PROGRAM MANAGER FOR
ROCKY MOUNTAIN ARSENAL

U.S. ARMY
MATERIEL COMMAND

— COMMITTED TO PROTECTION OF THE ENVIRONMENT —

FINAL
SUPPLEMENTAL FIELD STUDY
ACCIDENT PREVENTION SAFETY TASK PLAN

AUGUST 1994
CONTRACT NO. DAAA05-92-D-0002, Delivery Order 0(

EBASCO SERVICES INCORPORATED
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THE OVERALL PURPOSE OF THE RMA SUPPLEMENTAL FIELD STUDY IS TO RESOLVE THE BIOMAGNIFICATION FACTOR (BMF) DISPUTE ISSUE THAT WAS RAISED BY THE EPA UPON ITS REVIEW OF THE AUGUST 1993 DRAFT FINAL INTEGRATED ENDANGERMENT ASSESSMENT/RISK CHARACTERIZATION (IEA/RC) REPORT. THE PROGRAM INVOLVES TWO PHASES. PHASE I WILL INVOLVE COLLECTING AND ANALYZING BIOTA TISSUE SAMPLES FROM THE RMA "AREA OF DISPUTE" (AOD), A SPECIFIC AREA OVER WHICH THE ECOLOGICAL RISK CHARACTERIZATION IN THE AUGUST 1993 DRAFT FINAL IEA/RC IS CONTESTED. IF PHASE I INDICATES THAT UNACCEPTABLE RISKS TO BIOTA ARE LIKELY, THEN THE SUPPLEMENTAL STUDY MAY PROCEED WITH PHASE II TO COLLECT ADDITIONAL TISSUE AND SOIL DATA TO ESTIMATE BMFS FOR SELECTED SPECIES. THIS REPORT IS ORGANIZED INTO THE FOLLOWING SECTIONS: SECTION 1.0-INTRODUCTION. SECTION 2.0- AUTHORITIES AND RESPONSIBILITIES. SECTION 3.0- RMA HISTORY AND DESCRIPTION. SECTION 4.0- HAZARD ASSESSMENT. SECTION 5.0- TRAINING. SECTION 6.0- ZONES, PROTECTION, AND COMMUNICATION. SECTION 7.0- MEDICAL SURVEILANCE PROCEDURES. SECTION 8.0- SAFETY CONSIDERATIONS

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TECHNICAL SUPPORT FOR
ROCKY MOUNTAIN ARSENAL

FINAL
SUPPLEMENTAL FIELD STUDY
ACCIDENT PREVENTION SAFETY TASK PLAN

AUGUST 1994
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Prepared by:

EBASCO SERVICES INCORPORATED

Prepared for:

U.S. Army Program Manager's Office for the
Rocky Mountain Arsenal

OFFICE OF THE PROGRAM MANAGER
ACCIDENT PREVENTION SAFETY TASK PLAN
ROCKY MOUNTAIN ARSENAL
SUPPLEMENTAL FIELD STUDY

Contract No. DAAA05-92-D-0002
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7/15/94
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7/15/94
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LIST OF TABLES AND FIGURES

LIST OF ACRONYMS AND ABBREVIATIONS

AOD	Area of Dispute
APSPP	Accident Prevention Safety Program Plan
APSTP	Accident Prevention Safety Task Plan
BEMA	Bald Eagle Management Area
BMF	Bio Magnification Factor
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
OR	Contracting Officer's Representative
COTR	Contracting Officer's Technical Representative
CRZ	Contamination Reduction Zone
CSA	Central Study Area
DDE	1,1-Dichloro-2,2bis(p-chlorophenol)(ethylene)
DDT	Dichlorodiphenyltrichloroethane
ESA	Eastern Study Area
EZ	Exclusion Zone
FWS	Fish and Wildlife Service
GB	Sarin
H	Levinstein Mustard
HD	Distilled Mustard
HSM	Health and Safety Manager
HSSM	Health and Safety Site Manager
L	Lewisite
NCSA	North Central Study Area
NPSA	North Plants Study Area
OCP	Organochlorine Pesticides
OSHA	Occupational Safety and Health Administration
PMRMA	Program Manager Rocky Mountain Arsenal
PPE	Personal Protective Equipment
RMA	Rocky Mountain Arsenal
SC	Site Coordinator
SFS	Supplemental Field Study
SPSA	South Plants Study Area
SZ	Support Zone
TM	Task Manager
TSP	Trisodium Phosphate

1.0 GENERAL

1.1 INTRODUCTION

This Accident Prevention Safety Task Plan (APSTP) stipulates health and safety requirements for the Supplemental Field Study (SFS) - Phase 1 at Rocky Mountain Arsenal (RMA) and all activities associated with this study. This plan has been prepared in accordance with the Enserch Environmental Corporation (EEC) RMA Accident Prevention Safety Program Plan (APSPP) guidelines and task requirements, and the EEC Corporate Health and Safety Manual. It addresses SFS field activities which are collecting and analyzing biota tissue samples at RMA. The plan will be implemented during site work by the Health and Safety Site Manager (HSSM), assisted by the Health and Safety Manager (HSM). Compliance with this APSTP and the APSPP is required of all EEC personnel who perform field work for this project. The content of this APSTP may change or undergo revision based upon additional information made available to health and safety personnel, or changes in the technical scope of work. Any changes proposed must be reviewed by the HSSM and approved by the HSM. The Field Change Request (FCR) Form provided in Attachment A will be used to initiate such changes.

