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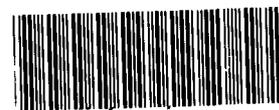
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Supplement to Site-Specific Health and Safety Plan Operable Unit No. 2

for



000014130

Rocky Flats Plant

In Compliance with
DOE ORDER 5400.1

Document Control Number
RFP/ER-SAF-93-OU2.1

**Supplement to Site-Specific
Health and Safety Plan
Implementation of
Phase II RFI/RI Work Plan**

**Rocky Flats Plant
Operable Unit No. 2**

Surficial Soil Program at Rocky Flats Plant

Prepared for

THE U S DEPARTMENT OF ENERGY
ROCKY FLATS AREA OFFICE
GOLDEN, COLORADO

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November 29, 1993

Reviewed for Classification/UCNI

By DOCUMENT CLASSIFICATION
REVIEW WAIVER PER
CLASSIFICATION OFFICE

Date _____

ADMIN RECORD

**ROCKY FLATS PLANT
SUPPLEMENT TO SITE-SPECIFIC
HEALTH AND SAFETY PLAN FOR
OPERABLE UNIT NO. 2 (OU 2)**

**Manual No.:
Section No.:
Page:
Effective Date:
Organization:**

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12/14/93
Environmental Management**

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JUNE 11, 1991**

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1.0 INTRODUCTION

1.1 POLICY

This Supplemental Health and Safety Plan (HSP) was developed for the implementation of activities associated with the existing Surficial Soil Program (SSP) project which is located east of the 903 Pad and is associated with Operable Unit 2 (OU2). This plan supplements the most recent version of the OU2 Site-Specific HSP (SSHSP). It has been developed for compliance with Occupational Safety and Health Administration (OSHA) Hazardous Waste Operations and Emergency Response Regulations 29 Code of Federal Regulations (CFR) 1910.120 for hazardous waste site workers at the Rocky Flats Plant (RFP). The intent of the supplement is to define the hazards which may be present and identify the procedures which will be followed to protect all project personnel from those hazards. This supplement shall also apply to all subcontractors who are participating in the field activities of this project. This plan addresses the requirements for personnel managing, monitoring, and performing activities associated with the SSP project. All subcontractor personnel will follow this HSP in addition to the requirement of the SSHSP and all RFP procedures and policies when conducting work at the project site. A signature sheet will be kept to document that all site workers have read, understand, and will comply with all aspects of this plan. The subcontractor has the responsibility for implementing the requirements of this SSHSP. The subcontractor will provide health and safety briefings, field activity oversight, and maintain appropriate health and safety records.

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1 2 REGULATIONS AND GUIDELINES

Adherence to applicable federal, local, and national consensus organization health and safety standards, regulations, and guidance manuals is required during field activities of the SSP. These include, but may not be limited to, the following:

- 29 CFR 1910, Occupational Safety and Health Standards, General Industry (latest edition),
- 29 CFR 1926, Occupational Safety and Health Standards, Construction Industry (latest edition),
- Nuclear Regulatory Commission 10 CFR 20 (latest edition),
- Department of Energy (DOE) Order 5480 11 (with revisions),
- Radiological Operating Instructions (ROI), EG&G Rocky Flats, Inc (with revisions),
- Environmental Management Radiological Guidelines (EMRG) Manual, EG&G Rocky Flats, Inc (with revisions),
- Health and Safety Practices Manual (HSPM), EG&G Rocky Flats, Inc (with revisions),
- Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Governmental Industrial Hygienists (latest edition),
- Occupational Safety and Health Guidance for Hazardous Waste Site Activities, U S Department of Health and Human Services et al , October 1985
- Radiological Control Manual, DOE, June, 1992

1.3 CONTENTS OF PLAN

This plan describes known hazardous materials and work operations associated with the activities of the SSP. The plan specifies responsibilities and authorities of the subcontractor and subcontractor personnel involved in the supervision of activities at this site. This plan further describes the requirements for medical surveillance, personal protective equipment (PPE), hazard communication, training, monitoring, decontamination, site control, and emergency response procedures.

The potential hazards associated with the SSP activities have been assessed by reviewing historical activities, previously performed studies, and personal communications with previously associated project personnel. Based on the hazard assessment, plans for PPE, monitoring, decontamination, site control, and emergency response have been developed.

1.4 BACKGROUND

A comprehensive, phased program of site characterization, remedial investigations, feasibility studies, and remedial/corrective actions is in progress at RFP. These investigations are being conducted pursuant to the 1986 Compliance Agreement between DOE, the U.S. Environmental Protection Agency (EPA), and the Colorado Department of Health, which addresses hazardous and radioactive mixed waste management at the plant.

The SSP supports the alluvial work plan for the Phase II Resource Conservation and Recovery Act (RCRA)/Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Remedial Investigation (RI) of OU2 and site wide characterization of soils at RFP. The SSP investigates the physiochemical attributes of actinides in soil east of the former storage site (locally known as the 903 Pad) as well as the temporal changes in actinides in the soil environment around RFP. Refer to Figure 1 4-1 for the location of the project.

The seven tasks that will be performed by this project include,

- Sample Soil Interstitial Waters for Actinides Analyses
- Maintain and Enhance the Soil Water Monitoring System
- Support and Calibrate the Time Domain Reflectometry
- Support Rain Simulation Experiments
- Installation and Support of Snow Water System
- Support Soil Erosion Studies
- Conduct Annual Soil Sampling for Actinides around RFP

1.5 LOCATIONS AND DESCRIPTIONS

The SSP is located in the Americium Zone east of the 903 Pad. The 903 Pad was used as a temporary storage area for radioactive materials. Subsequent remediation efforts allowed airborne release of some of these materials. The areas down wind of this pad have been since referred to as the Americium Zone. The project site has been designated as a Radiologically Controlled Area (RCA). Previous activities in the project area involved intrusive operations during installation of equipment. The activities involved with the present phase of the SSP project are not expected to require significant intrusive operations.

2.0 HEALTH AND SAFETY RESPONSIBILITIES

2.1 INTRODUCTION

Health and safety is the responsibility of all personnel working on the site. The subcontractor (Stoller) will provide the required health and safety services including daily sampling, screening all personnel and equipment for radionuclides, briefings, and oversight. Stoller has expressed a strong commitment to ensuring a safe work environment for all workers on the project. The project organization (Figure 2 1-1) will follow the lines of responsibility as described in EMRG Guideline 1 0. As contracted, a qualified individual may serve in more than one role. Individual contracted project personnel responsibilities are identified in the following sections.

2.2 ASSIGNMENT OF RESPONSIBILITIES

2 2.1 Stoller Program Manager

The Stoller Program Manager for the SSP project has overall responsibility for work performed by Stoller and subcontractors at the site. The Program Manager, through line management and supervisors, has responsibility for implementing and abiding by the SSHSP. The Project Manager has appointed an employee to serve as the Site Safety Officer (SSO). Stoller personnel and all subcontractors will review and comply with this SSHSP prior to initiating work at the site.

