

LOGSHEET FOR FIELD CHANGES TO CONTROLLED DOCUMENTS

Change Number	Date	Document Number	Document Title	Section/Page Modified	Description of Change (s)	Resp Manager Approval	Compliance Approval	ES&Q Approval	Rad Eng Approval	Quality Assurance	Completion of ADM 2.01 Checklist	Completion of SESUSQD Checklist
2	7/9/97	REF/MRS- Final FIP for 96-0062 the source located at the abandoned site EHS115		1.0/1	Add MTL #s	WMS	N/A	MDS	Done	HOD	yes	yes
				2.0/2	Deposition of SCA requirements for	WMS	N/A	MDS	Done	HOD		
				5.0/12/5	requirements for	WMS	N/A	MDS	Done	HOD		
				7.0/16	to be done	WMS	N/A	MDS	Done	HOD		
				7.2/24	at end of trench F-1	WMS	N/A	MDS	Done	HOD		
				7.3/27	Remedial Action	WMS	N/A	MDS	Done	HOD		
				App C	insert A-112 Narrative	WMS	N/A	MDS	Done	HOD		

7-17-97

Control

Michael 7-15-97 submitted to Doc Control

1.0 INTRODUCTION

#2 | The purpose of this Field Implementation Plan (FIP) is to describe in detail the tasks and procedures required to complete the Mound Site, (Individual Hazardous Substance Site [IHSS] 113), source removal by September 30, 1997. The purpose of the Mound Site Source Removal Project is to excavate and treat by low temperature thermal desorption, approximately 600 to 1,000 cubic yards (cy) of volatile organic compound (VOC) contaminated soil above the Tier I subsurface action levels specified in Attachment 5, The Action Levels & Standards Framework for Surface Water, Ground Water, and Soils, of RFCA (DOE, 1996) which is contributing to the degradation of groundwater. The Mound Site Source Removal Project is a mission activity, MP-ER-20, 37, 38, and 39 at the Rocky Flats Environmental Technology Site (RFETS) to reduce the human health and environmental risk associated with the VOC contamination on behalf of Kaiser-Hill Company, Inc., (K-H) for the U.S. Department of Energy/Rocky Flats Field Office (DOE/RFFO).

The controlling documents for this project are the Proposed Action Memorandum (PAM) for the Source Removal at the Mound Site, IHSS 113 (RMRS, 1997a), the Sampling Analysis Plan (SAP) to Support the Source Removal at the Mound Site, IHSS 113, (RMRS, 1997b), the task-specific Health and Safety Plan for the Source Removal at the Mound Site, IHSS 113, (RMRS, 1997c), the Integrated Work Control Package numbers T0090239, and the applicable Federal, State, and local regulations, as well as DOE Orders, RFETS policies and procedures, and Environmental Restoration Operating Procedures (OPs) Conduct of Operations (COOP) will be conducted in a manner consistent with RFETS goals, objectives, and approved procedures in accordance with DOE Order 5480.19. Implementation of COOP for the Mound Site Source Removal Project is summarized in Appendix A.

2.0 SITE LAYOUT AND DEVELOPMENT

The following site maps show the approximate location of the following principal features:

Figure 2.1 Mound Site Location Map

- IHSS 113, Mound Site
- Central Avenue ditch
- Mound Site
- Thermal Desorption Treatment Area
- Contaminated soil feed stockpile (CSFS)
- Treated Soil Stockpile
- Trailer T900D to be used as the site project/staging office
- Trailer T900C to be used for project support

Figure 2.2 Mound Site Excavation Map

- Mound Site
- Area to be excavated
- Exclusion zone (EZ)/Soil Contamination Area (SCA)
- Stepoff pad/radiological buffer area
- Contamination reduction zone (CRZ)

- Steppoff pad/Radiological Buffer Area (RBA)
- 1,800 gallon potable water holding tank (PW)
- 1,800 gallon incidental water holding tank (IW)
- Fire extinguishers, first aid kits
- Project support zone (PSZ)
- Primary and Secondary Assembly areas
- Supplied air trailers
- Trailer T903A to be used for project support