1.2 PURPOSE

This APSTP establishes policies, responsibilities, procedures, and information for the safe conduct of EEC and subcontractor field activities at RMA. Site activities will be coordinated as appropriate with personnel from the RMA Safety, Health, and Environment (SHE) Office, Program Management, Fire Department, as well as local emergency response personnel.

1.3 SCOPE OF WORK

The overall purpose of the Rocky Mountain Arsenal (RMA) Supplemental Field Study is to resolve the biomagnification factor (BMF) dispute issue that was raised by the Environmental Protection Agency (EPA) upon its review of the August 1993 Draft Final Integrated Endangerment Assessment/Risk Characterization (IEA/RC) Report. The program involves two phases. Phase I will involve collecting and analyzing biota tissue samples from the RMA "area of dispute" (AOD), a specific area over which the ecological risk characterization in the August

1993 Draft Final IEA/RC is contested. If Phase I indicates that unacceptable risks to biota are likely, then the supplemental study may proceed with Phase II to collect additional tissue and soil data to estimate field BMFs for selected species. The specific objective of Phase I of the Supplemental Field Study is to provide tissue data to determine whether any of a set of risk-based criteria for proceeding to a Phase II sampling program are exceeded. The Phase I tissue samples of interest will be collected in the AOD from 50 prairie dogs, 50 cottontails or jackrabbits, 50 deer mice, 50 starlings, 25 samples of beetles, and 25 samples of grasshoppers. In addition, 30 prairie dogs will be collected from the eagle exposure area and prairie dog towns that in April 1993 were outside the AOD (this does not include any such towns that are in the core area of RMA). Samples will be collected in a random block design throughout these areas. Biota tissue samples will be analyzed for five Organochlorine Pesticides (OCPs) Aldrin, Dieldrin, 1,1-Dichloro-2,2bis(P-chlorophenol)(ethylene) (DDE), Dichlorodiphyenyltrichlorethane (DDT), and Endrin. Alpha chlordane, gamma chlordane, xychlordane, and heptachlor epoxide will also be analyzed for. This APSTP addresses only the field activities of the Phase I SFS program.

1.4 EMERGENCY INFORMATION

Emergency telephone numbers will be posted in the on-site field trailer during all field operations, or otherwise will be made available to field personnel. Contingency guidelines and other information regarding emergencies are provided in Section 13.0 of this APSTP.

1.4.1 Emergency Numbers

RMA Fire Department	289-0223
RMA Safety, Health and Environment (Cliff Wendel)	289-0112
(Bruce Pelka)	289-0338
RMA Contracting Officer's Representative (Jeff Armstrong)	289-0260
RMA Ambulance	289-6235
RMA Security Office	289-0369
Hospital (AMI Presbyterian)	360-3133
Hospital (Fitzsimons Army Medical Center [FAMC])	361-8350

National Response Center	(800) 424-8802
Poison Information Center	620-9565

1.4.2 EBASCO Project Management/Health and Safety Personnel

Program Manager, Mike Amdurer	988-2202/969-8539
Task Manager, Susan Osborn	988-2202/449-8140
Site Coordinator, Michael Jones	988-2202/484-9221
Project Health and Safety Manager, Dina Sassone	988-2202/438-6859
Project Health and Safety Site Manager, Stephanie DeWitt	988-2202/424-3978

2.0 AUTHORITIES AND RESPONSIBILITIES

Overall authorities and responsibilities are detailed in Section 1.0 of the APSPP. Specific responsibilities for this task are discussed below.

2.1 EBASCO PROGRAM MANAGER

The Program Manager (PM) has the overall responsibility for the health and safety of site personnel.

2.2 EBASCO HEALTH AND SAFETY MANAGER

The HSM has overall responsibility for development, implementation, and approval of each APSTP on RMA tasks. The HSM will coordinate the approval of the APSTP with the EBASCO Regional Health and Safety Manager. The HSM will perform regularly scheduled field audits during this task. The HSM will interface regularly with the HSSM.

2.3 EBASCO HEALTH AND SAFETY SITE MANAGER

The HSSM provides site-specific training to field personnel. The HSSM will hold periodic safety meetings for the duration of this task.