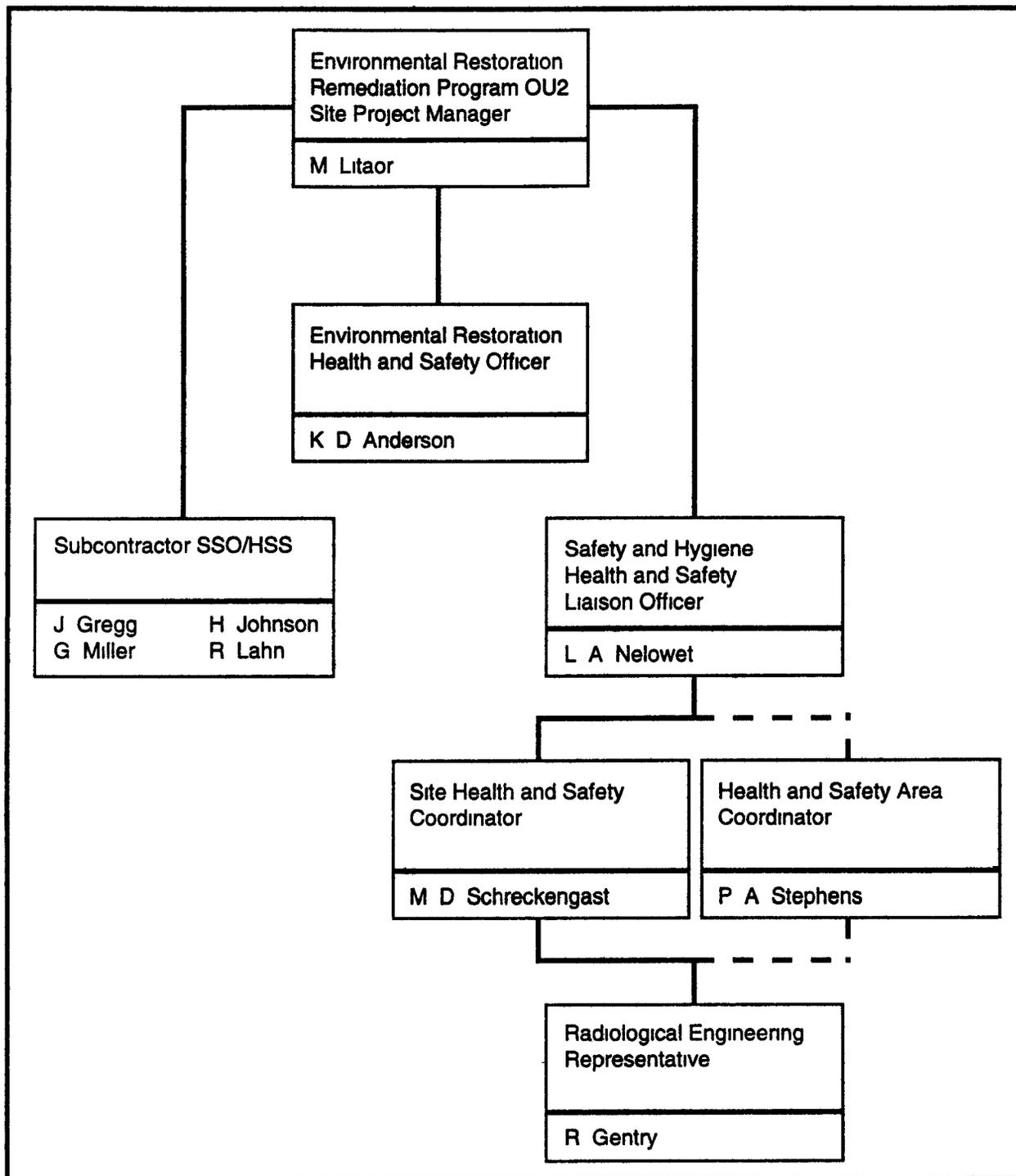


Figure 2 1-1 Safety and Health Organization for Surficial Soil Program (OU2)

2.2 2 Site Safety Officer

The Site Safety Officer (SSO) is responsible for implementing the supplemental SSHSP that adequately addresses the site hazards and controls necessary to safeguard personnel and property. Duties of the subcontractor SSO include the following:

- Providing requisite physical examination requirements to subcontractor employees working at hazardous waste sites,
- Correlating exposure data to ensure that the scope of annual physical examinations are correct,
- Informing employees of potential exposures to hazardous materials based on bio-assays,
- Ensuring that personnel are adequately trained so that they can safely perform their assigned tasks,
- Ensuring that personnel are aware of potential site hazards, and that they know the necessary controls to prevent overexposure or injury by conducting site-specific briefings,
- Appointing alternate SSO(s),
- Ensuring that the SSHSP and the required training and medical records for site personnel are current and are maintained on-site,
- Ensuring that all personnel have read and signed the SSHSP. A copy of the signed SSHSP must be kept in the work trailer,
- Conducting the required monitoring or assuring that monitoring is conducted by the assigned personnel,
- Coordinating with the EG&G Project Manager regarding the need for additional safety support required for the SSP project,
- Performing audits of subcontractor health and safety operations,
- Approving modified work practices in response to changing conditions, and
- Document control and distribution of any revisions to the SSHSP

2.2 3 Health and Safety Specialist

The SSO for the SSP project has the responsibility for assigning an Health and Safety Specialist (HSS) to provide oversight and monitoring of field operations. The key responsibilities of the HSS is

- Monitoring the project to ensure that the requirements of this SSHSP are implemented,
- Alerting the Program Manager and the SSO of health and safety violations,
- Performing tests to minimize the potential for exposure of field personnel and verify that equipment leaving the RCAs or areas of suspected/potential soil contamination is in compliance with applicable regulations and standard operating procedures (SOPs),
- Monitoring soil surfaces and samples and will perform decontamination verification by frisking and smear testing,
- Ensuring that field crews are in compliance with EG&G radiation work permits (RWPs), and
- Performing duties in accordance with the EG&G EMRGs with the approval of EG&G Radiological Engineering

2 2.4 Field Technicians

The field technicians are responsible for implementing and abiding to all provisions of the SSHSP and the supplement specific to this SSP project

2.2.5 Fire Protection Representative

The fire potential during environmental investigations does not justify the cost of providing an independent Fire Protection Representative. Fire prevention is expected to be largely a matter of good housekeeping. In the event of a fire, EG&G Fire Department will be notified and all subcontractor personnel will withdraw from the area. Should any personnel sustain injury, RFP Emergency Medical Services will be immediately notified. The EG&G emergency number is 966-2911.

2.3 SURFICIAL SOIL PROGRAM (SSP) PROJECT PERSONNEL

Project Title	Name (Company)	Phone
Program Manager	Allen Crockett (Stoller)	(303) 449-7220
SSO/HSS	John Gregg (IT)	(303) 793-5200
SSO/HSS	G Miller (Woodward-Clyde)	(303) 694-2770
SSO/HSS	R Lahn (Woodward-Clyde)	(303) 694-2770
Technician	Steve Aldrich (Stoller)	(303) 443-7220

2.4 EG&G PERSONNEL

	Name	Extension
Radiological Engineering Representative	K Gentry	x5151
Industrial Hygiene/Site Health and Safety Coordinator	P Schreckengast	x5471
Environmental Restoration Health and Safety Officer	K Andersen	x8577

3.0 HAZARD ASSESSMENT

3.1 INTRODUCTION

The field work that will be conducted as part of the SSP includes potential radiological, physical, biological, and mechanical hazards. These potential hazards were identified by reviewing site histories, previous sampling results, and the work plan for the project. The use of standard measures such as PPE, work site radiological monitoring, work practice controls, and training should assist in identifying, evaluating, and controlling potential hazards at the work site that are not currently known.

