

# **Infectious Disease (Bloodborne Pathogens)**

**MSC-PRAC-30511**

**Revision 0**

**Effective Date: December 9, 2009**

**Topic: Safety and Health**

## Infectious Disease (Bloodborne Pathogens)

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### **PURPOSE**

This practice identifies a key aspect of the Mission Support Alliance (MSA) construction Industrial Hygiene (IH) program, and establishes the requirements for reducing occupational exposure to and transmission of Hepatitis “B” Virus (HBV), Human Immunodeficiency Virus (HIV), and other infectious diseases. “Universal precautions” as advocated by the Centers for Disease Control are made an integral part of these exposure and control measures. Also, this practice provides necessary precautions to all employees who could be “reasonably anticipated” to come into contact with blood or other potentially infectious materials as the result of performing their job duties.

### **SCOPE**

This practice identifies the positions and activities the company deems as having potential for bloodborne pathogen exposure (and the criteria for this determination), educational requirements, methods for controlling exposures and post-exposure evaluation, and investigating methods.

When the normal work routine involves no exposure to blood, body fluids, or tissues (situations can be imagined under which anyone, anywhere, might encounter potential exposure to body fluids), these employees and “Good Samaritan Acts” (such as assisting a coworker with a nosebleed) would not be considered an occupational exposure. Tasks that involve handling of implements or utensils, use of public or shared bathroom facilities or telephones, and personal contacts such as handshaking are also not considered occupational exposures.

This practice includes the following elements:

- General Requirements
- Exposure Control Program
- Exposure Categories
- Engineering Controls
- Work Practice Controls
- Vaccination, Post Exposure Evaluations, and Follow-up
- Record Keeping
- Information and Training

The requirements of this practice are consistent with the requirements published in the Mission Support Contract (MSC) Safety and Health virtual manual.

### **APPLICATION**

This practice applies to Mission Support Alliance (MSA) construction personnel.

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### GENERAL REQUIREMENTS

Records generated during the performance of this activity are to be included in the Construction Work Package and will be managed in accordance with [MSC-PRAC-30374](#), *Construction Work Package* and [MSC-PRAC-30376](#), *Construction Document Control*.

### EXPOSURE CONTROL PROGRAM

Form [A-6004-280](#), *Job Safety Analysis/Activity Hazard Analysis (JSA/AHA)*, is prepared in accordance with [MSC-PRAC-30462](#), *Prejob Safety Planning*, for each routine and nonroutine job/task involving transportation, storage, or handling of materials that may expose employees to bloodborne pathogens and for each nonroutine job/task where exposure to undiluted or untreated blood or body fluids can be reasonably anticipated. The JSA includes the following:

- Hazard evaluation
- Engineering and work practice control measures
- Personal protective equipment
- Disposal of contaminated materials
- Training requirements

Examples of nonroutine job/tasks of this nature include field activities involving cleanup of blood or body fluids, disposal of hypodermic needles, or other blood-containing refuse.

Project safety reviews and approves JSAs (exposure control programs).

A copy of each JSA is made available to health care professionals upon request following a potential occupational exposure.

JSAs are reviewed with affected employees in prejob safety meetings prior to each nonroutine job/task and at least every 6 months, and updated as appropriate.

### EXPOSURE CATEGORIES

#### Category I

This exposure classification applies to tasks rather than to individuals during their daily activities because individuals may move from one exposure category to another as they perform various tasks.

Tasks that involve anticipated exposure to blood, body fluids, or tissues are Category I tasks.

In addition, job-related tasks that involve an inherent potential for mucous membrane or skin contact with blood, body fluids, or tissues, or a potential for spills or splashes of them, are Category I tasks.

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Use of “universal precautions” are required for employee(s) engaged in Category I tasks. Employees whose tasks could fit this category include designated first-aid attendants, medics, nurses, janitorial staff, and physician assistants.

### Category II

Tasks that do not involve anticipated exposure to blood, body fluids, or tissues, but may require performing unplanned Category I tasks, are Category II tasks.