Figure 2 3 Mound Site Contaminated Soil Feed Stockpile Map

- Contaminated soil feed stockpile (CSFS)
- 1,500 KVA substation
- Trailer T900D to be used as the site project/staging office
- Trailer T900C to be used for project support
- Exclusion zone (EZ)/Soil Contamination Area (SCA)
- Contamination reduction zone (CRZ)
- Steppoff pad/radiological buffer area
- Project support zone (PSZ)
- Primary and Secondary Assembly areas
- Supplied air trailer

Figure 2 4 Mound Site Treatment Map

- Thermal desorption treatment area
- Contaminated soil feed stockpile (CSFS)
- Treated soil stockpile
- Two 10,000 gallon, dual-wall condensate storage tanks
- 1,500 KVA substation
- Trailer T900D to be used as the site project/staging office
- Trailer T900C to be used for project support
- Exclusion zone (EZ)/Soil Contamination Area (SCA), as required
- Contamination reduction zone (CRZ)
- Steppoff pad/radiological buffer area, as required
- Project support zone (PSZ)
- Primary and Secondary Assembly areas
- Supplied Air Trailers
- TDU fuel storage tanks – eight 1,000 gallon liquid propane gas tanks
- 5,000 gallon potable water storage tank for dust suppression
- 300-ton chiller
- Additional equipment as necessary

3.0 PROJECT ORGANIZATION AND PLANT SUPPORT

The project organization is presented in Figure 3 1 and shows the responsible project personnel, subcontractors and plant support contacts. Roles and responsibilities are the same as the HASP (RMRS, 1997c). Rocky Mountain Remediation Services, L L C (RMRS) has planned and will manage the project and coordinate support for this accelerated source removal action through the appropriate RFETS contractor or subcontractor.

5.0 HEALTH AND SAFETY

RMRS will be responsible for the health and safety of all workers at the site. The RMRS Site-Specific Health and Safety Plan (HASP) for the Source Removal at the Mound Site (RMRS, 1997c) is the lead document for worker safety. This includes all collective bargaining unit, subcontractor, other site personnel, and RMRS personnel. RMRS will conduct training specific to the supplied air equipment used at the site before initiation of field activities. In the event that unanticipated hazards or conditions are encountered, as described in the HASP (RMRS, 1997c), the "Check List for Restart of Mound Operations" will be filled out by the Project Manager (Appendix D). Activity Hazard Analyses or modifications to the HASP (RMRS, 1997c) will be prepared to address new hazards or conditions that are identified. The treatment vendor, MH, will prepare a site-specific HASP to address the expected and unexpected hazards or conditions associated with their operations. The MH HASP will be reviewed and concurred with by the appropriate K-H, SSOC, and RMRS personnel.

#2 | Figures 2.2 and 2.3 show the approximate layout of the excavation EZ/SCA, CRZ, and PSZ per the site specific HASP (RMRS, 1997c). Figure 2.4 shows the approximate layout of the treatment EZ/SCA (as required), CRZ, and PSZ per the site specific HASP for treatment. The EZ/SCA is defined as the area of the project site requiring the most restrictive Personal Protective Equipment (PPE) for access. The CRZ and stepoff pad/radiological buffer areas are defined as the areas for access to and egress from the EZ/SCA. The CRZ will be utilized for equipment and material staging, the mobile decontamination pad if needed, and equipment refueling. The PSZ is defined as the project area requiring site specific training for unescorted access or escorted access if lacking site specific training. Project specific training required for the implementation of the Mound Site Source Removal is described in detail in the HASP (RMRS, 1997c) and a project-specific training matrix will be prepared as part of the RMRS Readiness Review Checklist (ADM-18.03).

#2 | Project personnel will be required to use the sign in/out log at T900D prior to site access to the CRZ, RBA, or EZ/SCA and obtain a project access pass. Visitors requiring unescorted access to the PSZ must use the sign in/out log at T900D and obtain a project access pass from T900D. To obtain a project access pass project personnel will be authorized by the Project Manager, Field Supervisor, or Site Safety Officer documenting completion of all applicable training requirements. Personnel entering the EZ/SCA will comply with the requirements of the task-specific RWP, as required. Project personnel entering the EZ/SCA will be trained in the use of the site-specific breathing air equipment. Visitors will be required to be escorted while in the PSZ, if all the site specific training requirements have not been met.