2.4 EBASCO TASK MANAGER

The TM is responsible for ensuring that assigned personnel are appropriately trained and medically qualified to perform work on this task. The TM also ensures that adequate resources are provided to the field health and safety staff to carry out their responsibilities.

2.5 EBASCO SITE COORDINATOR

The Site Coordinator (SC) verifies with the HSSM that all personnel are trained for hazardous waste site work and verifies that all protective equipment for the task has been procured and tested. The SC also assists the HSSM in preventing unauthorized personnel from going into the field.

2.6 EBASCO FIELD TEAM PERSONNEL

Field team personnel will ensure that no one enters a work site that is known or suspected to contain potential health and safety hazards without proper personal protective equipment (PPE), training and medical surveillance. All personnel are responsible for reporting any unsafe or unhealthy work conditions that may exist on site.

3.0 RMA HISTORY AND DESCRIPTION

3.1 STUDY AREAS

The collection of biota tissue samples from the AOD and eagle exposure area (prairie dogs only) will take place in numerous sections on RMA. Figure 3-1 illustrates the AOD where sampling will occur. Figure 3-2 illustrates the eagle exposure areas where sampling of prairie dogs only will occur. The following describes the general areas on RMA that will be entered with potential significant health and safety concerns. More detailed information may be obtained from the RMA Study Area Reports.

The North Central Study Area (NCSA) occupies all or part of Sections 22 through 28, 35, and 36. Lime slurry generated during acetylene production was discharged into several small basins in Section 36, southwest of Basin A. The Army performed Army Material operations in the

Figure 3-1

Figure 3-2

South Plants complex in Section 1 and 2, south of the NCSA. Treated aqueous wastes from the South Plants area were released into Basin A in Section 36. Overflow from Basin A was channeled into Basins B in Section 35, and D and E in Section 26. Portions of the South Plants area were also used by Colorado Fuel & Iron to produce chlorinated benzenes, chlorine, and caustic, and by Julius Hyman & Company and Shell Chemical Company, to produce a variety of pesticides. Basin F, in Section 26, received contaminated waste generated from pesticides, HD, GB, hydrazine blending operations, and crushed chemical sewer lines connecting the South and North Plants to Basin F. Various sites in Section 36 were also used for solid waste or munitions storage, destruction (button bombs and fuzes), or disposal, although most of these are in the CSA.

The North Plants Study Area (NPSA) is located in the south central portion of Section 25. It was used for the manufacture of GB, as well as assembly of munitions, redistillation, storage, and demilitarization of GB, V-chemical (VX), and Adamsite.

The South Plants Study Area (SPSA) includes the northern portions of Sections 1 and 2; it includes the South Plants manufacturing complex and the M-1 pits. The complex was used to manufacture and/or fill munitions with H, HD, L, napalm, a magnesium dust mixture, and white phosphorus during World War II. After the war, Julius Hyman & Company and Shell Chemical Company produced a variety of materials in this area.

The Central Study Area (CSA) includes the eastern two-thirds of Section 36 and a small portion of Section 25. The CSA received some of the Basin A overflow.

The Eastern Study Area (ESA) includes Sections 5, 19, 29–32, and parts of Sections 6–8, 20, 24, and 25. Portions of the ESA were used for storage, open burning and disposal of munitions. Some Army Material spills have been documented at various storage areas in the ESA.

The Southern Study Area (SSA) includes Sections 11 and 12, and parts of Sections 1, 2, 3, 6, and 7. The SSA is occupied by several bodies of water including lower and upper Derby Lakes and smaller lakes and ponds. Various wastes may have been disposed and discharged into the SSA.

4.0 HAZARD ASSESSMENT

The potential hazards associated with the planned SFS field activities include chemical, physical, and biological hazards. The potential for encountering chemical hazards is dependent upon the work activity being performed. The potential for encountering physical hazards such as heat stress, noise and other physical hazards due to motor vehicle operation, will be present depending upon the work being performed. Based on available information and the tasks to be performed, the potential for encountering biological hazards is moderate.

4.1 CHEMICAL HAZARDS

Potential chemical hazards associated with this study include those from field team use of carbon dioxide (from dry ice), hexane, trisodium phosphate (TSP), and ethyl alcohol. Table 4-1 lists specific information about these chemicals, including exposure limits as applicable. Although the investigation includes analysis for all compounds named in Section 1.3, the potential for encountering these and other compounds associated with RMA in concentrations that impact the health and safety of field personnel is low, provided good personnel hygiene is followed. Exposure to the chemicals used by the field team, in concentrations that impact health and safety, is also considered to be low provided that they are used in minimum quantities and only for their intended purpose.

