1.0 INTRODUCTION

1.1 Occupational exposure to human blood, body fluids and other potentially infectious materials may result in human disease. In an attempt to prevent these exposures and therefore to limit occupational illness and injury among employees who work with these potentially infectious materials, OSHA has enacted a Bloodborne Pathogens (BBP) Standard. This standard requires employers to identify potentially exposed employees by job classification and to implement a written program designed to eliminate or minimize employee exposure.

1.2 After careful evaluation of the work currently conducted by Desert Research Institute (DRI) employees, it has been determined that at this time there is no work in progress (or planned for the foreseeable future) which involves human blood, body fluids or tissues. There is a potential for contact with human fluids in the normal day-to-day activities conducted by DRI custodians in their cleaning activities and with facility and environmental, health and safety personnel responding to a workplace emergency which might include personnel injury.

2.0 PURPOSE AND SCOPE

2.1 This document serves to address the means by which the Desert Research Institute (DRI) will protect employees from the risks associated with exposure to human blood or other bodily fluids. It is also intended to ensure our compliance with the OSHA Bloodborne Pathogen Standard. Examples of pathogens which may be transmitted by exposure to infectious body fluids include, but are not limited to, Hepatitis B Virus (HBV), Hepatitis C Virus (HCV), and Human Immunodeficiency Virus (HIV).

2.2 Because of the limited potential for exposure to bloodborne pathogens, an abbreviated exposure control plan (ECP), eliminating much of the laboratory specific information typical in these plans, has been prepared for use at DRI. Continual monitoring of research projects will be conducted by hazard review and should the scope of work change to include work with human blood, body fluids, or tissues, the ECP will be subsequently revised as appropriate to include additional employee populations who have potential exposure to BBP.

2.3 The Exposure Control Plan contains the following sections:

2.2.1 Responsibilities

2.2.2 Exposure Determination,

2.2.2 Methods of Compliance,

2.2.4 Medical Surveillance and HBV Vaccination Programs,

2.2.5 Hazard Communication,

2.2.6 Recordkeeping,

2.2.7 Exposure Incident Investigation

2.2.8 Definitions

2.2.9 References , and

2.2.8 Attachments

2.2.8.1 A: Job *Classifications in which All Employees have Potential Exposure*

2.2.8.2 B: Job *Classifications in which Some Employees have Potential Exposure*

2.2.8.3 C: Description *of Universal Precautions for Healthcare Workers*

2.2.8.5 D: Hepatitis *B Declination Form*

2.2.8.6 *E: Accident/Incident Investigation Report Forms*

3.0 RESPONSIBILITY

3.1 Division and Program Directors and Administrative Vice Presidents are responsible for:

3.1.1 Providing EH&S with a list of job titles and job duties for their departments when either all employees or some employees have potential exposure to bloodborne pathogens.

3.1.2 Verifying that a process safety analysis or hazard evaluation is conducted in work areas under their management any time a new biohazardous substance or process is introduced, or an existing process is changed.

3.1.3 Notifying EH&S when the above analysis involves the potential for exposure to bloodborne pathogens.

3.2 Supervisors (who, for the purposes of this document, may be any DRI employee who is in charge of one or more employees) are responsible for:

3.2.1 Maintaining, as appropriate, a current inventory of biohazardous substances used and stored in areas under their supervision.

3.2.2 Assuring the development and evaluation of standard operation procedures (SOPs) for biohazardous processes under their supervision to verify that biosafety issues have been addressed and that Universal Precautions have been implemented.

3.2.3 Verifying that the appropriate personal protective equipment is available.

3.2.4 Auditing the work practices of their employees to verify engineering and administrative controls and personal protective equipment designed to prevent employee exposures to biohazardous substances are being properly employed.

3.2.5 Conducting periodic reviews to identify potential work place hazards and subsequently, developing corrective actions to eliminate the hazard.

3.2.6 Auditing the labeling of biohazardous substances and wastes in their work areas for compliance with Section 5.3.6.4.

3.2.7 Verifying that their affected employees attend annual biosafety training.

3.2.8 Verifying that affected employees have either participated in the Hepatitis B vaccination program or have signed a declination statement.

3.2.9 Referring an employee who reports a work-related exposure to human blood and/or body fluids to EH&S so a post exposure evaluation and follow-up can be scheduled.

3.2.10 Enforcing the appropriate work practice control outlined in Section 5.3.

3.3 The Environmental, Health and Safety Department is responsible for:

3.3.1 Communicating any changes in the regulations to management/supervision for distribution to their affected employees.