Based on available information about the site, field work will be conducted in areas where the severity of potential hazards is expected to be low. The potential for encountering radiological hazards will depend on the types of compounds at the site, work practices, and field activities to be performed. Environmental physical and biological hazards, such as insects, heat, and cold stress may be encountered to some degree while working at the site. The degree of mechanical hazards resulting from motor vehicle, field equipment, power tools, etc., will also depend on the work being performed. The rationale for monitoring and PPE are presented in Sections 9.0 and 6.0, respectively.

Field activities at the SSP project will involve the following operations:

- Non-intrusive operations such as assisting in radiological surveys and water sampling from existing installations. These operations do not disturb the soil and are not expected to approach occupational exposure limits.
- Intrusive operations such as installation of snow water instruments. These operations disturb soil and have the potential to re-suspend contaminated subsurface soils. The quantities of spoils produced is small. Dust generation will be minimized by misting soils with water. The Plan for the Prevention of Contaminant Dispersion (PPCD) developed by EG&G addresses dust emissions and will be complied with by Stoller.

3 2 POTENTIAL HAZARDS

3.2.1 Pathways and Exposure Routes

Pathways of exposure to hazards are directly dependent upon investigative activities performed at the SSP site. Exposure to potential health hazards may occur during field activities involving soil interstitial water sampling and other sampling and measurement efforts. Exposure pathways include the following:

- Inhalation of fugitive dust containing radionuclides,
- Skin contact with radionuclides,
- Inadvertent ingestion of dust particles or fugitive dust contaminated with radionuclides, and
- Injection of radionuclides into the body through wounds

3.2.2 Radiological Hazards

3.2.2.1 Airborne Exposures to Radiological Hazards — Exposure to radiological hazards could occur through inhalation of fugitive dust contaminated with radiological materials. The degree of potential exposure to airborne radiological hazards is considered unlikely or low depending on the individual work site and amount of air-borne dust created at the site. Most work sites reportedly have low or below background levels of radionuclides and the intrusive activities to be performed usually generate low quantities of airborne dust. Unknown radiological contamination at the site (e.g., buried contaminated material in the landfill) could lead to unexpected generation of airborne radiological hazards. The use of initial site surveys, air monitoring, work practice controls (e.g., minimizing dust generation), dust control practices, and proper use of PPE, and respirators will be the primary evaluation and control measures used to prevent inhalation of radioactive materials. If an inhalation exposure is suspected the provisions of EMRG 2.2 - Possible Inhalation Exposure will be followed.

3.2.2.2 Skin Exposures to Radiological Hazards — Radioactive materials identified at sites in OU2 are not readily absorbed through the unbroken skin. Contamination avoidance, decontamination, and proper use of protective clothing and gloves will be the primary control methods used to prevent skin contamination.

3.2.2.3 Inadvertent Ingestion of Radionuclides — Ingestion of radionuclides is possible during site work. The potential for exposure via this pathway is considered to be remote if good personal hygiene practices are followed prior to eating, drinking, or smoking. No eating, drinking, smoking, or chewing of tobacco or chewing gum will be allowed in the contamination reduction zone (CRZ) or the exclusion zone (EZ).

3.2.2.4 Puncture Wounds — Radiological materials could enter the body through breaks in the skin caused by a cut, laceration, puncture, abrasion, or burn. This route of entry can be controlled by complying with safe work practices to prevent accidents. If accidents occur possibly leading to radiation exposure, ROI 2.3 or EMRG 2.3 procedure will be implemented.

3.3 PHYSICAL HAZARDS

Workers at SSP sites within OU2 are potentially subjected to physical stresses including heat and cold stress and noise exposure. Investigative activities may take place during a wide range of weather conditions leading to possible heat or cold stress conditions. Unacclimatized workers or workers wearing impermeable personal protective clothing during warm weather may be susceptible to heat stress. The "buddy" system will be used and all personnel shall be aware of the signs and symptoms of heat/cold stress on themselves or their "buddy". High noise exposure is possible when operating power tools and mechanized equipment.

3.3.1 Cold Exposure

When working outdoors in temperatures below freezing, workers are susceptible to frostbite. Exposure to extreme cold can cause severe injury to the body surface or can result in profound generalized cooling, causing death. In cold weather, precautions should be taken to prevent cold

exposure by wearing properly insulated garments and taking warm-up breaks in temperature controlled areas when necessary Symptoms of cold exposure include the following

- Incipient frostbite or frost nip, characterized by sudden blanching or whitening of the skin
- Superficial frostbite, which causes the skin to become waxy or white and superficially firm, but resilient beneath
- Deep frostbite, characterized by cold, pale, solid skin tissues
- Systemic hypothermia, caused by exposure to freezing or rapidly dropping temperature Symptoms are usually exhibited in stages These include shivering, apathy, listlessness, sleepiness, rapid cooling of the body temperature to less than 95° Fahrenheit (F), unconsciousness, glassy stare, slow pulse and slow respiratory rate, freezing of the extremities, and death

3 3 2 Heat Stress

A worker's risk for developing heat stress is greatly increased when wearing impermeable, personal protection clothing This type of clothing limits the body's normal heat exchange mechanisms and increases energy expenditure A program to recognize potential heat stress situations, prevent episodes, and control hazards will be implemented when the SSO/HSS deems it necessary The program will include heat stress monitoring, adequate rest breaks, fluid replacement, acclimatization, and personal cooling systems Heat stress can cause health effects that range from heat fatigue to serious illness or death Signs and symptoms of heat stress include the following

- Heat rash, which may result from continuous exposure to heat or humid air
- Heat cramps, caused by heavy sweating with inadequate electrolyte replacement Signs and symptoms include muscle spasms, or pain in hands, feet or abdomen
- Heat exhaustion, which occurs from increased stress on various body organs or systems, including inadequate blood circulation due to cardiovascular system inefficiency or dehydration Signs and symptoms include pale, cool, moist skin, heavy sweating, dizziness, nausea, or fainting

Personnel having symptoms of heat exhaustion will be immediately removed from field work. Protective equipment will be removed and vital signs monitored. If body temperature exceeds 101° F the individual will be transported to the medical facility for evaluation.

Heat stroke is the most serious form of heat stress. The body's temperature regulation system fails, and the body temperature rises to critical levels. Immediate action must be taken to cool the body before serious injury and death occur. Signs and symptoms of heat stroke are red, hot, usually dry skin, reduced or lack of perspiration, nausea, dizziness and confusion, strong, rapid pulse, or coma. The body temperature often exceeds 102° F.