The following personnel and equipment have been identified within the excavation and

The following personnel and equipment or equivalent will be used within the Project Support Zone (PSZ) during treatment

- One RMRS Site Field Supervisor
- One RMRS Site Safety Officer and/or RMRS Health and Safety Supervisor
- On a part-time basis, one RMRS support personnel
- SSOC Radiological Engineering and Safety personnel
- Personnel to refuel the heavy equipment, as needed
- On an as-needed basis subcontractor or vendor personnel delivering equipment, propane, potable water, and picking up condensate and or storm water
- One MH project superintendent
- One MH Site Safety Officer
- Two MH HSSs for high and low volume air sampling for radionuclides, particulate monitoring and VOC perimeter monitoring
- MH will stage one 300-ton chiller and one potable water container for dust suppression
- MH will stage additional equipment, as necessary
- RMRS will utilize two 10,000 gallon tanks for storage of condensate and storm water
- RMRS will utilize one 1500 KVA skid mounted substation in the PSZ for electrical power
- One to two 24 cylinder air trailer(s)
- RMRS will stage eight 1,000 gallon Liquid Propane Gas storage tanks
- RMRS will stage additional above-ground storage tanks, as needed to support dust suppression activities or manage incidental waters

The following personnel and equipment have been identified during the backfilling of the excavation

Backfilling personnel

- RMRS Field Supervisor(s)
- Two Front-end Loader Operators
- One to two Dump Truck Operators
- Backfilling Spotter
- Two laborers providing dust suppression water
- Radiological Control Technicians (RCTs)– radiological monitoring of equipment and personnel out of the EZ/SCA, as required
- SSOC Radiological Engineering and Safety personnel
- RCTs performing high and low volume air sampling for radionuclides, as required
- RMRS Industrial Hygiene – air monitoring for particulate emissions

Backfill equipment

- Two 4 yd³ bucket front end loaders or equivalent
- One to two 10 to 20 yd³ dump truck or equivalent

#2

#2

Radiological high volume and low volume air monitoring equipment will be supplied by RMRS and SSOC Radiological Engineering, as needed, in support of the source removal action High volume and

#2 low volume air sampling for particulate radionuclides will be performed as directed by SSOC Radiological Engineering (Appendix C) and as a best management practice. Approximately one to two high-volume air sampling stations will be set up downwind from the following site activities: excavation, stockpiling soil in the CSFS, soil treatment, and backfilling, as needed as a best management practice. Locations will be determined by the wind direction at any given time during the evolution of the above activities. High volume and low volume air sampling will be performed to establish baseline airborne concentrations of particulate radionuclides and resultant airborne concentrations from soil movement activities during soil excavation, soil stockpiling, and as a best management practice during soil treatment and backfilling of treated soil. Sampling frequencies and radon discrimination are detailed in the task-specific As Low As Reasonably Achievable (ALARA) job review (Appendix C) and the site specific HASPs.

6.0 PUBLIC AND MEDIA RELATIONS

The public and media relations will be coordinated through Ann Tyson, RMRS, and Ann Sieben, K-H. A project sign will be installed at the southeast corner of the project site. RMRS Mound Site project personnel will coordinate with the on-site subcontractor for photographic support and documentation. Access control to the site will be in accordance with Section 5.0 of this FIP.

7.0 SOURCE REMOVAL ACTION

#2 The source removal action at the Mound Site will consist of three interdependent tasks. The first is to excavate and transport the contaminated soil to the CSFS, the second is to treat the soils with the TDU, and the third is to backfill the treated soil and reclaim the excavation and treatment areas. The estimated project duration is from March 20, 1997 to September 30, 1997, with the source removal activities completed by August 30, 1997. Excavation activities are scheduled to operate between March 21 and April 8, 1997, between the hours of 0600 to 1800. TDU activities are scheduled between July 15 through August 8, 1997, and operate between 0600 Monday through 0600 Saturday until completion of the treatment portion of the project. Field logbooks and forms will be utilized per procedure 2-S47-ER-ADM-05.14 (Use of Field Logbooks and Forms) and COOP-006 (Operating Area and Logs). Appendix D presents a number of forms/checklists that will be used to support the source removal.

