CPCCo Central Plateau Cleanup Company

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Administrative Procedure

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Bloodborne Pathogens

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Change Summary

Description of Change

Editorial change consists of updating company terminology (CHPRC to CPCCo) and referenced documents (PRC to CPCC), as well as an update to the current procedure templates, including spell check and updated table of contents.

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1.0 INTRODUCTION

1.1 Purpose

The goal of this procedure is to prevent exposure and subsequent illness or disease to workers from the human-to-human hazards known as bloodborne pathogens (BBP). This procedure provides instructions for identifying the primary type of hazards expected to be encountered by Central Plateau Cleanup Company (CPCCo) workers in performance of assigned work.

Recognition of the BBP leads to identification of appropriate precautions to prevent worker illness or disease.

1.2 Scope

This procedure addresses BBP that CPCCo workers may encounter at Hanford during the course of their work activities. This procedure implements Integrated Safety Management System/Environmental Management System (ISMS/EMS) requirements for environmental, safety, and health.

1.3 Applicability

This procedure is for use by CPCCo personnel who are potentially exposed to BBP hazards.

BBP exposure is a specifically regulated type of biological hazard that applies to workers who have been identified by their employer as subject to the BBP standard (Title 29 *Code of Federal Regulations* [CFR] 1910.1030) based on the performance of their required and assigned job duties, e.g., Radiological Control Technicians (RCT) who take blood smears or nuclear chemical operators (NCO) who clean up blood in rad zones.

The BBP standard <u>does not apply</u> in the following situations due to interpretative letters from Occupational Safety and Health Administration (OSHA) or the definitions in 29 CFR 1910.1030:

- Voluntary first aid and cardiopulmonary resuscitation (CPR) responders
- Voluntary emergency responses (where there may be a voluntary assignment but is not a job requirement)

The BBP standard <u>does apply</u> to positions that include the following as required job responsibilities for the work assignment:

- Healthcare and clinic providers
- Emergency services providers
- Firefighters
- Law enforcement personnel
- Workers identified by management as having the potential for exposure based on their required job assignments.

The use of sharps (e.g., hypodermic needles, syringes, Pasteur pipettes, scalpel blades) is not within the work scope of CPCCo personnel; therefore, a Sharps log is not required.

1.4 Implementation

This procedure is effective upon publication.

2.0 RESPONSIBILITIES

The responsibilities identified in this section apply to the BBP program as a whole. Responsibilities associated with individual tasks are identified in Section 3.0, "Process."

2.1 Manager

For personnel potentially exposed to BBP as a result of their required work scope, the manager:

- Identifies workers who may fall under the BBP program per 29 CFR 1910.1030.
- Verifies with Industrial Hygienist (IH) and the Occupational Safety and Industrial Hygiene (OS&IH) Manager that the worker falls under the BBP program.
- If verified, implements the Exposure Control Plan (ECP) provided in Appendix C for identified personnel. The ECP includes the following, per 29 CFR 1910.1030:
  - Exposure assessment
  - Implementation methods
  - Procedure for evaluation of exposure incidents
  - Training
- Ensures the following:
  - Identified personnel have received required training.

NOTE: *Documentation of the refusal to receive the Hepatitis B vaccination by personnel who fall within the BBP program will be maintained by CPCCo, IDMS database (29 CFR 1910.1030(f)(2)(iv))*

CPCCo has determined that workers who do not fall within the BBP program, but who request the Hepatitis B vaccination voluntarily as a precaution, will be provided with it through the onsite medical provider.

  - Identified personnel are offered the Hepatitis B vaccine and vaccination series after receiving BBP training and within 10 days of job assignment (29 CFR 1910.1030), using a *Hepatitis B Vaccination Declination Form* (Site Form A-6007-373)
  - Employee Job Task Analyses (EJTA) for identified personnel reflects the potential for exposure to BBP.
  - Identified personnel obtains medical consultation with the Hanford Site occupational medical services provider after a potential exposure event, notifies the facility IH and the OS&IH Manager if an employee has been exposed or potentially exposed to BBP or other potentially infectious materials (OPIM) as part of their work task or from providing emergency first aid response.
- Completes an event report in accordance with CPCC-PRO-SH-077, *Reporting, Investigating, and Managing Health, Safety and Property/Vehicle Events*, when there has been an exposure or a potential exposure.