If signs of heat stroke are detected, the emergency should be immediately reported by calling 2911. The individual's protective clothing will be removed and they will be cooled by flushing with water that is close to body temperature. The individual will be transported for further evaluation/treatment to the medical facility determined by the responding Emergency Medical Technicians. Appendix B provides additional guidance for the prevention, monitoring, and treatment of heat stress.

3 3 3 Noise Exposure

Workers are not anticipated to be exposed to high noise levels during sampling and maintenance activities of the SSP.

3 3.4 Explosive Hazards

No explosive hazards are anticipated during sampling and maintenance activities of the SSP.

3 4 BIOLOGICAL HAZARDS

Biological hazards that may be present at RFP include plants, insects, and snakes. Considerations for potential biological hazards may be necessary when workers are required to enter remote or seldom-visited locations.

The potential for contact with snakes or insects that may cause injury or disease exists when performing field activities at RFP. The RFP does not host any plants that are poisonous to humans, other than poison ivy. There are some plants that may be mechanically injurious (i.e., thorns, yucca). Field personnel will wear sturdy work clothes and steel-toed boots in order to help prevent injuries.

There is one type of venomous snake present in the RFP area, the prairie rattlesnake. Personnel should be aware that snakes may be present in the area and exercise caution, especially when working in previously undisturbed areas and locations with animal dens.

Black widow spiders may be present at SSP sites. They are usually found in shady places or under rocks or wood. The black widow spider has a shiny black body about the size of a pea, with a red or yellow hourglass-shaped mark on its abdomen. It weaves shapeless webs in undisturbed areas. A bite may result in severe pain, illness, and possibly death from complications, but usually not from the bite itself.

In addition to spiders, ticks, chiggers, bees, and wasps may be nuisances to field personnel. Bites from wood ticks may result in the transmission of Rocky Mountain Spotted Fever, a serious and possibly fatal viral disease. The Rickettsia virus infects wood ticks, mostly in the late spring and early summer, and is characterized by chills, fever, severe pain in leg muscles and joints, and a body rash. Lyme Disease is not prevalent in Colorado. Some protection will be offered by PPE, but the use of insect repellent (containing at least 30 percent DEET) on outside clothing and exposed skin also may be warranted. Personnel should perform self-searches after each day to check for ticks and chiggers. Bees or wasps can be considerable hazards for those people with allergic reactions to venom. The SSO should be notified if any worker is sensitive to these insects. Properly trained personnel will administer first aid should a bee or wasp sting occur.

3.5 MECHANICAL HAZARDS

Workers may be exposed to potential mechanical hazards during the field activities of the SSP project. Hazards and methods of hazard control are detailed in EG&G SOPs and operation safety

analyses for specific tasks performed during field activities. Site inspections will be conducted periodically by the SSO to assess hazards according to standard health and safety protocols.

3.6 HAZARD CONTROL METHODS SUMMARY

The control measures listed below are the minimum control measures required for work at the SSP site. Additional control measures may be necessary as determined by site health and safety personnel. As additional site data become available through site monitoring or investigations, the control measures may need to be altered. The decision to alter the control measures will be made by the SSO/HSS.

3.6.1 903 Pad

3.6.1.1 Site Background Summary — Starting in 1958, barrels containing used machining fluids were stored outdoors at the location now called the 903 Pad. Leakage from the barrels was discovered in 1964. By 1968 the last barrels had been removed and the area was monitored for alpha activity. Levels up to 13.5 micro Curies per gram of soil were found, with activity penetrating to 8 inches deep.

3.6.1.2 Anticipated Work Activities — No work will be conducted at the 903 Pad site.

3.6.2 Surficial Soil Program (SSP) Site

3.6.2.1 Site Background Summary — The distribution of radioactive dusts at the RFP has been driven by prevailing west to east wind and drainage patterns. As the existing SSP site is east of both the 903 Pad and the entire RFP, the site has been impacted by historical radionuclides releases.

3.6.2.2 Anticipated Work Activities — Project personnel will conduct non-intrusive activities such as water sampling from existing installations, piezometer readings, site inspection, and radiation monitoring activities at the site.

3.6.2.3 Potential Radiological Hazards — Expected concentrations of plutonium - 239 (Pu239) near the areas of this project are thought to be approximately 0.05 pico Curies per gram (pCi/g). The background concentration is 0.02 pCi/g. Americium-241 is a contaminant of weapons-grade plutonium, present at less than 20 percent of the concentration of Pu239. Uranium-238 is also known to be present in some soils at the site. These radionuclides pose a health hazard due to alpha particle emissions. Alpha (He^{2+}) is not sufficiently penetrating to penetrate the dead layers of skin, which means that these radionuclides do not pose an external hazard. However, it is very important to avoid inhalation or ingestion of these compounds as alpha radiation may be very damaging from within the body.

3.6.2.4 Control Measures — The project area has been designated as a RCA Modified Level D protection including cotton coveralls, tyvek coveralls, safety boots, disposable boot covers, eye protection, gloves will be worn during all activities in the RCA. Leather gloves over two layers of latex inner gloves will be worn when handling dry materials to prevent cuts/abrasions. Radiological screening and monitoring in accordance with EG&G SOP FO 16 will be performed during all field work. Decontamination procedures as discussed in Section 7.0 will be followed for general equipment. Face and hands will be washed after leaving the site and before eating, drinking, or smoking.

4.0 HAZARD COMMUNICATION

4.1 INTRODUCTION

Project personnel and all subcontractors must follow established work practices to safely handle hazardous chemicals. The implementation of a hazard communication program is also required by 29 CFR 1910.120 for RCRA treatment, storage, and disposal facilities. The SSO/HSS will maintain an inventory of hazardous chemicals stored at the project trailer and material safety data sheets (MSDSs) for those chemicals that will be available to employees at the site.

4.2 HAZARDOUS MATERIALS INVENTORY

The SSO/HSS will compile an inventory of hazardous chemicals present at their work sites or trailer areas and provide this information to EG&G Industrial Hygiene Department. The inventory may be requested by emergency response personnel to aid in identifying hazards associated with a spill or accident at the site. Radiological check sources and/or reference sources must also be included in this inventory including applicable calibration certificates.

4.3 MATERIAL SAFETY DATA SHEETS (MSDSs)

The MSDS must be readily available to employees for hazardous chemicals used or stored at the site. Information found on a MSDS includes identification of the product's hazardous chemical constituents, its physical characteristics, applicable exposure limits, symptoms of overexposure, recommended PPE, fire and explosion hazards, and spill response actions. This information is provided by the manufacturer and is typically included with the shipment of the chemical. The EG&G Industrial Hygiene Department maintains a master file of MSDS for materials stored or used at the plant. A complete file of MSDSs for hazardous chemicals used at the SSP project will be kept at the project trailer and readily available to site personnel.

4.4 TRAINING

Project personnel and all subcontractors are required to complete Hazard Communication training as part of their 40-hour OSHA training. Specific training on the information provided in the project MSDSs will be conducted by the SSO/HSS, or, if necessary, by a representative of the EG&G Industrial Hygiene Department. Specific hazards associated with the project will be communicated to workers at the site-specific briefing and then at the weekly safety .