3.3.2 Reviewing (and revising if necessary) the written program whenever new research using human blood, body fluids or tissues is planned or annually, whichever occurs first.

3.3.3 Obtaining and conducting new training programs and/or updating existing programs so employees receive current information in their annual training sessions.

3.3.4 Maintaining a file of declination statements and Hepatitis B vaccination participants.

3.3.5 Arranging a confidential medical evaluation and follow up for an employee who reports a work related exposure to human blood or body fluids.

3.3.6 Conducting an annual program evaluation which includes:

3.3.6.1 Observation of or the discussion with employees to determine that employees are aware of the biohazards of the materials with which they work or to which they may be occupationally exposed.

3.3.6.2 Periodic discussions with supervisors to verify their knowledge of the program and consistent program implementation.

3.3.6.3 A review of training records to verify the ability to document program implementation.

3.3.6.4 A spot check of secondary containers to verify labeling is consistent with Section 5.3.6.4.

3.4 Affected Employees are responsible for:

3.4.1 Reading and understanding the safety requirement section of the SOP prior to commencing a biohazard project.

3.4.2 Obtaining answers from their supervisor for any questions they may have about biohazardous substance(s) or process(es) prior to working with the substance or process.

3.4.3 Utilizing universal precautions when handling human blood or body fluid.

3.4.4 Reporting any incident involving human blood or body fluid to their supervisor and EH&S.

3.4.5 Attending annual biosafety training.

4.0 EXPOSURE DETERMINATION

4.1 Exposure determination or the identification of all employees whose jobs have the potential for exposure to blood or body fluids is made without accounting for the use of personal protective equipment. In evaluating the current activities of DRI employees, no employee category has, by job description, the potential for exposure to human blood, body fluids or tissues and therefore BBPs. Because of the nature of custodial and facility duties, a slight chance of coming across potentially infectious materials is possible. Therefore, it is the decision of DRI management to provide all employees in these departments with basic BBP education and to offer the opportunity for them to receive Hepatitis B vaccine. Appendices A and B list the job classifications and tasks identified had posing a risk of exposure to BBPs.

5.0 METHODS OF COMPLIANCE

5.1 Universal Precautions shall be observed to prevent contact with blood or other potentially infectious materials. (Attachment C contains a link to the June 1988 MMWR describing Universal Precautions for healthcare workers.)

5.2 Engineering controls are used to eliminate or minimize employee risk with regard to occupational hazards. Any engineering controls implemented for bloodborne pathogen usage shall be reviewed on a periodic basis to ensure effectiveness. Such engineering controls include the following:

5.2.1 *Sharps Containers,*

5.2.2 *Mechanical Pipettes,*

5.2.3 *Self-Sheathing Needles,*

5.2.4 *Class II Biological Safety Cabinets.*

5.3 Work practice controls are modifications of work procedures which will potentially reduce the likelihood of occupational exposure to blood or other body fluids. The following procedures are required:

5.3.1 *Hand Washing*

5.3.1.1 Hand washing facilities must be readily available to employees.

5.3.1.2 Employees must wash their hands immediately or as soon as it is feasible after the removal of gloves or other personal protective clothing.

5.3.1.3 Employees must wash their hands and exposed skin with soap and water or flush mucous membranes with water immediately or as soon as it is feasible following contact of such body areas with blood or potentially infectious materials.

5.3.2 *Sharps Handling*

5.3.2.1 Sharps containers will be readily available in all areas where sharps waste may be generated.

5.3.2.2 Broken glassware which may be contaminated must not be directly handled with a gloved hand. It shall be cleaned up with mechanical means such as tongs and/or dustpans and broom.

5.3.3 *Behavioral Considerations*

5.3.3.1 Eating, drinking, smoking or applying cosmetics is strictly prohibited in work areas where there is a reasonable likelihood of occupational exposure to BBP.

5.3.3.2 Food and drink shall not be kept in freezers, refrigerators, shelves and cabinets where hazardous materials, including blood or other potentially infectious materials are stored.

5.3.3.3 Any procedures which could potentially generate aerosols or other inhalation hazards shall be performed in a manner that will minimize such airborne pathogen transmission.

5.3.4 *Personal Protective Equipment*

Personal protective equipment shall be provided to all employees who are at risk of occupational exposure to bloodborne pathogens. Personal protective equipment shall be provided at no cost to the employee and shall include but not be limited to: gloves, gowns, laboratory coats, face

shields, masks, eye protection such as goggles, mouthpieces, resuscitation bags and pocket masks or other ventilation devices. Personal protective equipment is considered appropriate only if it does not permit blood or other potentially infectious material to pass through the employee's work clothes, street clothes or undergarments, skin, eyes or other mucous membranes under normal working conditions and for the duration of time that protective equipment will be used. Other conditions for personal protective equipment use include:

5.3.5.1 The supervisor shall ensure that employees wear the appropriate personal protective equipment for the task/procedure being conducted.

