

**Environmental Restoration  
RFCA Standard Operating Protocol  
for Routine Soil Remediation  
FY04 Notification #04-14  
IHSS Group 500-2**

**April 2004**

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for Routine Soil Remediation  
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Approval received from the Colorado Department of Public Health and Environment

April 12, 2004.

Approval letter contained in the Administrative Record.

**April 2004**

**TABLE OF CONTENTS**

1.0 INTRODUCTION ..... 1  
2.0 IHSS GROUP 500-2 ..... 1  
    2.1 Project Conditions..... 1  
    2.2 Remediation Plan ..... 1  
    2.3 Stewardship Evaluation ..... 3  
    2.4 Accelerated Action Remediation Goals..... 3  
    2.5 Treatment ..... 3  
    2.6 Project-Specific Monitoring..... 3  
    2.7 Resource Conservation and Recovery Act Units..... 3  
    2.8 Administrative Record Documents ..... 4  
    2.9 Projected Schedule..... 4  
3.0 PUBLIC PARTICIPATION ..... 4  
4.0 REFERENCES ..... 4

**LIST OF FIGURES**

Figure 1 IHSS Group 500-2 Proposed Remediation Area..... 2

## **ACRONYMS**

AL	action level
AR	Administrative Record
BMP	best management practice
CDPHE	Colorado Department of Public Health and Environment
D&D	Decontamination and Decommissioning
DOE	U.S. Department of Energy
EDDIE	Environmental Data Dynamic Information Exchange
EPA	U.S. Environmental Protection Agency
ER	Environmental Restoration
ER RSOP	Environmental Restoration RFCA Standard Operating Protocol for Routine Soil Remediation
FY	Fiscal Year
IA	Industrial Area
IASAP	Industrial Area Sampling and Analysis Plan
IHSS	Individual Hazardous Substance Site
mg/kg	milligrams per kilogram
PDF	portable document format
RCRA	Resource Conservation and Recovery Act
RFCA	Rocky Flats Cleanup Agreement
RFETS	Rocky Flats Environmental Technology Site
RSOP	RFCA Standard Operating Protocol
SAP	Sampling and Analysis Plan
SSRS	Subsurface Soil Risk Screen
WRW	Wildlife Refuge Worker

## **1.0 INTRODUCTION**

This Environmental Restoration (ER) Rocky Flats Cleanup Agreement (RFCA) Standard Operating Protocol (RSOP) for Routine Soil Remediation (ER RSOP) (DOE 2003a) Fiscal Year (FY) 04 Notification includes the notification to remediate an Individual Hazardous Substance Site (IHSS) at the Rocky Flats Environmental Technology Site (RFETS) Industrial Area (IA) during FY04. The purpose of this Notification is to invoke the ER RSOP for IHSS Group 500-2. Soil with contaminant concentrations greater than the RFCA wildlife refuge worker (WRW) action levels (ALs), or as indicated by the Subsurface Soil Risk Screen (SSRS), and associated debris will be removed in accordance with RFCA (DOE et al. 2003) and the ER RSOP (DOE 2003a). Activities specified in the ER RSOP are not reiterated here; however, deviations from the ER RSOP are included where appropriate.

## **2.0 IHSS GROUP 500-2**

IHSS Group 500-2 consists of IHSS 500-158, Radioactive Site Building 551. The IHSS and proposed remediation area are shown on Figure 1.

