

BW 0600

**Site Safety and Health Plan  
Remedial Investigation/Feasibility Study  
Fort Ord, California**

BW 0600

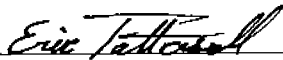
**Hantavirus Addendum**

Prepared for

**United States Department of the Army**

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## DISTRIBUTION

## **1.0 INTRODUCTION**

Harding Lawson Associates (HLA) will conduct the Fort Ord, California, Basewide Ecological Risk Assessment (ERA) in accordance with the EA Engineering (EA) Draft Final Site Safety and Health Plan (SSHP), February 1991, the HLA Health and Safety Policy and Procedures Manual, the U.S. Army Corps of Engineers Safety and Health Requirements Manual EM 385-1-1, October 1992, and all applicable addenda to the EA Draft Final SSHP.

## **2.0 AUTHORIZATION**

This Addendum to the EA Draft Final SSHP was prepared for the Department of the Army, Corps of Engineers, Sacramento District, under Contract DACA05-86-C-0241, in accordance with the original and supplemental scopes of work dated June 23, 1993.

### **3.0 DOCUMENT CHANGES**

The EA Draft Final SSHP has been modified to include the following attachment:

**ATTACHMENT**

**PROCEDURES FOR SMALL MAMMAL TRAPPING WITH  
POTENTIAL EXPOSURE TO HANTAVIRUS**

## ATTACHMENT A

### PROCEDURES FOR SMALL MAMMAL TRAPPING WITH POTENTIAL EXPOSURE TO HANTAVIRUS

#### A1.0 Purpose

This section describes the protocol for small mammal trapping, and handling of specimens and equipment. The intent of the protocol is to provide guidance for trapping and to prevent possible exposure to Pulmonary Syndrome Hantavirus (Hantavirus), while conducting small mammal trapping at Fort Ord.

The objective of the Basewide Ecological Risk Assessment (ERA) is to assess whether chemicals associated with Army activities at Fort Ord may currently or in the future adversely affect flora and fauna.

#### A2.0 Scope

These procedures apply to all HLA employees and subcontractors performing small mammal trapping at Fort Ord. Application of these procedures shall be specified in the Site-Specific Health and Safety worksheets.

#### A3.0 Responsibilities

The Task Manager is responsible for the overall planning and compliance with health and safety activities and for using trained individuals who are enrolled in a medical monitoring program. The Task Manager is directly responsible for confirming that project personnel are adequately protected from safety and health hazards and that all requirements of this plan are met.

The Site Safety Officer, \_\_\_\_\_, is responsible for all day-to-day onsite compliance with the health and safety provisions described in this SSHP. He or she will have the authority to stop operations if s/he believes conditions warrant the interruption. The Site Safety Officer will be familiar with general industrial hygiene practices and hazardous waste site operations.

The Field Operations Team members are responsible for following all provisions of this

SSHP. The Field Operations Team will include HLA personnel and any subcontractors.

#### A4.0 Hantavirus Information

Pulmonary Syndrome Hantavirus causes a disease in humans that begins as flu-like symptoms (fever, muscle aches, headache, and cough) and then progresses rapidly to severe lung disease, often requiring intensive care treatment. According to the Centers for Disease Control and Prevention, as of October 29, 1993, 62 percent of case patients have died.

The primary reservoir host for the hantavirus has been identified as the deer mouse (*Peromyscus maniculatus*). Additional hosts may include the piñon mouse (*P. truei*), brush mouse (*P. boylii*), house mouse (*Mus musculus*), harvest mouse (*Reithrodontomys* spp.), chipmunk (*Tamias* spp.), rock squirrel (*Spermophilus variegatus*), and the white-throated wood rat (*Neotoma albigula*).

Human infection may occur when infective saliva or excreta are inhaled as aerosols produced directly from the animal. Transmission may also occur when dried materials contaminated by rodent excreta are disturbed, directly introduced into broken skin, introduced into the eyes, or, possibly, ingested in contaminated food or water. Persons have also become infected after being bitten by rodents.

Confirmed cases of hantavirus infection have been reported in 12 western states. In California, two cases have been confirmed. In September 1992, a 29-year old ranch worker in Monterey County died, and in July 1993, a 27-year old field biologist working on the eastern slope of the California Sierra Nevada range also died.

#### A5.0 PPE Requirements

The following Personal Protective Equipment (PPE) shall be worn when handling small mammals or contaminated traps:

- Half or full-face air purifying (or negative pressure) respirator or PAPR equipped with HEPA filters
- Safety glasses; and
- Leather gloves under plastic gloves.