5.0 SITE CONTROL

5.1 OBJECTIVES

The purpose of this site control plan is to protect workers, the public, and the environment from the potential hazards associated with the OU2 SSP. In addition to general site control measures required under the 29 CFR 1910.120, activities conducted at SSP shall be conducted in accordance with the EG&G Integrated Work Control Program (IWCP). Project personnel will adhere to requirements of the IWCP. A RWP is required as part of the IWCP in the project area since the area has been designated as a RCA. Information required for the RWP includes job information, description of hazards, radiological and non-radiological safety requirements, preparation for the job, approval signatures, and permit duration.

5.2 SITE CONTROL DESIGNATIONS

The project work area has been designated an RCA and has been roped off and posted as required. This roped off work area itself is designated as an EZ and the staging area outside a work location is designated as a CRZ. Access to these areas will be controlled. Personnel working in the areas must meet specific training requirements, be participants in a medical surveillance program, and wear required PPE. Minimum requirements for access to these designated areas are summarized below. Detailed PPE, training, and decontamination requirements are presented in the respective sections of this plan.

5.2.1 Exclusion Zone (EZ)

The limits of the EZ have been established and marked by yellow rope and postings. The PPE requirements within the zone have also been established based on the hazards of the work being conducted, as determined by the appropriate health and safety representative. Environmental samples collected at these sites may contain elevated levels of radiological contaminants. Personnel entering these areas will be required to wear appropriate PPE. When leaving these areas,

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decontamination procedures (described in Section 7 0) will be followed where required, including clearance by the approved SSO/HSS

The EZ is also an RCA based on the historical data. A RWP and a site access log will be posted at the entrance to the EZ. Entry and exit requirements shall be posted as per ROI 1 03

5.2.2 Contaminant Reduction Zone (CRZ)

Adjacent to the EZ is the CRZ, where appropriate measures will be in effect to reduce the potential for spreading contamination via the workers and equipment. The entrance, exit, and decontamination area adjacent to the EZ will be designated as a CRZ. All personnel conducting or supervising activities in this area are required to have appropriate training.

5.2.3 Support Zone

The Support Zone will be outside the CRZ and will be the area where support workers will provide assistance to workers inside the EZ and CRZ. The Support Zone will begin at the exit from the decontamination line. Only clean or appropriately containerized equipment or material will be allowed to exit into the support zone from the CRZ. Visitors and observers will comply with the site control designations and the zone requirements established at the work site. Visitors will not be allowed to enter the EZ and/or CRZ without training as required in Section 10 0 of this SSHSP.

5.3 COMMUNICATION WITHIN CONTROL ZONES

Personnel will not conduct work activities alone. They will be accompanied by either another employee or subcontractor employee. The buddy system, as specified in 29 CFR 1910.120 (d)(3), will be implemented at the site. The buddy teams working at the site will maintain visual and audible contact so that they can provide emergency assistance to each other, if needed. Both members of the buddy team need not be in the same site zone, but each member must be wearing adequate PPE to assist the other, if necessary.

The communication system at the site consists of hand-held radios. Project personnel will rely on the EG&G hand-held radio system used by personnel performing the project work.

5.4 PLAN FOR THE PREVENTION OF CONTAMINANT DISPERSION (PPCD)

5.4.1 Objective

The objective of the PPCD is to establish procedural requirements to mitigate potential hazards to the general public as a result of contact with emissions resulting from intrusive RI activities.

5.4.2 Scope

Procedural requirements for the prevention of contaminant dispersion, applicable to intrusive actions as part of the RFI/RI activities described in the Interagency Agreement, are described in the PPCD prepared by EG&G. Intrusive activities that fall within the scope of this PPCD are those with the potential for producing suspended particulate, primarily through mechanical actions.

6.0 PERSONAL PROTECTIVE EQUIPMENT (PPE)

6 1 INTRODUCTION

The use of PPE is required when engineering and administrative controls are insufficient to prevent worker exposures to radioactive materials. Due to the nature of work performed at OU2, there is a potential for release of contaminated particulates which cannot be completely controlled at the source. Engineering and administrative controls will be used, when appropriate, to minimize potential worker exposures to the site contaminants, however, the use of PPE will be necessary to maintaining exposure as low as reasonable achievable (ALARA).

This PPE program defines the minimum level of protection that has been designated for the SSP project. The contingency protective equipment requirements are also defined. The PPE requirements will be re-evaluated by the site SSO/HSS as the work proceeds and recommendations for modifications to this program will be made to the Program Manager by the project SSO as required.

EG&G personnel, DOE representatives, or other authorized site visitors requiring access into areas zoned as restricted will follow the personal protective equipment requirements set in this plan.

6 2 PPE ISSUES APPLICABLE TO ALL SITE PERSONNEL

All personnel assigned to OU2 and the SSP must be trained in the proper inspection and use of the PPE used on this project before beginning work on the site. This training requirement is fulfilled through completion of the 40-hour OSHA course discussed in Section 10 0, Training, but site-specific training will cover the PPE requirements of this project.

All personnel working on this project who may be required to wear an air-purifying respirator must have a current medical clearance issued by a qualified physician and a fit test certificate for the size and make of respirator used. This clearance will be updated annually with the employee's physical exam as described in Section 8 0 of this plan.

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The SSO and individual team members are responsible for the inspection of their own and their team member's equipment during donning and field use. Personnel who are having equipment difficulties or experience tears in their suits should proceed directly to the CRZ for repairs or replacement of their equipment. If an exposure to site contaminants is suspected as a result of equipment failure, immediately contact the SSO or the EG&G Industrial Hygiene Department.

6.3 COMPONENTS OF LEVELS OF PROTECTION

OSHA and the EPA define four levels of protective equipment ensembles in the 29 CFR 1910.120 regulations, Levels A, B, C, and D. Levels A and B specifying the use of self-contained breathing apparatus are not addressed in this plan. If either of these levels of protection are required due to the presence of extreme site hazards, this situation will be handled as a separate amendment to this plan.

The levels of protection that are defined for this project include Level C, Level D, and a modified Level D. The specific equipment that is identified for each of these general ensembles is listed in Table 6.3-1.

6.4 LEVELS OF PROTECTION FOR SITE ACTIVITIES

The minimum safety equipment required for all personnel on this project site includes a hard hat, EG&G coveralls, and steel toed shoes. No workers, visitors or other personnel will be allowed on this project without these safety items even in the non-hazardous areas. Minimum levels of PPE by activity are listed in Table 6.4-1.

All non-intrusive activities will be performed in a modified Level D with skin, hand, and boot coverings. Intrusive activities will initially be performed in Level C (air purifying respirators) until the air quality can be characterized and a lower level of protection can be proposed. The decision to downgrade the level of protection will be made with the concurrence of the SSO, the Program Manager, and the EG&G PM.