### **2.1 Project Conditions**

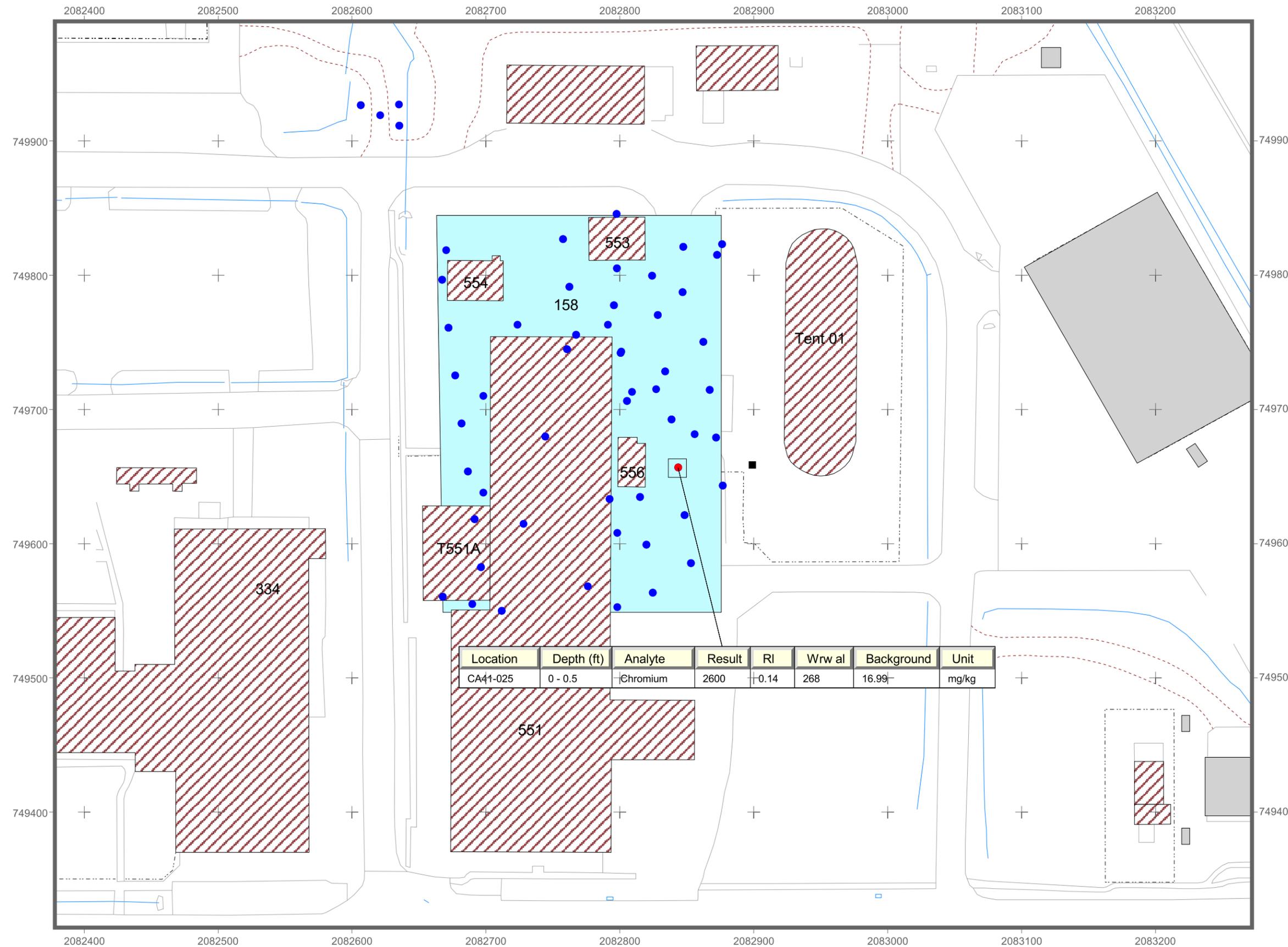
Historical data on IHSS 500-158 are presented in IA Sampling and Analysis Plan (SAP) (IASAP) FY03 Addendum #IA-03-07 (DOE 2003b), as well as specifications for additional accelerated action characterization sampling. Historical and accelerated action characterization data indicate that all contaminant concentrations are below the WRW ALs, with one exception. The chromium concentration in surface soil at sampling location CA41-025 was 2,600 milligrams per kilogram (mg/kg), and the WRW AL is 268 mg/kg. Because there are no subsurface soil exceedances, an SSRS is not warranted at this time. The accelerated action taken, characterization results, and the SSRS will be documented in the IHSS Group 500-2 Closeout Report.

### **2.2 Remediation Plan**

Based on the data summarized in Section 2.1, remediation will involve, at a minimum, removal of the top 6 inches of soil at sampling location CA41-025. The excavation will be 3 feet by 3 feet. Confirmation samples will be collected in the side walls of the excavation and analyzed for metals. Analytical results using EPA Method 6010 indicate that chromium concentrations are 20 mg/kg below 6 inches in depth at this location. It is anticipated that after remediation, metal concentrations in soil at this area will be less than the RFCA ALs.