Inhalation of carbon dioxide may occur during the use of dry ice. Health hazards associated with overexposure to carbon dioxide can be avoided by using the dry ice in a well ventilated area, and storing the dry ice in a sealed container during transport. Skin contact with dry ice must be avoided completely, due to the high potential for frostbite. Heavy gloves must be worn whenever handling dry ice.

Table 4-1

Inhalation of hexane vapors may occur during shipping preparation for tissue samples. There is also a potential for accidental ingestion and skin contact with hexane. During the use of hexane, personnel must work in level D protection in a well ventilated area using nitrile gloves and safety glasses. Personnel should use the minimum amount of hexane to perform the job, and use a spill-proof dispenser.

Trisodium phosphate will be used to decontaminate Sherman live traps in the field and will also be used for decontamination of tools, work surfaces, and personnel. Health hazards due to overexposure of trisodium phosphate are expected to be low as long as personnel exercise caution, good hygiene practices, and follow the manufacturer's suggestion for proper dilution before use. During the use of trisodium phosphate, nitrile gloves and safety glasses shall be worn.

Ethyl alcohol may be used on site periodically as a preservative for biota samples. Health hazards due to overexposure of ethanol are expected to be low. Level D protection must be worn when working with ethanol.

Hexane and ethyl alcohol are flammable liquids and must be stored in a flammable storage cabinet. Care should be taken to avoid using these chemicals in areas where spark or fire potential is present.

4.2 PHYSICAL HAZARDS

A variety of physical hazards may be present during site activities. Physical hazards due to motor vehicle operation and hazardous walking and working surfaces may exist. These hazards are not unique and are generally familiar to most hazardous waste site workers. Additional task-specific safety requirements will be covered during safety briefings.

Noise is a potential hazard due to the firing of .22 caliber rifles or 12-, 16-, or 20-gauge shotguns during sample collection. In accordance with the American Conference of Governmental

Industrial Hygienists (ACGIH) Threshold Limit Values (TLV) a worker is allowed to be exposed to impact noise levels of 140 decibels, A-weighted scale (dBA), for a permitted number of 100 impacts per day. This level is not expected to be reached at any time during field work, therefore the noise hazard is considered to be low. Hearing protection will be available to all field crew members.

Heat stress is a possible hazard during the life of this task. All requirements of Section 14.0 of the RMA APSPP shall be followed.

4.3 BIOLOGICAL HAZARDS

Biological hazards at RMA include bites from rattlesnakes, wasps, hornets, brown recluse and black widow spiders, ticks, fleas, and rodents. Care should be taken to avoid these hazards. The biological vectors that may cause disease are discusses in more detail below.

4.3.1 Fleas

The majority of fleas can easily leave their host and transfer to hosts of the same or different species. This lack of host specificity increases the potential acquisition and transmission of pathogens carried by fleas. Sensitivity of fleas to low humidity and temperature extremes appears to be the main reason fleas are more prevalent in burrowing animals. For example, cottontail rabbits, which inhabit burrows, harbor more fleas than jackrabbits, which live in open space areas.

Bubonic plague is a disease usually transmitted by rodent fleas. The plague is endemic to the prairie dog population at RMA. It may cause serious illness in human beings. Symptoms usually occur within three to four days and include rapid rise in body temperature, headaches, and inflammation of the lymph nodes. If symptoms and possible flea bitings exist, seek medical attention immediately.

Field personnel must wear level D protection. Care should be taken in prairie dogs areas to minimize contact with prairie dogs and tape sleeves close to wrists and pants legs close to ankles.

4.3.2 Ticks

Most species of vertebrate mammals, including man, have warmth and odor that are highly attractive to ticks. Once imbedded into the skin, ticks withdraw blood and other tissue fluids from the host animal.

Some of the disorders, diseases, and symptoms that ticks may inflict include the following:

- Dermatosis, which includes inflammation, itching, swelling, and ulcerations at the site of the bite
- Envenomization, which is suffered when toxic salivary fluids are inoculated at the site of the bite, often causing severe systemic disturbances
- Otacariasis, which occurs when the ticks invade the auditory (ear) canal causing infections
- Colorado Tick Fever, an illness caused by ticks transmitting a virus into the bloodstream of humans. There is usually sudden on-set of fever, headaches, retro-orbital discomfort and severe muscle pains
- Rocky Mountain Spotted Fever, an illness caused by ticks carrying and transmitting microorganisms into the bloodstream of humans. Symptoms include a constant rash that appears first in the wrist and ankles and then spreads to all parts of the body. There may also be headaches, severe aching in the lumbar region, and malaise.

In order to prevent ticks from imbedding into the skin, level D protection will be worn at all times during field activities.