Table 6 3-1 Specific Requirements for Each Level of Protection

Level of Protection	Equipment	Protection Provided	Should Be Used When	Limiting Criteria
D	<p>Required</p> <ul style="list-style-type: none"> • Steel-Toed Boots or Shoes • Long-Legged Pants • Safety Glasses or Chemical Splash Goggles <p>Optional, As Required</p> <ul style="list-style-type: none"> • Work Gloves • Coveralls • Hearing Protection 	<p>No respiratory protection</p> <p>Minimal skin protection</p>	<ul style="list-style-type: none"> • The atmosphere contains no known hazard • Work functions preclude splashes, immersion, or the potential for unexpected inhalation of or contact with hazardous levels of any chemicals 	<ul style="list-style-type: none"> • May be worn in support or the CRZ • This level should not be worn in the EZ • The atmosphere must contain at least 19.5% oxygen
Modified D	<p>Required</p> <p>All Rqmts of Level D Plus</p> <ul style="list-style-type: none"> • Chemically Protective Suite – Tyvek or Polyethylene Coated Tyvek • Inner and Outer Gloves • Chemical-Resistant Safety • Boots/Shoes or Steel-Toed Work Boots with Latex Overshoes (Taped to Suit) <p>Options, As Required</p> <ul style="list-style-type: none"> • Splash Shield • Hearing Protection • Eye Protection 	<p>Increased skin and splash protection, but no respiratory protection</p>	<p>Working in dusty areas or in areas with splash potential where low inhalation hazard is presented</p>	<ul style="list-style-type: none"> • May be worn in the EZ if the area has been demonstrated to be free of air contaminants above the action levels • The atmosphere must contain at least 19.5% oxygen
C	<p>Required</p> <ul style="list-style-type: none"> • Full-facepiece, air-purifying respirator equipped with organic vapor and HEPA filter cartridges • Chemically protective clothing dependent on the specific area <ul style="list-style-type: none"> – Tyvek full body suit for dry areas, – Polyethylene coated Tyvek for when splash hazards exist • Inner latex glove and outer nitrile gloves (taped to suit) • Chemical-resistant safety boots/shoes or steel-toed work boots with latex overshoes (taped to suit) • Hard hat • Two-way radio communications <p>Optional, As Required</p> <ul style="list-style-type: none"> • Coveralls under chemically protective suit • Face shield for splash protection • Long cotton underwear 	<p>Respiratory protection up to 50 times the permissible exposure level of selected contaminants (i.e., particulates and some organic compounds), and skin and splash protection from contaminated dust and water</p>	<ul style="list-style-type: none"> • The atmospheric contaminants, liquid splashes, or other direct contact will not adversely affect any exposed skin • The types of air contaminants have been identified, concentrations measured, and a canister is available that can remove the contaminant • All criteria for the use of air-purifying respirators are met 	<ul style="list-style-type: none"> • Atmospheric concentration of chemicals must not exceed immediately dangerous to life or health levels • The atmosphere must contain at least 19.5% oxygen

Table 6 4-1 Minimum Levels of PPE by Activity

Work Activity	Initial Level of Protection	Additional Comments	Contingency PPE
Project Activities in Non-RCA Areas	Level D	No contact or access to contaminated areas is permitted for personnel in this level of protection	No significant exposures to any of the site contamination is expected
Site Activities in RCA	Modified Level D	Tyvek suits, gloves, and boot covers are required for all access into the EZ regardless of activity	Upgrade to Level C if air monitoring action levels are exceeded (See Section 9 0)
All Intrusive Activities in the EZ	Level C	Tyvek suits can be used during activities with no splash hazards Water sampling and work around the pond requires the use of PVC suits	Downgrade any intrusive activity level of protection if no significant inhalation hazards are posed to workers If upgrade is necessary, contact SSO and PM

6 5 REUSE OF PPE

All disposable protective equipment (Tyvek suits, gloves, etc) must be removed and disposed of whenever a worker leaves the EZ This includes leaving the site after five minutes or a full day The length of the service life of a respirator cartridge, with activated carbon or other chemical adsorbing element, will be determined by the following criteria

- Breathing resistance becomes excessive,
- Chemical odors are detected by the wearer, or
- Dispose of chemical respirators after a minimum of seven days of use, sooner if necessary

Containers will be provided for the disposal of PPE used in the EZ and will be located adjacent to the CRZ Procedures for the use and disposal of PPE are given in SOP FO 6 -Handling of PPE, and shall be strictly followed

7.0 DECONTAMINATION

7.1 INTRODUCTION

The objective of decontamination is to remove hazardous substances from workers and equipment, to assure compliance with DOE Order 5480 11 and OSHA Standard 29 CFR 1910 120, to prevent the spread of contamination from the site, and to prevent potential adverse health effects that could be caused by contact with hazardous materials by unprotected workers

Safe work practices and engineering controls should be undertaken to prevent equipment and personnel from becoming contaminated during the work on this site. All equipment, samples, personnel, and vehicles leaving the exclusion zone will be checked for radiological contamination, and effective appropriate decontamination procedures will be undertaken to remove any contamination prior to release of the equipment from the site

The decontamination of personnel and equipment will be performed in the contamination reduction zone at the exit to the exclusion zone. Protective equipment and respirators will be removed in this area. Containers will be provided for collection of disposable protective clothing

7 2 DECONTAMINATION PROCEDURES

7 2 1 Personnel and Small Equipment Decontamination

The hazardous materials known to be present at the site are radionuclides. It is the responsibility of the SSO to determine whether radiological contamination of personnel or equipment exists and to prescribe the decontamination procedures that will be required. Appropriate PPE will be used during decontamination operations as an additional measure to prevent direct employee exposure to hazardous substances

Current EG&G SOPs should be consulted for specific decontamination requirements. These procedures include SOP FO 03 - General Equipment Decontamination, SOP FO 06 - Handling of PPE.

Respirators will be frisked and smeared for contamination prior to removal and cleaning. If radiological contamination is discovered on the exterior of the respirator, it should be removed before washing or disinfecting the face piece. (Head should also be frisked if respirator is found to be contaminated.) Respirators should be wiped clean by site personnel as they are removed. They must be stored in a plastic bag, with the cartridge side down, so that distortion of the facepiece does not occur.

7 2 2 Surface Contamination Surveys

The purpose of the surface contamination surveys will be to control and document all property/material to be released from the RCA. All equipment which leaves the RCA must be surveyed and comply with the EG&G Property Release Evaluation form. Radiological screening will be performed by the project SSO or by project personnel trained in performing this function.

8.0 MEDICAL SURVEILLANCE

8.1 MEDICAL MONITORING REQUIREMENTS

All field personnel and all subcontractors participating in the soil sampling of interstitial waters shall adhere to a medical monitoring program which fulfills the requirements of 29 CFR 1910 120. The program includes

- *Baseline Medical Examination Including Bioassay for Radionuclides*
- Annual Medical Examination
- Exit Medical Examination
- Incident Specific Examination

8.2 AVAILABILITY OF MEDICAL SERVICE

The EG&G Occupational Health Department is located in Building 122. The full staff is on duty from 7 30 am to 4 00 p m Monday through Friday. The registered nursing staff is on duty from 6 30 a m on Monday through 10 00 p m on Friday except 11 00 p m to 6 30 a m (midnight shift). A physician and a nurse are always on call for any emergency during off hours. Weekend coverage (Friday from 10 00 p m through Monday at 6 30 a m and midnight shift coverage) is provided by emergency medical technicians. They can be contacted at extension 4336 and will meet employees in the Occupational Health Department or respond to the site of any emergency. For life threatening emergencies, call extension 2911.