**A6.0 Safe Work Practices**

- a. All individuals involved in trapping efforts shall be briefed by the task leader (or other appropriate person) regarding concerns of hantavirus and approved trapping protocol.
- b. Issues will be readdressed during daily "tailgate" meetings prior to conducting daily activities.
- c. No personnel without required training and Health and Safety briefings will be permitted within 25 feet of any sprung trap.
- d. Traplines will be flagged with caution/keep out tape or a biohazard caution sticker will be placed on all traps.
- e. Traps shall be kept in airtight bags or containers while in transit between trapping locations.
- f. Personnel who develop a febrile or respiratory illness within 45 days of the last potential exposure should immediately seek medical attention and inform the attending physician of the potential occupational risk of hantavirus infection.

**A7.0 Decontamination and Disposal**

Decontamination of traps is to be conducted after trapping activities at Fort Ord have been completed. Transportation of traps between trapping locations shall be conducted by placing traps in airtight containers. The containers will be placed in a well ventilated area (i.e., truck bed) for transportation.

Decontamination of traps shall be conducted while wearing PPE. Each trap shall be dipped into a hypochlorite solution (3 tablespoons

bleach: 1 gallon water), then rinsed in clean water before setting out to air dry. Reusable containers should be decontaminated in the same manner. Disposable containers should be washed in hypochlorite solution, bagged and disposed of as non-hazardous waste.

Prior to removal, gloves should be washed in a hypochlorite solution or commercial disinfectant and then in soap and water. Gloves can then be disposed. Hands should be thoroughly washed with soap and water after removing the gloves. In the field, gloves should be sprayed with a hypochlorite solution then rinsed with water prior to removal.

Respirator filters shall be immersed in bleach solution, then double bagged in plastic bags with disinfectant, and disposed in an outside dumpster.

**A8.0 Training**

Persons conducting trapping studies shall have completed the following health and safety requirements: 40-hour Hazardous Materials Training, current respirator fit test, baseline blood serum sample, and possess a valid scientific collector's permit issued by the California Department of Fish and Game.

**A9.0 Emergency Procedures**

All accidents, including personal injury, property damage, fire, explosion, spill, or possible exposure to hantavirus, must be reported immediately to the Site Safety Officer. The Site Safety Officer shall direct immediate response actions and will call 911 if necessary. The Task Manager will be then contacted and is responsible for alerting the Fort Ord DPW and the Corps of Engineers of all accidents. The Task Manager will complete and submit an accident report within 2 business days of any accident. The Site Safety Officer will maintain a record of all injuries and illnesses that occur at the site.

**A9.1 First Aid Procedures and Medical Treatment**

A first aid kit, and a fire extinguisher shall be provided and maintained during site operations.

A list of emergency phone numbers are included in Appendix A, along with directions to the Community Hospital of Monterey Peninsula (CHOMP).

**A9.2            Safeguarding of Personnel**

No eating, drinking, chewing, or smoking is permitted within the investigation site.

**A10.0           Project Hazard Analyses**

This section provides information regarding potential hazards that might be encountered during field activities and the risk(s) associated with each hazard. The hazard analysis evaluates the possible type of hazards at the site by task. This analysis is presented in Table 10-1.

**A10.1           Hazard Mitigation**

Procedures that will be used to minimize hazards identified onsite are listed in Table A10-1. The applicable activity is shown next to the procedure to mitigate the hazard.

**Table A10-1. Hazard Analysis Summary**

Activity: Small mammal trapping. Some rodents will be taken for laboratory analysis of contaminants.

Analyzed by/date: \_\_\_\_\_ Reviewed by/date: \_\_\_\_\_

Principal Steps	Potential Hazards	Recommended Controls
• Set and bait traps	1. Exposure to biological hazards including: poison oak and rattlesnake	1. Leather boots, appropriate clothing (i.e., pants and long-sleeved shirts, tyvek suit)
• Remove, identify, and process trapped rodents	2. Possible exposure to hantavirus. 3. Animal bites	2. Full-face air-purifying respirator or PAPR equipped with HEPA filters. 3. Plastic gloves over leather gloves.
• Transportation of traps that may be contaminated with hantavirus.	4. Possible exposure to hantavirus.	4. Traps shall be kept in airtight containers while in transit between trapping locations.
• Decontamination of traps.	5. Possible exposure to hantavirus.	5. Wear PPE (see Control #2).

Equipment to be used	Inspection Requirements	Training Requirements
• Sherman live traps, folding	• Inspect condition	Persons conducting trapping studies shall have completed the following health and safety requirements: 40 hour Hazardous materials training, current respirator fit test, baseline blood serum sample, and possess a valid scientific collector's permit issued by the California Department of Fish and Game.
• bait: Organic rolled oats, bird seed, and/or peanut butter	• Take sample for analysis	
• small (1 quart) clear plastic bags		
• bleach or other disinfectant		
• CO <sub>2</sub> asphyxiation chamber	• Inspect for leaks	
• Ice chest with dry ice		