As soon as possible after completion of work activities in areas ticks may inhabit, a thorough body search may expose ticks. If found on the surface of the skin or clothing, ticks may be removed by hand. Do not crush any ticks between your fingers as tick tissues or feces may easily produce infection through broken skin. Removal by tweezers is not advised if the tick is deeply imbedded. A partial removal of the body, while leaving the head and mouth parts

imbedded into the skin, may cause the onset of symptoms. One possible way is to place Vaseline over the entire area where the tick is imbedded. This acts as a barrier to its air supply and begins to suffocate the tick. Again, this will cause the tick to back from the skin.

If symptoms do occur when exposure to ticks is known or suspected, seek medical attention immediately as there are antibiotics available to combat these disorders and diseases.

4.3.3 Rabies

Rabies is an acute, infectious, often fatal viral disease transmitted to humans by the bite of warm-blooded infected animals. This disease affects the central nervous system of humans. Upon approaching animals in the field, signs of raging, uncontrollable movement and possible foaming at the mouth, indicate a rabid animal.

If bitten by a rabid animal, try to capture or trap the animal, preferably alive. The animal shall then be taken to the Centers for Disease Control for analysis. The bitten individual shall seek medical attention immediately. If the testing proves positive for rabies or if an individual was bitten and unable to capture the animal, a series of shots may have to be administered to prevent further harm from the disease.

The likelihood of contracting rabies during field work is low; however, if it is necessary to handle animals, care should be taken to avoid bites. Leather gloves may provide enough protection to prevent an animal bite.

5.0 TRAINING

5.1 GENERAL

Training requirements defined in Section 2.0 of the APSPP shall be strictly followed. Site-specific training will include a review of the APSPP and this APSTP. Due to the nature of the hazards in this task, periodic safety meetings will be held during the field work.

5.2 POSTINGS

The OSHA poster (Figure 5-1) or a facsimile will be posted at the site in a conspicuous place. Emergency telephone numbers, listed in Section 1.4 of this APSTP, will also be posted. The OSHA 200 log will be posted at the base trailer.

6.0 ZONES, PROTECTION, AND COMMUNICATION

6.1 SITE CONTROL

Field personnel are required to employ a zoned approach to work in potentially contaminated areas. For the work to be done during this task, Section 36 will be considered the only potentially contaminated area. The entire section will be considered an exclusion zone (EZ). Field personnel will not be allowed to go into the field without the following:

- A buddy (buddy must be line-of-sight), or a radio or telephone
- Appropriate PPE
- Medical authorization
- Training certification

A contamination reduction zone (CRZ) is established between the EZ and remainder of RMA which serves as the support zone (SZ). The CRZ contains the contamination reduction corridor and provides an area for personnel and portable equipment decontamination. The SZ will be the field support area for most operations including team communications and staging for emergency response. Appropriate sanitary facilities, and safety and support equipment will be located in the SZ. Potentially contaminated personnel or material are not allowed in the SZ. The only exception will be appropriately packaged/decontaminated and labeled samples. Meteorological conditions will be observed and noted from this zone, as well as those factors pertinent to heat stress.

Figure 5-1

6.2 PERSONAL PROTECTIVE EQUIPMENT

The HSSM shall enforce the level of protection worn by field personnel. Level D protection is anticipated for all field activities and is defined in this section. The level of protection may be modified at the discretion of the HSSM. This decision shall be based on the biological, chemical, or physical hazards that may be present. Any changes in the level of protection shall be recorded in the health and safety field logbook.

Activity	Level of Protection
Collection of biota samples	D
Decontamination of personnel	D
Decontamination of equipment	D

For tasks requiring Level D protection, the following equipment shall be used:

- Cotton coveralls
- Tyvek (as needed)
- Cotton gloves (as needed)
- Gloves, outer (nitrile or as specified by HSSM)
- Boots (PVC, NBR, or as specified by HSSM)
- Boot covers (as needed)
- Hard hat (as needed)
- Hearing protection (as needed)
- Eye protection (as needed)

The following safety and first-aid equipment will be accessible in the support vehicle for field crews:

- One fire extinguisher, rated at least 1A, 10BC
- One standard industrial first aid kit, fully stocked

6.3 COMMUNICATIONS

A cellular telephone or radio will be the primary form of communication between the field teams and emergency support services. Backup communications will be provided through either messenger using field team vehicles or the nearest telephone to the field site. The telephone or radios will be continuously operational when crews are in the field. Crews will not be allowed to work without established communication. Field radio/telephone checks shall be performed at least daily with all field crews.

7.0 MEDICAL SURVEILLANCE PROCEDURES

All EEC personnel performing field work at the site shall comply with Section 3.0 of the APSPP. A medical data sheet is provided in Attachment B. This form shall be completed by all on-site personnel and kept at the site. Where possible, this medical data sheet will accompany the individual needing medical assistance or transport to hospital facilities.