5.3.5.2 The supervisor may, on a case-by-case basis, approve that the employee may briefly decline to use the personal protective equipment under extenuating circumstances such as the equipment:

5.3.5.3.1 potentially interferes with providing healthcare or public safety emergency service, such as mouth to mouth resuscitation; or

5.3.5.3.2 potentially poses an increased hazard to the safety of the worker or co-worker.

5.3.5.3 The supervisor shall ensure that personal protective equipment is readily accessible at the work site in all appropriate sizes.

5.3.5.4 Personal protective equipment shall be cleaned, laundered or repaired at no cost to the employee.

5.3.5.5 All personal protective equipment shall be removed prior to leaving the work area.

5.3.5.6 If a garment is penetrated by blood, then that garment shall be replaced as soon as it is feasibly possible.

5.3.5.7 When personal protective equipment is removed, it shall be placed in an appropriate container or location for storage, cleaning or decontamination.

5.3.5.8 Gloves shall be worn when it is reasonably anticipated that the employee may have hand contact with blood or potentially infectious materials.

5.3.5.8.1 Disposable gloves shall be replaced when practical after decontamination or whenever feasible after they are torn or otherwise rendered ineffective to provide barrier protection.

5.3.5.8.2 Disposable or other single use gloves shall be disposed of immediately after use.

5.3.5.8.3 Utility gloves may be decontaminated for re-use if the integrity of the glove has not been compromised. However, they must be discarded if they are peeling, cracking, or exhibit any sign of deterioration which would compromise adequate barrier protection.

5.3.5.9 Masks shall be worn in conjunction with eye protective devices such as goggles or face shields whenever there is a splash hazard involving blood or other potentially infectious materials in the vicinity of the eye, mouth or other mucous membranes.

5.3.5.10 Gowns, aprons or other similar coveralls or outer garments shall be worn in occupational exposure situations. The appropriate type of outer garment will be determined based on the task and degree of exposure anticipated.

5.3.6 *Housekeeping*

5.3.6.1 All working surfaces shall be cleaned and decontaminated after contact with blood or other potentially infectious materials.

5.3.6.2 Contaminated surfaces must be cleaned and decontaminated with an appropriate disinfectant after the completion of procedures; whenever feasible if the surface work area becomes overtly contaminated with blood after a spill; or whenever the work surface may have been contaminated since the last cleaning.

5.3.6.3 All bins, pails and similar containers intended for reuse which have a reasonable likelihood for becoming contaminated with blood or other potentially infectious materials shall be inspected and decontaminated on a regularly scheduled basis or cleaned as feasible at the first sign of visible contamination.

5.3.6.4 Regulated Waste

5.3.6.4.1 Contaminated sharps must be discarded into containers which are closeable, puncture resistant, leak-proof on the sides and bottom and labeled with the universal biohazard symbol. Sharps containers will be easily accessible during use, maintained upright during use, and replaced when full. Sharps containers are single use items. Their contents must not be transferred to another container unless the original container has been compromised. In this instance, the original container should be placed entirely within the secondary container which is constructed to contain all contents during handling.

5.3.6.4.2 When removing containers of contaminated sharps from the area of use, the containers shall be closed immediately prior to removal or replacement to prevent spillage or protrusion of contents during handling, storage, transport or shipping. The use of a secondary container is required if leakage is possible.

5.3.6.4.3 Sharps containers must not be autoclaved unless the container is specifically designed to withstand a minimum of 121°C for 30 minutes, 20 PSI.

5.3.6.4.4 Regulated red bag waste must be placed in a container which meets the following criteria:

- Closeable
- Prevents leakage
- Color-coded or labeled with the biohazard symbol which is readily visible from all approaches
- Easily cleaned

5.3.6.4.5 If the primary regulated waste container has been contaminated beyond decontamination, then its contents must be placed into a secondary container.

5.3.6.4.6 Disposal of all regulated waste shall be in accordance with applicable Federal, State and local regulation.

5.3.6.5 Laundry

This section is only applicable if protective clothing such as lab coats or uniforms are regularly sent out to a laundry for cleaning.

5.3.6.5.1 Contaminated laundry, such as lab coats, must be handled as little as possible with a minimum of agitation.

5.3.6.5.2 Contaminated laundry shall be bagged or containerized at the location where it was used and must not be sorted or rinsed.