All accelerated action wastes will be managed in compliance with Site waste management procedures.

**Figure 1  
Proposed Remediation Area**



**KEY**

- WRW exceedance
- Proposed remediation area
- Historic and accelerated action locations below action level
- Approximate location of air sampler
- IHSS 158
- Drainage
- Paved road
- Dirt road
- Fence
- Demolished building
- Standing building

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50 0 50 Feet

Scale = 1: 900

State Plane Coordinate Projection  
Colorado Central Zone  
Datum: NAD 27

U.S. Department of Energy  
Rocky Flats Environmental Technology Site

Prepared by:

Date: 4.7.04



Prepared for:



File: W:\Projects\Fy2004\500-2\Closeout\  
500-2\_tracking\_mar\_quickfix.apr

### **2.3 Stewardship Evaluation**

Because the full extent of remediation is not known at this time, a stewardship evaluation will be conducted during remediation using the consultative process and will be documented in the IHSS Group 500-2 Closeout Report. A new map of residual contamination will be generated after remediation.

The current stewardship actions and recommendations for IHSS Group 500-2 are as follows:

- Use best management practices (BMPs) to reduce erosion into surface water drainages.
- Implement near-term institutional controls until final closure and stewardship decisions are implemented, including soil excavations controlled through the Site Soil Disturbance Permit process.
- Implement long-term stewardship actions, including the following:
  - Prohibitions on construction of buildings in the IA; and
  - Restrictions on excavations or other soil disturbance.

These recommendations may change based on in-process remediation activities and other future RFETS remediation decisions.

### **2.4 Accelerated Action Remediation Goals**

ER RSOP remedial action objectives (RAOs) include the following:

- Provide a remedy consistent with the RFETS goal of protection of human health and the environment;
- Provide a remedy that minimizes the need for long-term maintenance and institutional or engineering controls; and
- Minimize the spread of contaminants during implementation of accelerated actions.

### **2.5 Treatment**

Not applicable.

### **2.6 Project-Specific Monitoring**

Not applicable.

### **2.7 Resource Conservation and Recovery Act Units**

IHSS Group 500-2 contains no Resource Conservation and Recovery Act (RCRA) units subject to RCRA closure requirements.

## **2.8 Administrative Record Documents**

DOE, 2003, Environmental Restoration RFCA Standard Operating Protocol for Routine Soil Remediation Modification, Rocky Flats Environmental Technology Site, Golden, Colorado, September.

DOE, 2003, Industrial Area Sampling and Analysis Plan Addendum #IA-03-07 for IHSS Group 500-2, Rocky Flats Environmental Technology Site, Golden, Colorado, June.

DOE, CDPHE, and EPA, 2003, Modifications to the Rocky Flats Cleanup Agreement Attachment, U.S. Department of Energy, Colorado Department of Public Health and Environment, and U.S. Environmental Protection Agency, Rocky Flats Environmental Technology Site, Golden, Colorado, June.

## **2.9 Projected Schedule**

Remediation of IHSS Group 500-2 is expected to begin in the third quarter of FY04.

## **3.0 PUBLIC PARTICIPATION**

ER RSOP Notification #04-14 activities were discussed at the May 2004 ER/Decontamination and Decommissioning (D&D) Status meeting. A portable document format (PDF) version of this Notification was provided to the local governments. This notification is available at the Rocky Flats Reading Rooms and on the Environmental Data Dynamic Information Exchange (EDDIE) website at [www.rfets.gov](http://www.rfets.gov).

## **4.0 REFERENCES**

DOE, 2003a, Environmental Restoration RFCA Standard Operating Protocol for Routine Soil Remediation Modification, Rocky Flats Environmental Technology Site, Golden, Colorado, September.

DOE, 2003b, Industrial Area Sampling and Analysis Plan Addendum #IA-03-07 for IHSS Group 500-2, Rocky Flats Environmental Technology Site, Golden, Colorado, June.

DOE, CDPHE, and EPA, 2003, Modifications to the Rocky Flats Cleanup Agreement Attachment, U.S. Department of Energy, Colorado Department of Public Health and Environment, and U.S. Environmental Protection Agency, Rocky Flats Environmental Technology Site, Golden, Colorado, June.