8.0 SAFETY CONSIDERATIONS FOR SITE OPERATIONS

In addition to the specific requirements of this APSTP and the APSPP, common sense should be used at all times. The following general safety rules and practices will be in effect at the site:

- If any unexploded ordinance, suspicious material, or actual munitions are found during field work, activities at that location will cease immediately. The HSSM shall immediately notify the HSM and the RMA site representative (Cliff Wendel).
- Smoking and ignition sources in the vicinity of potentially flammable or contaminated material are prohibited.
- Personnel must wear approved and appropriate safety equipment (as specified in this APSTP).
- No smoking, eating, or drinking shall be allowed in the field.
- Horseplay is prohibited in the work area.
- Work while under the influence of intoxicants, narcotics, or controlled substances is prohibited.

8.1 HUNTER'S SAFETY

Those individuals operating shotguns and/or rifles must possess a Hunter's Safety Card. The following is a summary of responsibilities that each hunter must take upon himself or herself to ensure the safety to other field team members, wildlife, equipment, property owners, and themselves. The hunting guidelines that follow are excerpted from Colorado's Hunter Education Manual. Hunters should wear an outer garment of orange fluorescent clothing (i.e., safety vest) to make themselves more visible.

8.1.1 Firearms Handling

Accident prevention can also be accomplished by following these ten safety guidelines.

1. Always control the muzzle of the firearm. Always point the muzzle in a safe direction. Carry the firearm with the safety on until ready to shoot.

2. Treat each firearm as if it is loaded. Never accept a firearm from anyone without personally checking to see that it is unloaded.

3. Be sure of your target and what is beyond it. Be certain what is in the background to ensure that people, buildings, or vehicles cannot be hit.

4. Be sure the barrel and action are clear of any obstruction before firing.

5. Unload firearm and keep action open when not in use or when transporting it in a vehicle.

6. Do not point a firearm at something you do not wish to shoot.

7. Never climb a fence, tree, or jump a stream or creek with a loaded firearm.

8. Never shoot at a hard, flat surface or water.

9. Store firearms and ammunition separately.

10. Never consume alcohol or drugs while hunting.

8.1.2 Carrying Firearms

Notify RMA Security and the Fish and Wildlife Service (FWS) before using a firearm (which should have a permit issued by RMA Security). Anticipated use should be announced at the FWS coordination meeting on Tuesday of the preceding week and verified the day before intended use. This allows coordination with other activities ongoing at RMA and promotes safety.

There are various safe ways in which to carry a firearm from which to choose. The illustrations in Figure 8-1 are acceptable positions dependent upon your style of hunting.

- The best control is provided by the double-hand carry. Grasp the firearm's grip in one hand and the forearm with your other hand.
- The cradle carry is also good and does not tire the arms. The barrel of the firearm is cradled in the hand at the elbow and the other hand holds the stock of the firearm.
- The elbow carry can be utilized if there is no one in front of you. The firearm is slung over your elbow with the muzzle pointed at the ground. This carrying position provides the least muzzle control.
- A shoulder carry is best utilized in waist-high brush. The muzzle points upward over your shoulder. This carry is not recommended if someone is behind you.
- The sling carry is more comfortable for long hunts. The firearm hangs from one shoulder by a sling with the muzzle pointed upward. The firearm should be removed from the shoulder when crossing any obstacles.
- The trail carry is performed by gripping the stock in one hand and holding the forearm down one side of your body. This carry is not recommended when walking behind other persons.

8.1.3 Trapping

Trappers should comply with the following guidelines:

1. Notify the FWS before trapping on RMA.
2. Record trap locations accurately.

Figure 8-1

3. Follow trapping regulations.

8.2 MATERIAL HANDLING

Material is handled regularly as part of many employees' duties. Handling of material accounts for at least 25 percent of all occupational injuries. Each job should be evaluated to determine:

- If the job can be engineered to eliminate manual handling
- If the material be conveyed or moved mechanically
- What can cause injury
- If handling aids can be used to make the job safer

8.2.1 Lifting Techniques

- Before starting to lift or carry anything, check your entire walkway to make sure your footing will be solid. Your shoes should give you good balance, support and traction.
- Clear any movable obstacles out of your way, and make sure you know where the unmovable ones are.
- Cautiously heft the object you'll be moving, to check its weight and center of gravity
- Face the object squarely and get as close to it as you can
- Balance yourself solidly, with your feet slightly apart
- Squat down, bending your knees. Keep your back as straight and upright as possible.
- Grip the object firmly
- Tighten your abdomen
- Use your legs to bring you to a standing position, keeping your back straight
- Make the lift smoothly and under control
- When carrying an object, grip it firmly and hold it as close to your body as possible

- Keep your back straight
- Tighten your abdomen
- Bend at the knees
- Whenever possible, store heavy loads off the floor