5.3.6.5.3 Contaminated laundry shall be placed and transported in bags or containers labeled or color-coded in accordance with this document, unless the facility uses universal precautions.

5.3.6.5.4 When a facility utilizes Universal Precautions in the handling of soiled laundry, then alternative labeling or other color-coding is sufficient if it permits all employees to recognize the containers as requiring compliance with Universal Precautions.

5.3.6.5.5 When contaminated laundry is wet and presents a reasonable likelihood of soak-through or leakage from the bag or container, then the laundry shall be placed in bags or containers which shall prevent leakage of fluids to the exterior.

5.3.6.5.6 The supervisor shall ensure that employees who have contact with contaminated laundry wear protective gloves and other appropriate personal protective equipment.

5.3.6.5.7 When a facility ships contaminated laundry off site to a facility which does not utilize Universal Precautions in the handling of all laundry, then the laundry must be placed in bags which are labeled or color-coded in accordance with the OSHA standards.

6.0 MEDICAL SURVEILLANCE AND HBV VACCINATION PROGRAMS

6.1 The Hepatitis B vaccine* shall be offered to all employees who are at risk of occupational exposure to bloodborne pathogens. The initial Hepatitis B vaccination, the post-exposure evaluation and follow-up prophylaxis are:

- made available at no cost to the employee
- made available to the employee at a reasonable time and place
- performed by or under a licensed physician or by or under supervision of another licensed healthcare professional
- provided according to recommendations of the U.S. Public Health Service current at the time that these procedures take place.

* Currently, no vaccine is available to protect against Hepatitis C or HIV. Should they be developed then each employee with potential for occupational exposure to BBP would be offered these vaccines too.

6.2 Hepatitis B Vaccination

6.2.1 An accredited lab at no cost to the employee will perform all laboratory tests.

6.2.2 The Hepatitis B vaccination shall be offered immediately to all current employees and within 10 working days of initial assignment to all future employees unless:

6.2.2.1 the employee has previously received a complete series of Hepatitis B vaccinations;

6.2.2.2 antibody testing has revealed that the employee is immune;

6.2.2.3 the vaccine is contraindicated for medical reasons.

6.2.3 The supervisor shall not make participation in a prescreening program a prerequisite for receiving the Hepatitis B vaccination.

6.2.4 If the employee initially declines the Hepatitis B vaccination but at a later date, while still covered under the standard, decides to accept the vaccination, then the vaccination must be provided to the employee at this time.

6.2.5 The supervisor MUST ensure that any employee who declines the Hepatitis B vaccination sign a declination statement. (Attachment D)

6.2.6 If the U.S. Public Health Service recommends a routine booster dose of Hepatitis B vaccine, then it shall be administered in accordance with the requirements of the standard.

6.3 Post Exposure Evaluation and Follow-Up

6.3.1 Following a report of an exposure incident, the supervisor shall immediately refer the employee to EH&S; who will arrange for the exposed employee to obtain a confidential medical evaluation and follow-up, which will include the following:

6.3.1.1 documentation of the route(s) of exposure, and circumstances under which the exposure occurred.

6.3.1.2 identification and documentation of the source individual, unless the laboratory director can establish that identification is infeasible or prohibited by state or local law.

6.3.2 The source individual's blood shall be tested as soon as it is feasible, and after consent is obtained, in order to determine HBV, HCV or HIV infectivity.

6.3.2.1 If consent has not been obtained, the supervisor shall establish that consent cannot be obtained. When law does not require the source individual’s consent, then the source individual's blood, if available, shall be tested and the results documented.

6.3.2.2 If the source individual is already known to be infected with HIV, HCV or HBV, then testing to determine such status need not be repeated.

6.3.2.3 Results of the source individual's testing shall be made available to the exposed employee and the employee shall be informed of applicable laws and regulations regarding the privacy rights of the source individual.

6.3.3 Collection of Blood for HIV, HCV and HBV Serological Status

6.3.3.1 The exposed employee's blood will be collected as soon as it is feasible and tested after consent has been obtained.

6.3.3.2 If the employee consents to baseline blood collection, but does not give consent to HIV serological testing, then the sample shall be preserved for at least 90 days. If within 90 days of the exposure incident, the employee elects to have serological testing performed on the baseline sample, then testing shall be done as soon as it is feasible.