The normal work routine involves no anticipated exposures to blood, body fluids, or tissues, but potential exposure may occur. Protective measures are readily available to employee(s) engaged in Category II tasks.

**NOTE:** *Category I or II activities involving radiological hazards require the support of a Radiation Control Technician.*

### ENGINEERING CONTROLS

Engineering controls are used as the primary method to reduce worker exposure to harmful substances. The following controls are not all-inclusive, but are implemented as a minimum:

- Isolation or containment of the hazard.
- Disposable puncture-resistant containers that are closeable and leakproof on the sides and bottom and properly labeled with the universal BIOHAZARD symbol are utilized for used needles, blades, sharps, and other one-time-use implements of treatment. These containers are placed in the use area.
- Hand washing facilities with soap and running water are made available. If running water cannot be supplied, germicide hand wipes are provided.
- Appropriate and accessible personal protective equipment is used.

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### **WORK PRACTICE CONTROLS**

Work practice controls are established to reduce the likelihood of exposure in which a task is being performed. Examples of some work practice controls include the following:

- “Universal precautions” are in effect in all occupational exposures.
- Recapping of needles or other sharps by hand is not allowed.
- Pipette or suctioning by mouth (siphoning) is forbidden.
- Storing food, drink, etc., is forbidden in areas of potential occupational exposure.
- Eating, drinking, smoking, etc., is forbidden in areas of potential occupational exposure.

### **Limited Access**

There is limited access to areas where there is a potential for “reasonably anticipated” contact with blood or other potentially infectious materials. Areas where the difference between body fluid types is difficult or impossible to determine are considered limited access areas.

### **Employees Who Perform Category I and II Tasks**

Employees who perform Category I Tasks (and Category II tasks when employees are potentially exposed) routinely use applicable universal precautions during patient contact, or handling of body fluids; appropriate personal protective equipment (PPE) is provided for protection against an “occupational exposure.” Appropriate equipment is defined to mean equipment that does not permit blood or other potentially infectious material to contact, pass through, or be absorbed onto the employee’s clothes, undergarments, skin, eyes, mouth, or other mucous membranes. PPE is removed prior to leaving the work area, and placed in an appropriately marked container for disposal, storage, or decontamination. PPE includes, but is not limited to, gloves, gowns, laboratory coats, face shields, masks, eye protection, mouthpieces, resuscitation bags, pocket masks, or other artificial ventilation devices.

Disposable gloves (rubber or latex surgical type) are properly worn to protect skin and mucous membrane when in contact with blood and body fluids. Gloves are changed and hands washed between each first-aid case (patient).

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To prevent exposure of mucous membranes of the mouth, eyes, and nose, masks (surgical type) and protective eye wear or face shields are worn during procedures that are likely to generate splashes of blood and other body fluids.

Gowns or aprons are worn during procedures that are likely to generate splashes of blood and other body fluids. Hands and other skin surfaces are washed immediately after gloves are removed.

Saliva has not been implicated in any bloodborne pathogen; however, protective instruments such as mouthpieces, resuscitating (ambu) bags, or other ventilation devices are available for use in areas where the need for mouth-to-mouth resuscitating is predictable. Ventilating devices are fitted or contain one-way valves. Ventilation devices that do not contain one-way valves are not used.

Employees performing Category I and II tasks who have skin lesions or weeping dermatitis refrain from all direct first-aid (patient) care and from handling first-aid type equipment until the condition clears up.

Employees in Category I and II environments who are pregnant are in greater risk to exposure and should be especially familiar with and strictly adhere to these precautions to minimize the risk of bloodborne pathogen exposure.

### **Smoking, Drinking, Etc.**

Smoking, drinking, eating, applying any type of cosmetic or chapping balm to face/mouth, and insertion or handling of contact lenses is strictly prohibited in areas identified as having “occupational exposure.”

### **Housekeeping Guidelines**

Project safety has a written schedule for cleaning and methods of decontamination for areas of occupational exposure. This schedule is based upon the location within the facility, type of surface, and implements to be cleaned, types of contaminations to expect, and the types of tasks being performed in the area. The written schedule includes the following as a minimum:

- Implements of treatment, pails, bins, containers, or similar receptacles (including protective covering and work surfaces) are cleaned and decontaminated after contact with blood or other potentially infectious material, and at the end of the work shift.