8.2.2 General Guidelines

- Don't lift objects over your head
- Don't twist your body when lifting or setting an object down
- Don't reach over an obstacle to lift a load. Move whatever is in your way or go around it
- Pace yourself to avoid fatigue when doing heavy work for a long period of time
- Follow the safety guidelines of your workplace
- Ask a co-worker for help
- Use a pushcart or other material-handling device

Pushing a load is easier on the back than pulling is. When pushing a load:

- Stay close to the load
- Don't lean forward
- Use both arms
- Keep your stomach muscles tight

If you must pull something:

- Face the object squarely, with one foot at least 12 inches in front of the other
- Keep your back straight

- Bend your knees slightly
- Pull with one smooth motion

8.2.3 Exercise

- If you have a history of back problems, consult your doctor before beginning any exercise program
- Exercise regularly
- Warm up thoroughly before starting any vigorous exercise and cool down afterward
- Maintain good posture throughout your workout
- If the exercise starts to cause pain, stop doing it

9.0 DECONTAMINATION PROCEDURES

All decontamination shall be in accordance with Section 13.0 of the APSPP and this section. Prevention of personal contamination and cross contamination of equipment and samples must be emphasized. All personnel shall perform field decontamination whenever they exit section 36. Personnel are encouraged to shower prior to leaving the site.

Figure 9-1 shows the decontamination steps for level D protection. These steps are typical. Specific procedures will be established in the field by the HSSM. Field decontamination of personnel shall generally take place after equipment has been decontaminated.

9.1 PERSONNEL DECONTAMINATION

Contamination prevention is important when working on hazardous waste sites. Contamination prevention shall be practiced as detailed in the APSPP. To prevent contamination of skin, personnel shall ensure the following:

- Use fasteners. Zippers shall be fully closed, all buttons shall be fastened, and all snaps shall be closed.

Figure 9-1

- Check PPE before each use to ensure that it contains no cuts, punctures, rips, or tears.
- Pay particular attention to areas where injuries to the skin have occurred, since this may enhance the potential for contaminants to enter the body. Workers with large areas of damaged skin will be kept from working on site until the skin heals.
- Remove and properly dispose of boot covers or decontaminate chemical resistant boots and outer gloves.
- Place boot covers, outer gloves, and inner cotton gloves in the dedicated potentially contaminated PPE disposal drum.
- Place all reusable PPE, e.g., cotton glove liners, in a dedicated receptacle for transportation to the laundry.
- Travel to the decontamination trailer for final decontamination. Place cotton coveralls in a dedicated receptacle in the decontamination trailer for laundering.

9.2 EQUIPMENT DECONTAMINATION

All vehicles, upon exiting section 36, shall be decontaminated. The tires of each vehicle must be sprayed with water, then each vehicle must immediately be decontaminated at the RMA CERCLA facility. If the vehicles are heavily soiled with mud, the decontamination facility that is operated by the Harding Lawson Associates Inc. (HLA) should be accessed.

Large live traps and other equipment may also be decontaminated at the HLA facility. Small equipment that may be damaged by water will be wrapped in plastic prior to use in the EZ, and decontaminated by wiping clean the plastic wrap.

10.0 DISPOSAL

All discarded materials, waste materials, or other objects shall be handled in such a way as to preclude the potential for spreading contamination, creating a sanitary hazard, or causing litter to be left on site. All potentially contaminated materials (e.g., clothing, gloves, decontamination water, etc.) shall be bagged or drummed as necessary, labeled, and segregated for disposal. All

noncontaminated materials shall be collected and bagged for appropriate disposal as normal domestic waste.

11.0 EMERGENCY PLAN

The EEC Emergency Response Plan (ERP) for RMA tasks is presented in Section 5.0 of the APSPP. Specific requirements for this task are described below.

11.1 POTENTIAL FOR EMERGENCIES

The potential for the development of an emergency situation is low considering the types of hazards present at the worksite. Nevertheless, an emergency situation could occur. All EEC field team members shall be familiar with the ERP and this section, prior to the start of work. A copy of the ERP will be available for use at all times during site work.

11.2 ASSEMBLY POINTS

The HSSM and HSM will establish assembly points to use in case of evacuation prior to start of work. These points will be documented in the health and safety log book. All personnel will be briefed on emergency procedures for each site.

11.3 DIRECTIONS TO HOSPITAL

For injuries or illnesses that **DO NOT** involve Army Material (RMA Fire Department may transport):

AMI Presbyterian Aurora Hospital
700 Potomac (Interstate 225 at 6th Avenue)
Aurora, Colorado
Emergency Department 360-3133
Emergency Medical Air Service 360-3400

From south gate of RMA:

- Proceed straight ahead (south on Havana) 1.5 miles to Interstate 70
- Proceed east on I-70 for 2 miles to I-225
- Proceed south on I-225 for 3 miles to 6th Avenue exit

- Turn right (west) off exit. Hospital is on the immediate right.