6.3.3.3 Post exposure prophylaxis, when medically indicated, will be as recommended by the U.S. Public Health Service.

6.3.3.4 Information Provided to the Healthcare Professional.

6.3.3.4.1 A copy of the Bloodborne Pathogen Standard (29 CFR 1910.1030) will be provided to the healthcare professional. The supervisor of any employee who has been potentially exposed to Hepatitis B must provide the evaluating healthcare professional the following information:

- a description of the exposed employee's job duties as they relate to the employee's exposure incident
- documentation of the route(s) of exposure and circumstances under which exposure occurred
- test results of the source individual's blood, if available
- all medical records relevant to the appropriate treatment of the employee including vaccination status, which is the responsibility of the laboratory director

6.3.3.4.2 Healthcare Professional's Written Opinion

- The EH&S Department shall obtain and provide the employee with a copy of the evaluating healthcare professional's written opinion within 15 days of completing the evaluation.
- The healthcare professional's written opinion for Hepatitis B shall be limited to whether the Hepatitis B vaccination has been indicated for an employee, and whether the employee has received such a vaccination.

- The healthcare professional's written opinion for post exposure follow-up shall be limited to the following information:
  - the employee has been informed of the results of the evaluation;
  - the employee has been told of any medical conditions which require further treatment or evaluation
  - All other findings or diagnoses shall remain confidential and shall not be included in the written report.

7.0 HAZARD COMMUNICATION

7.1 Labels and Signs

7.1.1 Warning labels incorporating the universal biohazard sign and the word, "BIOHAZARD," shall be affixed to containers of regulated waste, storage freezers or refrigerators containing blood or other potentially infectious materials or any other containers used to store, transport or ship blood.

7.1.2 The labels shall be fluorescent orange or orange-red with lettering or symbols in a contrasting color.

7.1.3 Labels shall be affixed as securely as possible to the container, preferably by adhesive, or by wire, string or other method to prevent loss or unintentional removal.

7.1.4 Red bags or red containers may be substituted for labels.

7.1.5 Containers of blood, blood products, or blood components that are labeled as to their contents and have been released for transfusion or other clinical use are exempted from the labeling requirements.

7.1.6 Individual containers of blood or other potentially infectious materials that are placed in a labeled container during transport, shipment, or disposal are exempted from additional labeling requirements.

7.1.7 Regulated waste that has been decontaminated need not be labeled or color-coded.

7.2 Biohazard Signs

7.2.1 All HIV, HBV, and HCV laboratories/production facilities shall have a sign posted at the entrance of the facility. This sign will:

- incorporate the universal biohazard symbol
- list the name(s) of the infectious agent(s) used within the laboratory
- list any special requirements for entering the area
- list the name and telephone number of the laboratory supervisor or other responsible person

7.2.2 These signs shall be fluorescent orange with contrasting color.

7.3 Information and Training: Training will be provided to all employees who are at risk from exposure to bloodborne pathogens. This training must be provided at no cost to the employee and during work hours.

7.3.1 Training is required to be given as follows:

7.3.1.1 at the time of initial assignment to tasks where occupational exposure may take place

7.3.1.2 immediately for currently employed workers

7.3.1.3 annually after the initial training

7.3.1.4 whenever modifications of current tasks may affect the potential occupational exposure to bloodborne pathogens

7.3.2 Training must be at an education level appropriate for the audience to which it is given.

7.3.3 The training program must include, but is not limited to the following subjects:

7.3.3.1 access to the OSHA Standard and an explanation of the document

7.3.3.2 a general explanation of the epidemiology and symptoms of bloodborne diseases

7.3.3.3 an explanation of the modes of transmission of bloodborne diseases

7.3.3.4 an explanation of this document and the mean to obtain a copy of the written plan

7.3.3.5 an explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potential materials

7.3.3.6 an explanation of the use and limitations of methods that will prevent or reduce exposure including appropriate engineering controls, work practices and personal protective equipment

7.3.3.7 information on the types, proper use, location, removal, handling, decontamination and disposal of personal protective equipment

7.3.3.8 an explanation of the basis for the selection of personal protective equipment

7.3.3.9 information on the Hepatitis B vaccine, including information on its efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine and vaccination is being offered at no cost

7.3.3.10 information on the appropriate actions to take and persons to contact in an emergency involving blood or other potentially infectious materials

7.3.3.11 an explanation of the procedure to follow if an exposure incident occurs, including the method of reporting that incident and the medical follow-up that will be made available

7.3.3.12 information on the post-exposure evaluation and follow-up that the company is required to provide for the employee following an exposure incident

7.3.3.13 an explanation of the signs and labels and/or color-coding required by this document

7.3.3.14 an opportunity for interactive questions and answers with the person conducting the training session

7.3.4 The person conducting the training must be knowledgeable in the subject matter covered by the elements contained in the training program as it relates to the workplace that the training will address.