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- Glassware that has broken in the treatment area is picked up mechanically and not by hand (such as with a dustpan and broom or brush with nylon bristles).
- The mechanics of cleaning is conducted using forceps-type implements. All items and spills are cleaned with a germicide or a solution of sodium hypochlorite (a 1:8 dilution of household bleach).

### Regulated Waste

Regulated waste means liquid or semi-liquid blood or other potentially infectious contaminated materials that would release blood or other potentially infectious material in a liquid or semi-liquid state if compressed. Certain practices regarding the handling, disposal, and storage of contaminated sharps and other regulated waste are as follows:

- Contaminated reusable sharps are not stored or processed in a manner that allows employees to reach them by hand. The engineering of the storage method is such that when the lid is lifted, the reusables extract themselves from the container. Throwaway contaminated sharps are discarded immediately in containers as described under engineering controls. During use, these containers are easily accessible, kept upright, replaced routinely, and not allowed to be overfilled. When containers of contaminated sharps and implements are moved, the containers are securely closed to prevent spillage or leakage of the regulated waste.
- Contaminated laundry is handled as little as possible and only by employees who are wearing appropriate PPE. Laundry is containerized and in appropriately labeled BIOHAZARD or “red” leakproof bags, and must not be washed or rinsed at the site of use.
- For purposes of offsite regulated waste disposal, contact project safety.

### VACCINATION, POST-EXPOSURE EVALUATION AND FOLLOW-UP

On the Hanford project, the Occupational Medical Service Provider (OMSP) is the licensed health care professional to administer the hepatitis B vaccination and provide post-exposure medical evaluation and follow-up. Employees in Category I and Category II who test negative for HBV antibodies are offered the hepatitis B vaccination series within 10 working days of initial assignment. Employees who decline the vaccination sign a waiver (refer to Site form [BC-8800-539](#)) indicating their choice; however, if the employee later chooses to be inoculated with the hepatitis B vaccination, he/she may do so at no cost.

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The OMSP places the signed waiver in the employee's confidential medical file. Safety and Health is responsible for supervision of this program.

**NOTE:** *Subcontractors are not required to use the OMSP on the Hanford Site. However, subcontractors must provide for an equivalent health care provider and program.*

### **Post-Exposure Evaluation and Follow-up**

The OMSP (or subcontractor's equivalent) develops a procedure for providing post-exposure evaluation and follow-up to employees who report an exposure incident. The evaluation includes:

- Documentation of the routes of entry and circumstances surrounding the exposure incident
- Identification of the source individual, if feasible
- Identification of the source individual's blood, if consented to
- Testing of the source individual's blood, if consented to
- Post-exposure medical treatment, if indicated
- Counseling

### **Information Provided to the Health Care Professional**

Project safety provides the OMSP (or subcontractor's equivalent) with the following information:

- A copy of the bloodborne pathogen standard ([29 Code of Federal Regulations \[CFR\] 1910.1030](#), *Bloodborne Pathogens*).
- A description of the exposed employee's duties as they relate to the exposure incident.
- Documentation of the route(s) of exposure and circumstances under which exposure occurred.
- Results of the source individual's blood testing, if available.
- All medical records relevant to the appropriate treatment of the employee, including vaccination status, which are the employer's responsibility to maintain.

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**Health Care  
Professional's  
Written Opinion**

Safety and Health obtains and provides the employee with a copy of the OMSP's (or subcontractor's equivalent) written opinion within 15 days of completion of the evaluation. The original is placed in the employee's confidential medical file by the OMSP (or subcontractor's equivalent). The written opinion is documented to the requirements of [29 CFR 1910.1030 \(f\)\(5\)](#).