8 3 TRANSPORTATION FOR MEDICAL REASONS

EG&G and EG&G-subcontractors employees will be provided transportation for medical reasons (if it is medically safe, as determined by the EG&G Occupational Health Staff) to their home or to an appropriate medical facility for the following

- An emergency EG&G Occupational Health will determine the appropriate mode of transportation for illness/injury requiring air or ground ambulance transport
- A non-emergency If there is no medical necessity for ambulance transport, supervisors will be asked to arrange transportation

In a situation where an employee is injured and requires non-ambulance transport to an off-site medical facility, the SSO will accompany that person and be available to interface with outside authorities (if necessary) and to provide further transportation for the employee as appropriate. If personnel are unable to arrange transportation on weekends or during night work they will contact the EG&G Shift Superintendent (RFP Emergency Coordinator) at extension 2914 for assistance.

8.4 MEDICAL RECORDS

EG&G and EG&G-subcontractors are required to keep medical information of an individual's file, including laboratory reports, electrocardiogram reports, x-ray reports, health histories, physical examinations, letters, and reports from the employee's personal or referral physician.

The medical records of all field personnel will remain in the possession of their corporate headquarters and will not be taken from the premises except for the purpose of answering subpoenas.

If respiratory protection is required at the site, the physician must provide authorization that the employee is medically qualified to wear a respirator and this record will be kept at the project trailer by the SSO. EG&G and EG&G-subcontractor personnel required to wear a respirator will be fit tested annually.

9.0 RADIOLOGICAL SCREENING PROGRAM

9.1 DIRECT-READING INSTRUMENTS

Direct-reading or real-time monitoring instruments provide instantaneous data on the concentration or identity of radiological contaminants present on the site

The following direct reading instruments will be used during this project (Also See Table 9 1-1)

- A Bicon Frisk-Tech with A-100 probe will be used to monitor dry equipment surfaces and dry PPE for the presence of alpha-emitting radioisotopes
- A Ludlum 12 with a 44-9 pancake probe will be used to monitor equipment and PPE for the presence of beta- and gamma-emitting radioisotopes
- Bicon Frisk-Tech with B-50 (optional)

Table 9 1-1 Direct-Reading Action Limits

Instrument	Monitoring Guidelines	Instrument Reading	Mandatory Action
Bicon Frisk-Tech with A-100 Probe	Survey All Personnel and Equipment Leaving EZ	0 – 100 CPM	No special precautions
		> 100 CPM	The material is considered contaminated and cannot be released from the EZ, contact SSO

9 2 REAL-TIME RADIOLOGICAL MONITORING

Radiological monitoring involves the detection and measurement of alpha, beta, gamma, or neutron radiation. Radiological monitoring is established in accordance with appropriate and relevant requirements and policies. The goal of the radiation monitoring program is to maintain personnel exposure ALARA. Personnel and equipment contamination surveys will be performed in accordance with the appropriate EMRGs or ROIs.

Monitoring of personnel and equipment for radiological contamination will be performed in the following situations

- Whenever leaving a RCA,
- Whenever exiting a contaminated area,
- During and after work where the potential exists for release of radioactive material,
- Whenever passing through an RCA,
- Following personnel decontamination,
- When required by EG&G SOPs,
- When required by a RWP, or
- When required by the EG&G HSPM, Section 18 10 "Release of Property for Conditional and Unrestricted Use"

9 3 PERSONNEL RADIATION MONITORING

All field personnel on this project will be involved in the RFP personnel radiation dosimetry program during site activities. The program entails the use of personal radiation dosimeters coupled with laboratory analyses to determine the radiation doses experienced on the site. Badges will be provided to each worker and turned into the dosimetry office at specified frequencies. EG&G will be responsible for providing thermoluminescent dosimeters, analyses of dosimeters, and reporting the results to the site SSO. Results will be given to employees, kept in health and safety files, and maintained by each contractor.

10.0 TRAINING

All EG&G & EG&G-subcontractor personnel assigned to the SSP must complete the training required by OSHA as well as site-specific health and safety training courses required by EG&G (See Table 10-1) The soil sampling of interstitial waters is an environmental investigation classified as a hazardous waste operation by OSHA standard 29 CFR 1910 120, therefore, the training requirements, including the initial training, annual refresher training, and supervisor training, apply to EG&G & EG&G-subcontractor personnel working at the site Additional training courses required by EG&G include General Employee Training, radiation worker, and respirator training

10 1 TRAINING REQUIREMENTS

10 1.1 Hazardous Waste Site Health and Safety

Any EG&G or EG&G-subcontractor employee assigned to work on the SSP must complete the 40 hour hazardous waste health and safety course required by OSHA in 29 CFR 1910 120(e) The 40-hour course and 3 days of supervised field experience is mandatory for workers who may be required to use respiratory protection equipment and/or who are engaged in activities in which they may be exposed to hazardous substances and health hazards at or above the permissible exposure limits

All hazardous waste workers must complete an annual 8-hour refresher course The course content consists of a summary of the 40-hour course Supervisors of hazardous waste sites or of tasks conducted on hazardous waste sites must complete an additional 8-hour supervisor health and safety training course A summary of training requirements is given in Table 10 1

Table 10-1 1910 120 Training Requirements for SSP

Operation/Personnel	Site Safety Briefing	24-Hour	40-Hour	8-Hour Supervisor	8-Hour Refresher
Routine or Occasional Site Worker	Yes	Yes ³	Yes	N/A	Yes
Routine or Occasional Site Worker (Support Zone)	Yes	N/A	N/A	N/A	N/A
Onsite Supervisor	Yes	Yes ⁴	Yes	Yes	Yes
Visitor ^{1,2} • Level A or B PPE	Yes	N/A	Yes	N/A	Yes
• Level C PPE	Yes	Yes	N/A	N/A	Yes
• Level D or No PPE	Yes	N/A	N/A	N/A	N/A

¹ All visitors should be issued and instructed in the use of required PPE, receive a site-specific safety briefing, and be escorted by training personnel

² Visitors are not directly involved with hazardous waste operations (i.e., management, audit, and oversight personnel) Visitors include those covered and not covered by OSHA

³ 24-hour training is adequate for these workers only for entry into areas where Level D PPE is sufficient For routine workers, the area must also have been monitored and fully characterized

⁴ Supervisors of general site workers who require only the 24-hour course need only take the 24-hour initial and 8-hour supervisor courses

10.1.2 Radiation Worker Training

All subcontractor personnel performing field work must complete the 1-day class entitled "Radiation Safety for Environmental Restoration" offered by the EG&G Performance Based Training Department Starting January 1, 1994 all site personnel must either test out or complete a 3 day EG&G Radiation Worker Level II Training Course

10.1.3 Site-Specific Briefing

All subcontractor employees assigned to work on the SSP project must receive a briefing that introduces site safety, emergency procedures and the information contained in the plan. The briefing should provide enough detail that employees can implement the plan and safely perform their assigned tasks.