2.2 Occupational Safety and Industrial Hygiene Manager

- Provides direction to IH and radiological control personnel and potentially exposed workers regarding administration of the CPCCo BBP program.
- Reviews the BBP ECP annually and updates it as needed.
- Notifies CPCCo Occupational Safety and Health Director in the event of a known exposure to BBP.

2.3 Industrial Hygiene

- Assists management with exposure determination and selection of protective equipment.
- Reviews EJTAs for employees identified as having the potential to be exposed to BBP as a part of their required job duties to ensure BBP is selected.

2.4 Potentially Exposed Worker

- Completes the required training.
- Wears the prescribed personal protective equipment (PPE), and follows “universal precautions” as identified in the BBP ECP.
- Washes/flushes exposed areas of the eyes, nose, or mouth with water or saline solution if potential contact with human blood or OPIM.
- Ensures all PPE or other articles contaminated with human blood or OPIM are removed as soon as possible and placed in designated BIOHAZARD-labeled containers for disposal.
- Notifies management if exposed to blood or OPIM.
- Obtains post-exposure medical evaluation from the Hanford Site occupational medical services provider after the event and follows up as directed by the Hanford Site occupational medical services provider.

3.0 PROCESS

NOTE: *Sections of this procedure may performed in the order needed to complete the work.*

The process is outlined in Figure 1.

Figure 1 – Bloodborne/Other Potentially Infectious Materials Biological Hazards

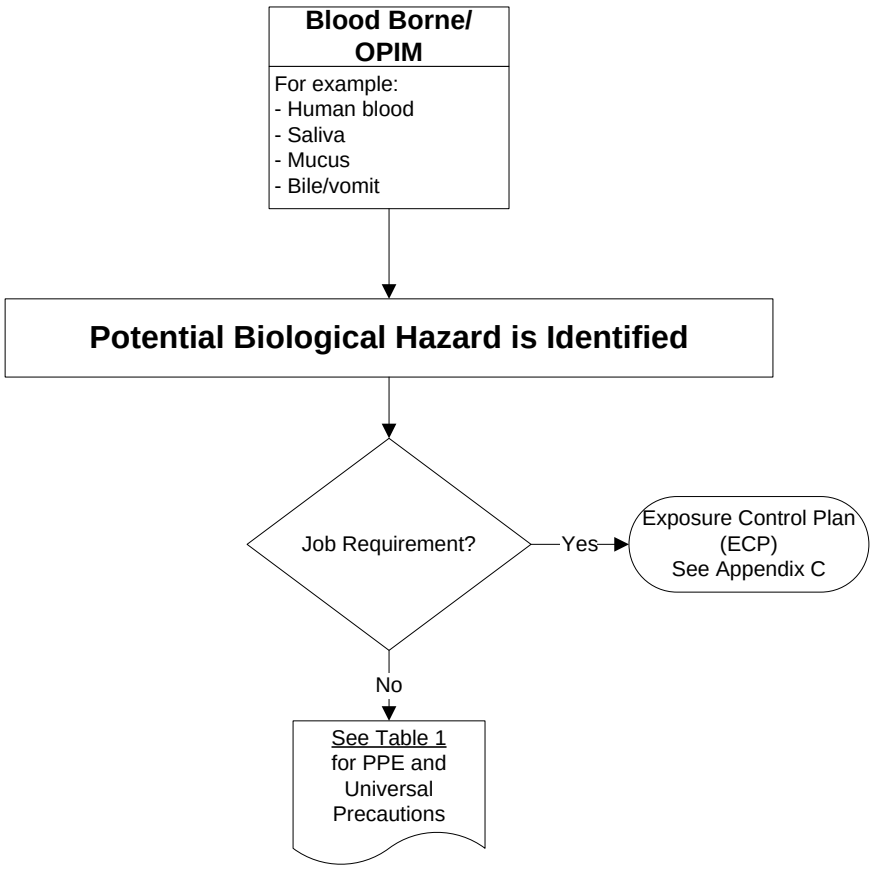

Table 1 – Bloodborne Pathogen Classification Table

BIOLOGICAL HAZARD TYPE	*Potential Route of Exposure*	*Potential Hazards*	*Precautions*	*PPE Requirements*
Bloodborne human diseases	Skin Injection Inhalation	HIV, Hepatitis	Call HFD emergency response. Universal precautions & wash hands. Hepatitis B vaccine may be requested from the Site Occupational Medical Contractor.	Gloves and eye protection are minimum PPE. Face shields, half mask respirator, and protective clothing may also be necessary.
Other Presumed Infectious Materials (OPIM)	Injection Inhalation Eye exposure	Common infectious materials: Strep., Staph., E. Coli, Salmonella	Universal precautions & wash hands	Gloves and eye protection are minimum PPE. Face shields, half mask respirator, and protective clothing may also be necessary.

3.1 Training

Actionee	*Step*	*Action*

Manager of Potentially Exposed Workers	1.	IDENTIFY appropriate training on the employee's training plan using the EJTA. BBP training will include the following:
		
		• BBP - For workers potentially exposed to BBP as a condition of their job assignment (human to human exposure):
		  ○ Course 170648, *Bloodborne Pathogens Initial*
		  ○ *Bloodborne Pathogens – CBT* as indicated in the training plan
		  ○ Annual review of the BBP ECP (required reading)

3.2 Incidental Contact with Human Body Fluids

Actionee	*Step*	*Action*
Worker	1.	WEAR appropriate protection to help prevent the contact and spread of bodily fluids, to include: • Respiratory protection with a half mask respirator and particulate filter will shield against exposure to aerosols. • Protective impervious gloves, collecting tools, wipes or swaps, and a face shield will protect against sampling blood smears, nasal wipes, mucous membranes, or other bodily fluids.
	2.	IF ingestion or inhalation of aerosols occur, or broken skin comes in contact with a presumed biological hazard, THEN immediately REPORT the incident to the supervisor.

3.3 Handling of BBP Waste

Actionee	*Step*	*Action*

Worker	1.	HANDLE BBP waste using the following guidelines:
		• Towels and disposable PPE used during cleanup of blood and OPIM must be disposed of using universal precautions described as follows:
		  ○ BBP waste must be double-bagged and marked prior to handling, storing, and transporting. See Appendix B for label/bagging requirements.
		  ○ Dispose of BBP waste bags/containers appropriately per instructions from the waste management specialist.
		  ○ Radiological area waste containing BBP waste must have final disposition in yellow radioactive waste bags and be placed and disposed of with radioactive waste. Radiological area waste (radioactive waste) labels can be obtained from an RCT.

3.4 Documentation

NOTE: *Documentation of the refusal to receive the Hepatitis B vaccination by personnel who fall within the BBP program will be maintained by CPCCo, IDMS database (29 CFR 1910.1030(f)(2)(iv)), using Hepatitis B Vaccination Declination Form (Site Form A-6007-373).*

Actionee	*Step*	*Action*
Bloodborne Pathogen Technical Authority	1.	SEND *Hepatitis B Vaccination Declination Form* (Site Form A-6007-373) to IRM Service Provider for record retention.

4.0 FORMS

A-6007-373, *Hepatitis B Vaccination Declination Form*

5.0 RECORD IDENTIFICATION

All records are required to be managed accordance with CPCC-PRO-IRM-10588, *Records Management Processes.*

Records Capture Table

Name of Record	Submittal Responsibility	Retention Responsibility
Hepatitis B Vaccination Declination Form, A-6007-373	BBP TA	IRM Service Provider

6.0 SOURCES

6.1 Requirements

10 CFR 851.21(a)(1), *Hazard identification and assessment for exposure to chemical, physical, biological or safety workplace hazards*
29 CFR 1910.1030, *Bloodborne pathogens*

6.2 References

CPCC-PRO-IRM-10588, *Records Management Processes*
CPCC-PRO-SH-077, *Reporting, Investigating, and Managing Health, Safety and Property/Vehicle Events*

6.3 Bases

CPCC-PRO-SH-17916, *Industrial Hygiene Exposure Assessment*
CPCC-PRO-WKM-079, *Job Hazard Analysis*

Appendix A - Glossary

Term	*Definition*
Bloodborne Pathogen	Pathogenic (disease causing) microorganisms that are potentially present in human blood and include hepatitis B virus (HBV) and human immunodeficiency virus (HIV).
Other Potentially Infectious Materials (OPIM)	Any body fluids visibly or potentially contaminated with blood and/or any human body fluids, tissues, or organs.
Universal Precautions	An approach to infection control. According to the concept of Universal Precautions, all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other BBPs.

Appendix B - Biohazard Label

Biohazard labels shall be fluorescent orange or orange-red or predominantly so, with lettering and symbols in a contrasting color.

Red bags or red containers may be substituted for labels.

Appendix C - Bloodborne Pathogens Exposure Control Plan

Job Classification

1. Line management could assign the following job classifications to activities that could result in occupational exposure to BBPs:

   - Radiological Control supervisors
   - RCTs
   - Operations Managers/Field Work Supervisors
   - NCOs/D&D Workers
   - Electricians

NOTE: *Nasal mucous and saliva are not considered OPIM unless they contain blood; however, to avoid confusion, universal precautions must still be followed.*

2. In these job classifications, the potential for occupational exposure occurs during the following activities:

   - Responding to emergency situations including cleanup or decontamination
   - Performing blood, wound, nasal, or mouth smears for RadCon purposes

3. All employees may be potentially exposed to BBPs if they respond to emergency situations as a Good Samaritan. If they respond, they should follow Universal Precautions.

Work Controls and Universal Precautions

Protective Equipment

Universal precautions kits contain BIOHAZARD-labelled waste bags, absorbent materials, disinfectant chemical germicide, disinfectant towelettes, and single-use PPE (e.g., gloves and safety glasses with side shields).

Housekeeping, Cleanup Practices and Controls

Work areas and equipment need to be cleaned up and decontaminated with an approved disinfectant as soon as possible after contact with potentially infectious materials.

Personal cleanliness is essential to reduce spread of infectious material. Employees shall wash hands immediately after removal of gloves or other PPE. If soap and running water are not immediately available, hands and other exposed skin can be disinfected with an antiseptic cleanser or towelette. Wash hands thoroughly when possible using soap and running water.

Approved disinfectants include the following:

- Disinfectant chemical germicide obtained from building custodial supplies or from a universal precautions kit
- Household bleach diluted 1.5 cups of bleach to one-gallon of water (1:10 bleach to water mixture), mixed just prior to use.

Appendix C - (Cont.) Bloodborne Pathogens Exposure Control Plan

Universal precautions shall always be observed. All blood and OPIM shall be treated as if it is known to be infectious. Protective single-use gloves and safety glasses with side shields must be worn when performing first aid; blood, nasal, or mouth smears; or when handling waste associated with the above activities. Other PPE shall be used, as necessary, to prevent blood or OPIM from reaching the first aid responder's work clothes, street clothes, undergarments, skin, eyes, mouth, or mucous membranes.

Perform activities involving blood or OPIM in a manner to minimize splashing, spraying, spattering, and the generation of droplets.

Hand washing with soap and running water shall be conducted as soon as possible after:

- Contact with blood or OPIM
- Removing protective gloves or other PPE, even if PPE appears to be intact

Handling of BIOHAZARD Waste

Potentially contaminated sharp objects or broken glassware shall be picked up using housekeeping tools (dust pan, brush, tongs, etc.) - not with the hands - and placed in a hard sided container (plastic bottle, box, etc.) for disposal.

Towels and disposable PPE used during cleanup of blood and OPIM shall be disposed as BIOHAZARD waste.

NOTE: *Red-colored bags are acceptable in lieu of BIOHAZARD labelling.*

BIOHAZARD waste shall be double-bagged and labelled before handling, storing, and transporting and be placed for pickup with regular or radioactive waste, as applicable.

BIOHAZARD bags/containers may be obtained from a BIOHAZARD kit or from a facility custodian.

1. Place all BIOHAZARD waste in a closable, leak-proof, BIOHAZARD-labelled bag or container.

2. Before removing BIOHAZARD waste for disposal, place the bag/container in a second closable, leak-proof, BIOHAZARD-labelled bag or container.

3. Place and dispose of BIOHAZARD bags/containers in the same manner as regular waste unless they are radioactive waste.

BIOHAZARD warning labels may be obtained from a BIOHAZARD kit or from a facility custodian and shall be attached to bags/containers of BIOHAZARD waste.

Waste from a radiological area containing BIOHAZARD waste shall have final disposition in yellow radioactive waste bags and be placed and disposed with radiologically contaminated waste. Radiological waste labels can be obtained from an RCT.