Site activities will be performed in accordance with the HASP, the task-specific RWPs, as required, and the task-specific IWCPs. In addition, specific tasks will be covered by Pre-Evolution Briefs, scheduling field activities on the weekly Environmental Restoration Plan-of-the-Day (POD), and performing daily POD briefings at the health and safety tailgate.

meetings Communications will be performed in accordance with COOP-015 (Appendix A) and the project will utilize the Environmental Restoration radio channel EMAD-6

stockpile Initial treatment operation will begin with a shakedown run to optimize treatment times and to establish process baseline sample results (RMRS, 1997b) Per the SAP (RMRS, 1997b), soils containing the highest levels of VOCs will be treated during baselining TDU operations will be performed by MH in accordance with their operating procedures for the system, their RMRS-approved HASP, and per their contractual agreement with RMRS The IWCP for treatment, T0090239-4, describes the procedures and steps applicable to document the treatment task Dyncorp/Filter Services will provide DOP testing of HEPA filters as needed per the HEPA Filter Testing IWCP

#2 | Radiological high volume and low volume air sampling for particulate radionuclides will be performed along the perimeter of the EZ during periods of soil movement or other dust generating activities as a best management practice at a minimum of one low volume sampler and one high volume sampler per shift

Operating logs will be maintained by MH to ensure maintenance of complete and accurate operational histories during treatment per COOP-006 (Appendix A) Shift operating rounds will be performed once per shift by Field Supervisors to monitor operating logs recording system and process parameters per COOP-012 (Appendix A) Shift relief and turnover for both RMRS field supervisors and MH field supervisors will be documented on the Shift Relief and Turnover Form in Appendix C per COOP-007 (Appendix A) Quality Assurance personnel from RMRS will perform internal surveillance inspections of the MH operating logs and RMRS field supervisor personnel field logbooks per COOP-002 (Appendix A) In the event that unanticipated hazards or conditions are encountered, as described in the HASP (RMRS, 1997c), the "Check List for Restart of Mound Operations" will be filled out by the Project Manager (Appendix D)

#2 | Decontamination and demobilization of MH equipment will commence at or near the end of treatment operations Heavy equipment and all support equipment will have gross decontamination performed in the EZ at a mobile decontamination site setup within the EZ before being moved to the main decontamination facility, if necessary Equipment will be inspected and radiologically surveyed before access to the project site Radiological surveys will be performed before equipment is released from the EZ and RFETS per the Radiological Controls Manual (KH, 1996) In addition, decontamination will be performed in accordance with operating procedures FO 03, Field Decontamination Operations, FO 04, Decontamination of Equipment at Decontamination Facilities, FO 06, Handling of Personal Protective Equipment, and FO 12, Decontamination Facility Operations as described in Section 10

7.2.1 PROCESS VERIFICATION SAMPLING

After treatment, process verification samples will be collected as described in the SAP (RMRS 1997b) Treated soil waiting for process verification results will be stockpiled in the preliminary treated soil stockpile (pTSS) as shown in Figure 2.4 and described in Section

The following CAPS 900 information and procedures are contained in Appendix E

- CAPS preventive maintenance schedule and daily startup
- ConCover® work sheet
- Water calibration chart (tank volume calibration for CAPS 900 system)
- ConCover® mixing and application procedures
- ConCover® daily application record
- ConCover® MSDS and Product certification
- Freezing conditions maintenance

The RMRS field supervisor will be responsible for visually inspecting the condition of the cover material placed on the fTSS during daily operations. If weather conditions cause "bare spots" to develop on the fTSS, the RMRS field supervisor will direct MH to apply additional dust suppression agent to the fTSS until approved by the RMRS field supervisor.