  Total distance: approximately 6.5 miles

  Total time: approximately 8 minutes

From west gate of RMA:

- Turn left (south on Quebec) and proceed for 3.5 miles to Interstate 70
- Proceed east on I-70 for 2 miles to I-225
- Proceed south on I-225 for 3 miles to 6th Avenue exit
- Turn right (west) off exit. Hospital is on the immediate right.

  Total distance: approximately 11 miles

  Total time: approximately 15 minutes

Prehospital care services will be provided by the Fire Prevention and Protection Branch (FPPB) of PMRMA.

11.4 ACCIDENT/INCIDENT REPORTING

The RMA Fire Department shall be immediately contacted at 289-0223. As soon as first aid and/or emergency response needs have been met, the following parties shall be contacted by telephone:

- Dina Sassone, Health and Safety Manager – 988-2202/438-6859
- Fred Applehans, Task Manager – 988-2202/494-9009
- Jeff Armstrong, RMA COR – 289-0260

Written confirmation of verbal reports shall be submitted within 24 hours. The report form entitled "Accident/Incident Report" in the APSPP shall be completed by the HSSM. All EEC representatives listed above shall receive a copy of this report.

For reporting purposes, the term accident refers to fatalities, lost time injuries, spill or exposure to hazardous materials (e.g., radioactive materials, toxic materials, explosive or flammable materials), fire, explosion, property damage, or potential occurrence of the above.

Any information released from the health care provider, not deemed confidential patient information, shall be attached to the accident/incident form. Any medical information which is released from the health care provider by patient consent is to be filed in the individual's medical records and treated as confidential.

11.5 ADVERSE WEATHER CONDITIONS

In the event of adverse weather conditions, the HSSM or designee will determine if work can continue without endangering the health and safety of all field workers. The HSSM shall consider the following items prior to determining if work should continue:

- Potential for heat stress and heat-related injuries
- Potential for cold stress and cold-related injuries
- Treacherous weather-related working conditions
- Limited visibility
- Potential for electrical storms

Site activities will be limited, as much as possible, to daylight hours and acceptable weather conditions. Some work may need to occur at dusk. For example, the likelihood of successfully trapping rabbits is much higher in the evening than it is during the heat of the day. However, at no time will shooting occur during non-daylight hours, or when adequate light is compromised by inclement weather. Inclement working conditions include heavy rain, fog, high winds, and lightning. The HSSM or designee will observe daily weather reports and evacuate if necessary in case of inclement weather conditions.

12.0 AUTHORIZATIONS

Personnel authorized to work in the field on RMA must be approved by the HSSM. Authorization will involve completion of appropriate training courses and medical examination requirements as required by OSHA 29 CFR 1910.120 and review and sign-off on this APSTP.

13.0 FIELD TEAM REVIEW

Each field team member shall sign this section after site-specific training is completed and before being permitted to work on site.

I have read or have been verbally advised of all aspects of the Accident Prevention Safety Task Plan for Task 92.15. I understand and shall comply with the provisions contained therein.

Site/Task: _____

Date	Name	Signature

14.0 REFERENCES

EBASCO Accident Prevention Safety Program Plan.

RMA On-Post Feasibility Study.

Attachment A

FIELD CHANGE REQUEST FORM

FIELD CHANGE REQUEST FORM

Requested By _____

Task _____

Description _____

_____

_____

_____

_____

Reason for change

_____

_____

_____

_____

Approval Signatures

Task Manager _____ Date _____

Health and Safety Manager _____ Date _____

Attachment B

MEDICAL DATA SHEET

MEDICAL DATA SHEET

This brief Medical Data Sheet will be completed by all on-site personnel and will be kept in the Command Post during the conduct of site operations. It is in no way a substitute for the Medical Surveillance Program requirements consistent with the Ebasco Corporate Health and Safety Program for Hazardous Waste Sites. This data sheet will accompany any personnel when medical assistance is required or if transport to hospital facilities is required.

Project

Name _____ Home Telephone _____

Address _____

Age _____ Height _____ Weight _____

Emergency Contact Name and Phone No. _____

Allergies _____

Particular Sensitivities _____

Do You Wear Contacts? _____

Name of Personal Physician _____ Telephone _____

Attachment C

ACCIDENT/INCIDENT FORM

Attachment D

HEALTH AND SAFETY WEEKLY REPORT

EBASCO

HEALTH AND SAFETY WEEKLY REPORT

SITE: _____

WEEK OF REPORT: _____

HEALTH AND SAFETY OFFICER: _____ Date of Report: _____

Activities (Drilling, Groundwater sampling, etc.)	Levels of Respiratory Protection	Comments/Unusual Occurrences
M		
T		
W		
Th		
F		
Sat		
Sun		

Summary of job-related injuries/illnesses:

Summary of violations or near misses:

Other notable items, incidents, conditions, etc.: