employees and subcontractor personnel who may be exposed to blood or other potentially infected material. If hand washing facilities are not feasible, antiseptic cleanser used in conjunction with clean cloth, paper towels, or antiseptic towelettes will be used. These dry-wash methods will be followed up as soon as possible with washing with soap and running water.
- Decontamination. After removal of personal protective gloves, employees and subcontractor personnel shall wash hands and any other potentially contaminated skin area with soap and water immediately, or as soon as feasible. If an employee incurs skin or mucous membrane exposure, these areas shall be washed or flushed with water, as appropriate, as soon as feasible following contact.
- Contaminated sharps (e.g., broken glass/can lids that may be contaminated). As previously stated, broken glass must not be picked up by hand. In such cases, a broom and dust pan will be used. The trash shall be labeled as containing broken glass. When disposing of the sharp edge of a can lid, the lid must not be bent by hand. In such cases, the lid should be either taped or placed in the can, at which time the can could be bent.
- Containers for sharps. Contaminated sharps are to be placed immediately, or as soon as possible after use, into appropriate containers (e.g., trash cans appropriately labeled as containing sharps such as broken glass/can lid).
 - Specimens of blood or other potentially infected material shall be placed in a container that prevents leakage during collection, handling, processing, storage, transport, or shipping. The container, found in the first aid kit, shall be appropriately labeled.
 - Contaminated equipment that has become contaminated with blood or other potentially infected material shall be examined before servicing or shipping and shall be decontaminated, as necessary, unless the decontamination of the equipment is not feasible.

3.6 Personal Protective Equipment

When there is potential occupational exposure, personal protective equipment is provided at no cost to the employee. The equipment includes gloves, face shields, safety glasses, masks, and coveralls.

- All personal protective equipment will be cleaned, laundered, and disposed of by the employer at no cost to employees. All garments penetrated by blood shall be removed immediately or as soon as feasible. All personal protective equipment will be removed before leaving the work area.
- Gloves shall be worn where it is reasonably anticipated that employees and subcontractor personnel could have contact with blood, other potentially infected material, non-intact skin, and mucous membranes.

Disposable gloves used at this facility are not washed or decontaminated or re-used and will be replaced when they become contaminated, torn, punctured, or when their ability to function as a barrier is compromised. Utility gloves may be decontaminated for re-use as long as the integrity of the glove is not compromised. Otherwise utility gloves shall be discarded if they show any sign of deterioration or when their ability to function as a barrier is compromised.

- Masks, in combination with eye protection devices such as goggles or glasses with solid side shields, or chin length face shields, are required whenever splashes, spray, splatter, or droplets of blood or other potentially infected material may be generated and eye, nose, or mouth contamination can reasonably be anticipated.
- Protective clothing, such as lab coats, gowns, aprons, clinic jackets, or similar outer garments appropriate for the task, must be used.

3.7 Housekeeping/Decontamination

All contaminated work surfaces will be decontaminated after completion of procedures or tasks, and immediately, or as soon as feasible, after any spill of blood or other potentially infected material and at the end of the work shift if the surface may have become contaminated since the last cleaning. Record any information concerning the use of protective coverings, such as plastic wrap, that may be used to assist in keeping surfaces free of contamination.

3.8 Regulated Waste Handling and Disposal

- Contact Environmental Support and Assessment Program for the proper methods of disposal of biohazardous waste, such as double bagging, sharps containers, etc., and for disposal, such as regular trash pickup, dumpster, or other.
- Laundry that is contaminated with blood or other potentially infected material will be handled as little as possible. Such laundry will be placed in appropriately marked bags at the location where it was used and not be sorted or rinsed in the area of use. All employees and subcontractor personnel who handle contaminated laundry will use gloves and/or other personal protective equipment to prevent contact with blood or other potentially infected material. When the contaminated laundry is being sent off-site, then the laundry service accepting the laundry is notified.

3.9 Hepatitis B Vaccination and Post-Exposure Evaluation and Follow-Up

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- All employees who have been identified as having occupational exposure to blood or other potentially infected material will be offered the hepatitis B vaccine at no cost to the employee. The vaccine will be offered within ten working days of their initial assignment to work involving occupational exposure to blood or other potentially infected material, unless the employee has previously had the vaccine or wishes to submit to antibody testing to prove the employee has sufficient immunity. Employees who decline the hepatitis B vaccine will sign a waiver that uses the wording in Appendix A of the OSHA standard. Employees who initially decline the hepatitis B vaccine, but who later wish to have it, may then have the vaccine provided at no cost.
- When an exposure incident occurs, it should be reported immediately. Exposure incidents must be reported to the shift supervisor/manager. Follow the guidance provided in [TFC-ESHQ-S CMLI-C-01](#) for reporting exposures.
- All employees who incur an exposure incident will be offered post-exposure evaluation and follow-up in accordance with the OSHA standard. This follow-up will include the following:
 - Documentation of the route of exposure and the circumstances related to the incident
 - If possible, the identification of the source individual and, if possible, the status of the source individual. The blood of the source individual will be collected as soon as feasible and will be tested (if consent is obtained) for HIV/hepatitis B infection
 - Results of the source individual testing will be made available to the exposed employee who will also be informed about the applicable laws and regulations concerning disclosure of the identity and infectivity of the source individual
 - If the exposed employee consents to having his or her blood collected, but does not consent to HIV/hepatitis B serological status testing, the blood sample will be preserved for at least 90 days to allow the employee to decide if the blood should be tested for HIV serological status. However, if the employee decides before that time that testing should be conducted, then the appropriate action can be taken.
 - The employee will be offered post-exposure prophylaxis in accordance with the current recommendations of the U.S. Public Health Service
 - A written form shall be obtained from the health care professional who evaluates employees at this facility. Written opinions will be obtained in the following instances:
 - When the employee is sent to receive the hepatitis B vaccine.
 - When the employee is sent to a health care professional following an exposure incident.

- Health care professionals shall be instructed to limit their opinions (to the employer) to:
 - Whether the hepatitis B vaccine is indicated and if the employee has received the vaccine, or for evaluation following an incident
 - That the employee has been informed of the results of the evaluation
 - That the employee has been told about any medical conditions resulting from exposure to blood or other potentially infected material
 - Note that the written opinion to the employer does not reference any personal medical information.

3.10 Training

1. Training for all employees and subcontractor personnel, as identified by their EJTA as having potential exposure to bloodborne pathogens will be conducted before initial assignment to tasks involving the potential for occupational exposure.
2. Training for employees and subcontractor personnel will include the following:
 - An explanation of the OSHA standard for bloodborne pathogens
 - Epidemiology and symptomatology of bloodborne diseases
 - Modes of transmission of bloodborne pathogens
 - This exposure control standard (e.g., points of the standard, lines of responsibility, how the standard will be implemented, etc.)
 - Procedures or tasks that might cause or increase risk of exposure to blood or other potentially infected material at this facility
 - Control methods that will be used at the facility to control exposure to blood or other potentially infected material
 - Personal protective equipment available at this facility and who should be contacted
 - Post-exposure follow-up
 - Signs and labels used at the facility
 - Hepatitis B vaccine program at the facility.
3. All employees and subcontractor personnel will receive annual refresher training. This training will be conducted within one year of the employee's previous training.

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3.11 Recordkeeping

- Medical records. Employee medical records are maintained by the site occupational medical contractor. These records are maintained for the duration of employment plus thirty years. Medical records are available to the employee or designated representative. (5.1.3)
- Training records. Employee training records are maintained by the Training organization. These records are maintained for three years. Training records are available to the employee or designated representative.

4.0 DEFINITIONS

Bloodborne pathogens. Pathogenic microorganisms present in human blood and certain other bodily fluids and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus and human immunodeficiency virus.

Exposure incident. A specific eye, mouth, other mucous membrane, non-intact skin, or parenteral (piercing) contact with blood or other potentially infectious materials that has occurred during the performance of an employee's duties.

Other potentially infectious materials. Other potentially infectious materials include any of the following:

- Human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovia fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluids visibly contaminated with blood, and all body fluids where it is difficult to differentiate between body fluids
- Unfixed human tissue or organs, other than intact skin
- HIV or hepatitis B contaminated cultures
- Blood, organs, and tissues from experimental animals infected with HIV/hepatitis B virus.

Regulated waste (biohazard waste). Wastes regulated by this standard include: liquid or semi-liquid blood or other potentially infectious material; contaminated items that could release blood or other potentially infectious material in a liquid or semi-liquid state if compressed; items that are caked with dried blood or other potentially infectious material and could release the materials during handling; contaminated sharps; pathological and microbiological waste containing blood or other potentially infectious material.

Universal precautions. An approach to infection control that assumes all human blood and certain body fluids are known to be infectious for HIV, hepatitis B virus, and other bloodborne pathogens; therefore, precautions are always (i.e., universally) taken when there is a potential contact with these materials.

5.0 SOURCES

5.1 Requirements

1. 10 CFR 851, "Worker Safety and Health Program."
2. 29 CFR 1910.151(b), "Medical Services and First Aid." (S/RID)
3. 29 CFR 1910.1020, "Access to Employee Exposure and Medical Records." (S/RID)
4. 29 CFR 1910.1030, "Bloodborne Pathogens." (S/RID)

5.2 References

1. TFC-ESHQ-S_CMLI-C-01, "Injury, Illness, Vehicle, and Property Loss Record Management."
2. TFC-ESHQ-S-STD-04, "First Aid."