7.3 SITE RECLAMATION

Site reclamation consists of three tasks, backfilling of treated soil into the Mound Site excavation, decontamination and demobilization of the remaining project equipment, and re-vegetation.

Backfilling of the Mound Site excavation will commence upon confirmation that process verification samples meet or exceed the TDU performance goals stated in Table 3-2 of the PAM (RMRS, 1997a) and the radiological soil put back levels, if necessary. The treated soil stockpile will be backfilled into the excavation using dump trucks and two front-end loaders equipped with a 4 yd³ bucket (or equivalent). Particulate dust monitoring will be performed during soil transport and backfilling activities. Dust suppression with potable water will be applied during soil transport and backfilling. When backfilling approaches less than four feet to ground surface, the front end loader will provide additional compaction by driving onto the excavation backfill. Radiological high volume and low volume air sampling for particulate radionuclides will be performed along the perimeter of the EZ during periods of soil movement or other dust generating activities as a best management practice at a minimum of one low volume sampler and one high volume sampler per shift.

#2

Decontamination and demobilization of project support equipment and materials will commence on completion of treatment and backfilling operations. Regrading and replacement of topsoil stripped from the soil stockpile areas will be performed prior to re-vegetation. Re-vegetation of disturbed areas will be performed at the completion of the Trench T-1 Remedial Action in accordance with the guidance provided by RFETS ecologists as described in Appendix F and per the IWCP.

ALARA REVIEW NARRATIVE

TITLE SOURCE REMOVAL AT THE MOUND SITE (IHSS 113). AMENDMENT #1

Log No. 97-SITE-002

RWP No N/A

- I. **Task Description** This ALARA Job Review is an amendment that was written to cover the current radiological conditions for the Source Removal at the Mound Site (IHSS 113)
- II. **Radiological Concerns** There are no radiological concerns to be addressed during the Thermal Desorption Unit treatment operations, return of IHSS 113 soils to the excavation site, and the reclamation of the stockpile, treatment, and excavation areas
- III. **Amended Controls to be Implemented for the Source Removal at IHSS 113**
 - 1 1 During the Thermal Desorption Unit treatment operations, return of IHSS 113 soils to the excavation site, and reclamation of the stockpile, treatment, and excavation areas, continuous radiological low volume air sampling and shiftly high volume air sampling will not be required to be performed outside the CRZ boundary Substantial analytical data has been acquired that indicates that no radiological airborne hazard exists
 - 1 2 Engineering controls, such as containments, are not required for this project. Supplied air or Self Contained Breathing Apparatus (SCBA) respirators will be required as per the Health and Safety Plan for Industrial Hygiene concerns with the chemicals There is no radiological requirement for respiratory protection.
 - 1 3 The document entitled "Technical Basis for Posting and Radiological Control Requirements in Environmental Restoration Activities", dated March 5, 1997, shall be used for determining the posting and deposing requirements The IHSS 113 excavated soils are significantly below the Rocky Flats Cleanup Agreement (RFCA) Tier II soil action levels (see attached memorandum from R Gentry) Therefore, per the recent change to Article 222 of the Site Radiological Control Manual, there are no radiological posting requirements during Thermal Desorption Unit activities and for the return of IHSS 113 soils to the excavation site
 - 1 4 Individuals supporting the Thermal Desorption Unit treatment activities, the return of IHSS 113 soils to the excavation site, and reclamation of the stockpile, treatment, and excavation areas are required to wear personnel protective equipment (PPE) per the project specific Health and Safety Plan PPE used will be radiologically surveyed for unrestricted release in accordance with HSP 18 10 to satisfy waste acceptance criteria for release to the Sanitary Landfill Equipment that is utilized for treatment / soil handling activities, regardless of destination, shall be radiologically surveyed in accordance with ROI 3 01 and ROI 3 02 for unrestricted release per HSP 18 10 Hand carried items will be radiologically frisked for release Tools that come in contact with soils shall be surveyed in accordance with ROI 3 01 and ROI 3 02