**Incident Evaluation**

Exposure incidents are reported immediately to the exposed employee's supervisor. The supervisor reports the exposure to project safety as soon as possible. With the same urgency, the MSA S&H Group Lead or designee conducts and documents an Exposure Incident Evaluation containing at least the following:

- The circumstances under which exposure occurred
- The route(s) of entry
- Engineering controls in place at the time of the exposure incident
- Work practice controls in place at the time of exposure incident
- Personal protective equipment or clothing in use at the time of the exposure incident
- Any failures of the above controls at the time of the incident
- Identification, if possible, of the source individual
- Recommendations for avoidance of future exposure incidents in similar situations

**NOTE:** *A Hanford Event Report is used as the exposure incident evaluation, so long as it contains this information.*

**RECORD KEEPING**

The OMSP (or subcontractor's equivalent) establishes and maintains medical records to be kept confidential and may not be disclosed without written consent of the employee. All medical records of exposure incidence are reviewed as required by the doctor of record, and maintained for a period of 30 years past employment.

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The following information is included on these records:

- The name and social security number of the employee
- All hepatitis B vaccination records and medical reports
- A copy of examinations, medical testing, and follow-up procedures
- A copy of the health care professional's written opinion
- A copy of information provided to the health care professional(s).

### **INFORMATION AND TRAINING**

Employees who have been identified as having the potential for occupational exposure participate in a training program. This training is provided at the time of initial assignment to tasks where occupational exposure may take place and annually thereafter.

Employees in Categories I and II affected by a "reasonably anticipated" episodic event receive training and information on the transmission of bloodborne pathogens which explains the universal precautions used to control the exposures to any bloodborne pathogens in the workplace and emergency procedures.

### **Training Program Elements**

The training program contains at least the following elements:

- Employees are given access to a copy of the bloodborne pathogen standard, and its contents are explained to them.
- There is a general discussion of bloodborne diseases with special emphasis on the epidemiology, symptomatology, and modes of transmission of HIV and HBV.
- There is an explanation of the employer's Exposure Control Plan, and employees are told how to obtain a copy of the written plan for their review.
- An explanation of the methods for recognizing tasks and other activities that may involve exposure to blood or other potentially infectious materials.
- An explanation of engineering and work-practice controls and PPE, and how these preventative measures reduce the risk of exposure and the limitations of each of these methods to limit exposure.

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- Information is made available on the types, proper use, location, removal, handling, decontamination, and disposal of PPE. Training also is included to enable employees to select the appropriate PPE for a given task.
- Information on the hepatitis B vaccine, its effect, safety, method of administration, benefits, and that it is offered free of charge to Category I and Category II employees.
- Information on the appropriate actions to take, whom to contact in an emergency involving blood or other potentially infectious material.
- Appropriate actions to be taken in an exposure incident, including the method of reporting and the medical follow-up that is available.
- Information regarding post-exposure evaluation and follow up and what is required to provide this to the employee after an exposure incident.
- An explanation of the BIOHAZARD labels and red bags.
- The instructor provides a question-and-answer period.

### FORMS

*Event Report* (and continuation page) ([A-6001-714](#))

*Job Safety Analysis/Activity Hazard Analysis (K-2 JSA/AHA)* [A-6004-280](#)

*Hepatitis B Vaccination Participation/Declination*  
(Form [BC-8800-539](#))

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**RECORDS IDENTIFICATION**

**Records Capture Table**

Name of Document	Submittal Responsibility	Retention Responsibility
Site Form <a href="#">A-6001-714</a> , <i>Event Report</i> (and continuation page)	Construction Supervisor/ Superintendent	Project Document Control
Form BC-8800-539, <i>Hepatitis B Vaccination Participation/Declination</i>	OMSP	OMSP
Form <a href="#">A-6004-280</a> , <i>Job Safety Analysis/Activity Hazard Analysis (K-2 JSA/AHA)</i>	Construction Supervisor/ Superintendent	Project Document Control
Construction Work Package	Construction Supervisor/ Superintendent	Project Document Control

**REFERENCES**

[29 CFR 1910.1030 \(f\)\(5\)](#), *Bloodborne Pathogens*

[MSC-PRAC-30374](#), *Construction Work Package*

[MSC-PRAC-30376](#), *Construction Document Control*

[MSC-PRAC-30462](#), *Prejob Safety Planning*