Visitors who do not have the required OSHA training and medical certifications will not be allowed to enter the site EZ or CRZ. Prior to gaining access to the site, visitors to the SSP site will have an orientation that summarizes the plan. This orientation does not qualify the visitor to access-controlled areas of the site. The purpose of the briefing is to provide sufficient information on the hazards and control measures at the site to prevent the visitor from unknowingly violating any site control measures. Visitors will be escorted by a trained site employee during the entire visit.

Visitors will provide signature verification that they have read, understand, and will comply with the requirements of the plan. Signatures are recorded in a logbook, which is maintained at the project trailer by the SSO.

10.1.4 Safety Meetings

Discussion at weekly meetings may include the following topics:

- Health and safety considerations and the required PPE for current operations,
- Any revisions to the plan,
- Any new MSDS filed at the project trailers,
- Documented or observed unsafe acts committed at the worksite, a clarification of the safety requirements violated, and methods to prevent future violations, and
- Approved changes to the plan.

Workers are required to attend the weekly safety meetings and sign a roster (attendance sheet) that will be maintained by the SSO at the project trailers. Meeting minutes will be documented and attached to the roster. The project manager or HSO will review the meeting minutes with absentees and have them sign the attendance sheet. This documentation will be filed at the work site,

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available to EG&G upon request, and archived when the project is completed Safety meetings will be conducted weekly at a minimum or more frequently as necessary

10.1 5 Rehearsal of Emergency Response Plan

Subcontractor personnel will participate in any Emergency Response Plan rehearsals conducted by EG&G Emergency Preparedness

10.2 VERIFICATION OF TRAINING

The SSO will maintain documentation of EG&G and EG&G-subcontractor employee training (including supervised field experience) on file at the project trailers These records will be kept on file by the SSO

11.0 EMERGENCY INFORMATION

11.1 NOTIFICATION

LIFE-THREATENING EMERGENCIES CALL EXTENSION 2911

NON LIFE-THREATENING EMERGENCIES CALL EXTENSION 2914

Notification requirements for emergency situations at SSP depend on the nature of the perceived emergency (e g , spill injury, illness, fire) and the extent to which the damage and/or injuries have progressed Upon discovery of a release of materials or other non life-threatening emergency situation, the Shift Superintendent will be notified at extension 2914 If there is no answer at 2914, refer to 2911 If the situation is life-threatening, RFP emergency response personnel will be notified as detailed below

Call Extension 2911 to obtain emergency assistance for life-threatening emergencies and to simultaneously access the following

- Emergency Coordinator (EC), Shift Superintendent
- Plant Protection Central Alarm Station
- Fire Department Dispatch Center
- Medical Department

As much detail about the emergency as possible will be provided. A decision to dispatch any or all of the following equipment will be based on the provided information.

- Fire Engine
- Ambulance
- Hazardous Material (HAZMAT) Response Vehicle

Provide the following information, upon request, to the Emergency Dispatcher

- Informant's Name
- Exact Location of the emergency
- Nature of the emergency
- Condition of the patient if applicable (breathing, consciousness, bleeding, etc)
- Special hazards in the area
- Any other information requested

If no details are given, emergency response personnel will respond automatically.

The EC will immediately respond to emergencies. The RFP Protection Central Alarm Station will activate the Building Emergency Support Team by the Life Support/Plant Warning Public Address System. The EC will activate the Emergency Operation Center and notify departments that have an advisory role in the situation, if applicable. The EC will determine whether additional help from off-site agencies (e.g., police, hospitals) is required.

The EC will also notify the following groups when appropriate:

- Radiological Engineering
- Industrial Hygiene
- Industrial Safety
- Waste Operations
- Waste Programs

- Traffic
- Occurrence Notification Officer
- Health and Safety Administrator

11.2 SPECIFIC SITE HAZARDS

The response to and abatement of most emergency situations from the SSP will require the expertise of RFP emergency response personnel. Situations that will require the assistance of RFP emergency responders include, but are not limited to the following:

- Accidents resulting in physical injury,
- Accidents resulting in radiological exposure,
- Incidents where the substance cannot be absorbed, neutralized or otherwise controlled at the time of release,
- Situations where there is a potential for safety or health hazards
- Accidents resulting in a radiological exposure exceeding the following limits
 - 2 rem (Whole Body)
 - 7.5 rem (Skin)
 - 15 rem (Extremities)

11.3 SPILLS OF HAZARDOUS AND RADIOACTIVE MIXED WASTE AND HAZARDOUS MATERIAL

REPORT TO THE EC AT EXTENSION 2911 all spills where the substance cannot be absorbed, neutralized, or otherwise controlled at the time of release, or where there is a potential for safety or health hazards (fire, explosion, chemical, or radiological exposure). The EC will dispatch the HAZMAT Response Vehicle and any other necessary support personnel.

Spills that do not require a HAZMAT response shall be cleaned up by site personnel according to an approved EG&G SOP. Spills onto porous ground will require removal of contaminated dirt as

well as the spilled material and are expected to be classified as hazardous and radioactive mixed waste

11 4 POST-EMERGENCY RESPONSE EQUIPMENT MAINTENANCE

Equipment used in emergency situations will be decontaminated by wiping with a soap solution Rags used for decontamination will be disposed as low-level radioactive waste, if necessary Contaminated heavy equipment used in emergencies will be thoroughly decontaminated prior to being released from the site The decontamination protocols described in SOPs FO 10 - Heavy Equipment Decontamination, FO 11 - Handling of Decontamination Water and Wash Water, and FO 18 - Decontamination Facility Operations will be followed Equipment will not be released until monitoring indicates that contaminant levels are less than 20 disintegrations per minute/100 square centimeters (above background) and that chemical contamination is not present

11 5 EMERGENCY EQUIPMENT LOCATION

A 15-minute emergency eye wash and shower will be provided for tasks where eye hazards may exist Either a 15-minute eye wash will be located within 100 feet or 10 seconds of travel time from each hazard area or a portable hand-held eyewash bottle will be available at the site for use These items may be located in the project trailers on the site Fire extinguishers will be located in all field vehicles and will be temporarily located at sites where there is a potential for fires (e g , during welding operations) First aid will be provided by EG&G Emergency Medical Technicians

11.6 EVACUATION PLAN

Personnel and visitors to SSP will evacuate the area if any of the following occur

- If an emergency (such as a fire or chemical spill) develops
- If instructed by site supervision
- If instructed by the Shift Superintendent over the site radio or telephone system

After an evacuation, each Field Team Leader will verify that the employees that he/she supervises are accounted for

11.7 COMMUNICATION

Radios will be used by field personnel to maintain contact with the project manager or other designated persons in the trailers who have access to telephones. The HSO and PM will monitor the radio frequency in use by field personnel at all times during field operations. Radio frequencies are monitored by the RFP security system to ensure that response time is minimal in the event of an accident or emergency on the site. In the event of a plant emergency, Central Dispatch will notify the trailers and field personnel by telephone and radio. If Central Dispatch fails in its attempt to contact anyone on-site, a security car will be sent to the site to alert personnel of the emergency.

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12.0 REFERENCES

EG&G 1991 *Environmental Management Radiological Guidelines*

EG&G 1993 *Final Site-Specific HSP for the Phase I RCRA Facility Investigation/ Remedial Investigation OU2*

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