8.0 RECORDKEEPING

8.1 Medical Records

8.1.1 EH&S shall establish and maintain an accurate record for each employee with occupational exposure in accordance with Federal and State regulations. This record shall include:

8.1.1.1 the name and social security number of the employee

8.1.1.2 a copy of the employee's Hepatitis B vaccination status, including the dates of the Hepatitis B vaccinations and any medical records relative to the employee's ability to receive vaccinations

8.1.1.3 a copy of all results of examinations, medical testing, and follow-up procedures as described in Section 7 of this document

8.1.1.4 a copy of the information provided to the healthcare professional as required by this document

8.1.3 The EH&S and H.R. Departments shall ensure that employee medical records are kept confidential and are not disclosed or reported without the employee's written consent to any person within or outside the workplace except as required by this section and by law.

8.1.4 H.R. shall maintain the records required by this section for at least the duration of employment plus 30 years.

8.2 Training Records: Training records shall include the following information:

8.2.1 the dates of the training session

8.2.2 the contents or a summary of the training session

8.2.3 the names and qualifications of persons conducting the training session

8.2.4 the names and job titles of all persons attending the training

8.3 Accessibility

8.3.1 Employee training records must be made available upon request to employees, employee representatives and to OSHA.

8.3.2 Employee medical records must be made accessible to the employee, anyone having the written consent of the employee and to OSHA.

9.0 EXPOSURE INCIDENT INVESTIGATION

9.1 Attachment E contains the Accident/Incident Investigation Report Form. This document is used to follow-up any and all occupational illness, accident or near-miss event.

9.2 Sharps Log. As required by 29 CFR 1910.1030 (h) (5), a sharps log shall be maintained to record percutaneous injury resulting from contaminated sharps. The information contained in the log will be recorded in such a manner as to protect the confidentiality of the injured employee. At a minimum the following information shall be recorded:

9.2.1 Type and brand of device involved

9.2.2 Department or work area where exposure incident occurred

9.2.3 An explanation of how the incident occurred.

10.0 DEFINITIONS

10.1 *"Blood"* means human blood, human blood components, and products made from human blood.

10.2 *"Blood-Borne Pathogens"* means pathogenic 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).

10.3 *"Clinical Laboratory"* means a workplace where diagnostic or other screening procedures are performed on blood or other potentially infectious materials.

10.4 *"Contaminated"* means the presence or the reasonably anticipated presence of blood or other potentially infectious materials on an item or surface.

10.5 *"Contaminated Laundry"* means laundry which has been soiled with blood or other potentially infectious materials or which may contain sharps.

10.6 *"Contaminated Sharps"* means any contaminated object that can penetrate the skin, including, but not limited to, needles, scalpels, broken glass, broken capillary tubes, and exposed ends of dental wires.

10.7 *"Decontamination"* means the use of physical or chemical means to remove, inactivate, or destroy bloodborne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use, or disposal.

10.8 *"Engineering Controls"* means controls (e.g., sharps disposal containers, self-sheathing needles) that isolate or remove the bloodborne pathogens hazard from the workplace.

10.9 *"Exposure Incident"* means 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.

10.10 *"Handwashing Facilities"* means a facility providing an adequate supply of running potable water, soap and single use towels or hot air drying machines.

10.11 *"Licensed Healthcare Professional" is* a person whose legally permitted scope of practice allows him or her to independently perform the activities required by paragraph (f) Hepatitis B Vaccination and Post-exposure Evaluation and Follow-up.

10.12 *"HBV"* means Hepatitis B Virus.

10.13 *"HIV"* means Human Immunodeficiency Virus.

10.14 *"Occupational Exposure"* means 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.

10.15 *"Other Potentially Infectious Materials"* means:

10.15.1 The following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids;

10.15.2 Any unfixed tissue or organ (other than intact skin) from a human (living or dead); and

10.15.3 HIV-containing cell or tissue cultures, organ cultures, and HIV- or HBV-containing culture medium or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV or HBV.

10.16 *"Parenteral"* means piercing mucous membranes or the skin barrier through such events as needlesticks, human bites, cuts, and abrasions.

10.17 *"Personal Protective Equipment" is* specialized clothing or equipment worn by an employee for protection against a hazard. General work clothes (e.g., uniforms, pants, shirts or blouses) not intended to function as protection against a hazard are not considered to be personal protective equipment.

10.18 *"Production Facility"* means a facility engaged in industrial-scale, large-volume or high concentration production of HIV and HBV.

10.19 *"Regulated Waste"* means liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed; items that are caked with dried blood or other potentially infectious materials and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood or other potentially infectious materials.

10.20 *"Research Laboratory"* means a laboratory producing or using research-laboratory-scale amounts of HIV or HBV. Research laboratories may produce high concentrations of HIV or HBV but not in the volume found in production facilities.

10.21 *"Source Individual"* means any individual, living or dead, whose blood or other potentially infectious materials may be a source of occupational exposure to the employee. Examples include, but are not limited to, hospital and clinic patients; clients in institutions for the developmentally disabled; trauma victims; clients of drug and alcohol treatment facilities; residents of hospices and nursing homes; human remains; and individuals who donate or sell blood or blood components.

10.22 *"Sterilize"* means the use of physical or chemical procedure to destroy all microbial life including highly resistant bacterial endospores.

10.23 *"Universal Precautions"* is 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 blood-borne pathogens.

10.24 *"Work Practice Controls"* means controls that reduce the likelihood of exposure by altering the manner in which a task is performed (e.g., prohibiting recapping of needles by a two-handed technique).

11.0 REFERENCES

11.1 National Clinical Chemistry Laboratory Society Document M29T-2 1991.

11.2 *Recommendations for Prevention of HIV Transmission in Health-Care*. MMRW. August 21, 1987. Volume 36 (SU02): 001.

11.3 *Settings Perspectives in Disease Prevention and Health Promotion Update: Universal Precautions for Prevention of Transmission of Human Immunodeficiency Virus, Hepatitis B Virus, and Other Bloodborne Pathogens in Health-Care Settings.* MMWR. June 24, 1988. Vol. 37 (24): 377-388.

11.4 *Guidelines for Prevention of Transmission of Human Immunodeficiency Virus and Hepatitis B Virus to Health-Care and Public-Safety Workers*. MMRW. June 23, 1989. Volume 38, Number S-6.

11.5 CDC/NIH Biosafety in Microbiological and Biomedical Laboratories, 5th edition, September 2009, HHS Pub. No. (CDC) 21-1112.

11.6 Title 29 Code of Federal Regulations 1910.1030.

11.7 State of Nevada, Department of Business and Industry "Occupational Safety and Health Standards for General Industry", Section 1910.1030.

11.8 Bloodborne Infectious Diseases: HIV/AIDS, Hepatitis B, Hepatitis C, CDC Workplace Safety and Health Topics, http://www.cdc.gov/niosh/topics/bbp/

ATTACHMENT A

Job classifications at the Desert Research Institute in which all employees are considered to have potential exposure to blood or body fluids

Job classifications	Tasks or Procedures
Facilities Manager Building Tech Building Tech Assistant Facilities Dept. Hourly Service Maintenance Worker	Repair and maintenance of various building systems (ex. HVAC, plumbing, etc.), response to emergency situations that may include injured personnel.
Custodial Supervisor Lead Custodian Custodial/Building Maintainer	Working in areas or handling equipment where human blood or body fluids may be found (ex. cleaning restrooms and emptying office trashcans), clean up activities during and after an emergency situation.
Building and Grounds Attendant Building and Grounds Attendant/Motor pool	May be exposed when assisting facilities staff or assisting in a response to emergency situations that may include injured personnel.
Facilities Department Hourly Professional	May be exposed when assisting staff or during emergency repairs.
Environmental Health & Safety Officers	May be exposed while conducting the day-to-day activities of the Environmental Health and Safety Department or during an emergency situation that may include injured personnel.

ATTACHMENT B

Job classifications the Desert Research Institute in which some employees may have exposure

Job classifications	Tasks or Procedures
Facilities Administration Manager Administrative Assistant (Facilities Dept.)	Facilities Department administrative employees who may be exposed when assisting injured employees filing Worker's Compensation Claims.

ATTACHMENT C

Perspectives in Disease Prevention and Health Promotion Update: Universal Precautions for Prevention of Transmission of Human Immunodeficiency Virus, Hepatitis B Virus, and Other Bloodborne Pathogens in Health-Care Settings

http://www.cdc.gov/mmwr/preview/mmwrhtml/00000039.htm

Please notify EH&S if you have any problems accessing this link.

ATTACHMENT D

Hepatitis B Vaccination Declination Form

HEPATITIS B VACCINATION PROGRAM

NAME: _____ Employee ID #: _____
(please print your name)

Department #: _____ Extension: _____ M/S: _____ Supervisor's Name: _____

Please initial the appropriate paragraph(s)

____ I acknowledge that I have received relevant information from the Desert Research Institute, including the description of certain procedures and provisions of certain equipment to be used to minimize the risks of infection with the hepatitis B virus associated with certain tasks I perform at DRI. I am aware that DRI agrees with the recommendation of the Centers for Disease Control and Prevention that individuals at risk of exposure to the hepatitis B virus should receive the proper vaccination series. I have been provided with information concerning the risks associated with receiving these vaccinations.

____ I have elected to participate in the Hepatitis B Vaccination Program**. I will contact DRI EH&S for the forms needed to take to the clinic applicable to my work location to obtain these vaccinations. Please verify reimbursement by your program BEFORE obtaining the vaccine**

____ I have already received the Hepatitis B Vaccine
* Location (if known, please state) _____
* Year (if known, please state) _____
* Vaccine received (if known) Recombivax ___or Heptavax _____
* Did you complete the 3-injection series? _____
* If not, how many did you receive? _____

PLEASE READ AND SIGN IF YOU ARE DECLINING THE VACCINATION
****

HEPATITIS B VACCINATION DECLINATION

I understand that due to my occupational exposure to blood or other potentially infectious materials, I may be at risk of acquiring the hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated with hepatitis B vaccine, at no charge to me. However, I decline hepatitis B vaccination at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring hepatitis B, a serious disease. If, in the future, I continue to have occupational exposure to blood or other potentially infectious materials and want to be vaccinated with hepatitis B vaccine, I can receive the vaccination series at no charge to me.

_____ _____
Your Signature for Declining the Hepatitis B Vaccination Today's Date

INFORMATION REGARDING THE BENEFITS AND RISKS OF HEPATITIS B VACCINATION

I. Introduction

Occupational Safety and Health Administration (OSHA) regulations state that all employees whose jobs involve handling of substances of human origin that could contain bloodborne pathogens be offered the opportunity of being vaccinated for hepatitis B, at no cost to the employee.

Because from 10 to 25 percent of persons who have been working with human serum specimens may have been previously exposed to the hepatitis b virus, it is desirable to perform a blood titer to determine whether or not there has been previous exposure. While OSHA regulations do not provide for a titer test before vaccination, the decision to vaccinate without pretesting will be up to the health care professional responsible for vaccination.

Most people who have had a previous exposure will have antibody levels that protect them from subsequent exposure to hepatitis B virus, i.e., they are immune and are not candidates for vaccination. Those employees who have been previously exposed, but have low levels of antibodies and those who have not been previously exposed (no antibodies) are candidates for vaccination. Vaccination consists of three injections, the second one 30 days after the first, and the third one six months after the first.

Note: Being vaccinated will not prevent you from donating blood.

II. Benefits of Vaccination:

Approximately 93 to 99 percent of persons who are vaccinated develop protective levels of antibody to hepatitis B and are, therefore, immune. Thus the risk to employees and their families of contracting hepatitis B is greatly reduced. In addition, post-exposure prophylaxis procedures are greatly simplified.

III. Risks of Vaccination:

Because of the nature of the recombinant vaccines available, the risks of vaccination are very low. According to the Centers for Disease Control and Prevention over 2.5 million adults received one or more doses of recombinant hepatitis B vaccine with no reported cases of serious reactions to the vaccination. In 1991 routine vaccination against hepatitis B began for U.S. children The most common reaction is a slight soreness at the injection site (deltoid muscle in the upper arm).

IV. Benefits of Not Being Vaccinated:

There are no significant benefits of not being vaccinated.

V. Risks of Not Being Vaccinated:

The most common form of infection associated with handling specimens of human origin is hepatitis B. The consequences of parenteral (through the skin) exposure to hepatitis B are highly variable, ranging from no effect to very serious illness, including death. Intermediate effects include chronic hepatitis and acute hepatitis with complete recovery or with a permanent carrier condition. Hepatitis B is considered a sexually transmitted disease. Therefore, it is possible for the disease to be transmitted to a sexual partner during the early stages of infection with hepatitis B. Non-sexual family contacts are also at risk of infection.

It is considered the opinion of the Desert Research Institute that the above risks of hepatitis B infection to you and your family would be greatly reduced by the offered vaccination. Please refer to the CDC fact sheet on what you need to know about hepatitis B vaccine for additional information If you still have questions about whether the hepatitis B vaccine is right for you, please contact your personal physician.

(The link above was updated in 10/2013. Please notify EH&S if you have any problems accessing this link.)

ATTACHMENT E

Accident/Incident Investigation Report Forms

C-1 Notice of Injury or Occupational Disease Incident Report

(to be completed by the employee)