



Randy Leitner  
GRK-313-97  
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Attachments (2):  
As Stated

cc:

K. North	-	Kaiser-Hill
M.H. Conilogue	-	Safe Sites
W.M. Wierzbicki	-	Safe Sites
D.W. Pontius	-	EnviroTemps

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97-RF-xxxxxx

Joseph Legare  
Environmental Compliance Division  
Rocky Flats Field Office  
U.S. Department of Energy

Attn.: David Grosek

NOTIFICATION TO BEGIN CLOSURE OF GLOVEBOX 460 IN BUILDING 779 AS PART OF RCRA UNIT 881.3B, UNDER REVISED CLOSURE DESCRIPTION DOCUMENT (ENCLOSED) (5400.1) - RML-XXX-97

Kaiser-Hill Company, L.L.C., is submitting the enclosed draft 45 day notification to begin closure of Glovebox 460 in Building 779 on December 15, 1997. This glovebox will be closed in accordance with the attached *Closure Description Document for RCRA Closure of Glovebox 460 in Building 779* (originally issued September 23, 1997, revised October 22, 1997). This glovebox was used for treatment activities under the auspices of permitted RCRA Unit 881.3B.

Kaiser-Hill requests that the enclosed 45 day notification letter be submitted to CDPH&E no later than October 29, 1997. If you have any questions, please contact me at extension 3537, or Natalie Van Tyne of RMRS at extension 5893.

Randy Leitner, Program Manager  
Compliance and Performance Assurance

Attachment:  
As Stated

Orig. and 1 cc. - Joseph Legare

Distribution w/attachment:

D. Grosek - DOE, RFFO  
K. North - KH  
N. C.T. Van Tyne - RMRS

Enclosure  
97-RF-XXX  
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Mr. Joe Scheiffelin, Unit Leader  
Colorado Department of Public Health and the Environment  
4300 Cherry Creek Drive South  
Denver, Colorado 80222-1530

Dear Mr. Scheiffelin:

The United States Department of Energy, Rocky Flats Field Office (DOE, RFFO) issues this notification of the intent to begin closure of Glovebox 460 in Building 779 on December 15, 1997. This glovebox will be closed in accordance with the enclosed *Closure Description Document for RCRA Closure of Glovebox 460 in Building 779* (originally issued September 23, 1997, revised October 22, 1997). This glovebox was used for treatment activities under the auspices of permitted RCRA Unit 881.3B.

If you have any questions, please contact David Grosek at 966-3305.

Joe Legare, Director  
Environmental Liaison Division

cc:

C. Gilbreath	-	CDPHE
K. North	-	K-H
W.M. Wierzbicki	-	SSOC
N.C.T. Van Tyne	-	RMRS

**CLOSURE DESCRIPTION DOCUMENT FOR**  
**RCRA CLOSURE OF GLOVEBOX 460 IN BUILDING 779**

**EPA ID No. CO7890010526**

**U.S. Department of Energy**  
**Rocky Flats Environmental Technology Site**  
**October, 1997**

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Figure 1 - Location of Glovebox 460 Within Room 222 in Building 779

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## 1.0 INTRODUCTION

Fifteen small vessels containing uranium hydride (UH) were utilized as sources of high purity hydrogen in support of experimental activities in Building 779. Glovebox 460 in Building 779, Room 222 was used to perform a hydrolysis treatment activity to convert UH to uranium oxide under the auspices of permitted RCRA Unit 881.3B, which is located in Building 881.

This activity was approved for Building 779 for the following reasons:

- The material to be treated was located in Building 779, which is currently authorized for its storage and handling, and
- the material could not be transferred to Building 881 for treatment, since the nuclear material concentration exceeded the allowable limits for Building 881.

The location of Glovebox 460 within Room 222 is shown in Figure 1. This glovebox had never stored hazardous waste prior to the treatment activity. Therefore, the only exposure of this glovebox to contamination by hazardous waste would have occurred during the treatment activity. The glovebox is to be clean closed, as partial closure of Unit 881.3B.

## 2.0 SCHEDULE FOR CLOSURE

This closure will be conducted immediately after the 45-day notification period for the start of closure activities, as required by 6 CCR 1007-3, Section 264.112. All closure activities will be completed within 180 days of the last day of treatment activity, as required by 6 CCR 1007-3, Section 264.112.

## 3.0 DESCRIPTION OF HAZARDOUS WASTE ACTIVITY

Within Glovebox 460, each vessel was vented to initiate reaction of the uranium hydride with glovebox air. The uranium hydride reacted with oxygen in the air to form uranium oxide and water, with the release of energy as heat. Once the reaction had ceased, as noted by the cooling of the vessel, the vessel was opened by removing the flange bolts. The contents of the vessel were manually stirred with a rod until no further reaction was noted, then poured into a metal pan and stirred to assure that all of the uranium hydride had reacted. The converted material was then sampled and packaged for transfer to Building 707.

Since the uranium compounds were totally contained within the vessels or within the metal pan during the last step of treatment, no releases of hazardous waste to the glovebox surface occurred.

#### 4.0 WASTE CHARACTERIZATION AND MANAGEMENT

Uranium hydride is considered pyrophoric (EPA waste code D001) and reactive (EPA waste code D003). The largest vessel was estimated to contain 600 grams of  $\text{UH}_3$ . Since the starting material is not a listed hazardous waste, and since the treatment process removed the applicable hazardous characteristics, the material exiting the activity did not require management as a hazardous or mixed waste.

#### 5.0 METHOD OF CLOSURE

Glovebox 460 will be closed by the method described as "Unit Removal" in the Site RCRA Permit, Part X, Section D. All treatment activities were conducted in a steel containment pan within the glovebox, with no release of hazardous constituents to the glovebox floor or surroundings; therefore, removal of the pan from the glovebox constitutes removal of the treatment unit.

#### 6.0 SPECIFIC CLOSURE ACTIVITIES

After the treatment activity has been completed, all vessels of uranium hydride will be removed from the glovebox, along with the containment pan in which treatment was conducted. The glovebox will then be inspected by all treatment-related equipment has been removed, the glovebox surface will be inspected for determination of "unit removal" and certification of closure by an independent, Colorado-registered professional engineer, as required by 6 CCR 1007-3, Section 264.115.

#### 7.0 SOIL CONTAMINATION EVALUATION

The closure activities associated with Glovebox 460 are not expected to impact the soils surrounding Building 779. Therefore, soil contamination will be evaluated as part of decommissioning and cleanup activities for Building 779 under the Rocky Flats Cleanup Agreement (RFCA).

#### 8.0 POST-CLOSURE CARE REQUIREMENTS

As the treatment activity conducted in Glovebox 460 in Building 779 did not result in contamination of soil or ground water surrounding Building 779, post-closure care activities under an applicable RFCA remediation decision document are not necessary as part of the closure of this glovebox.

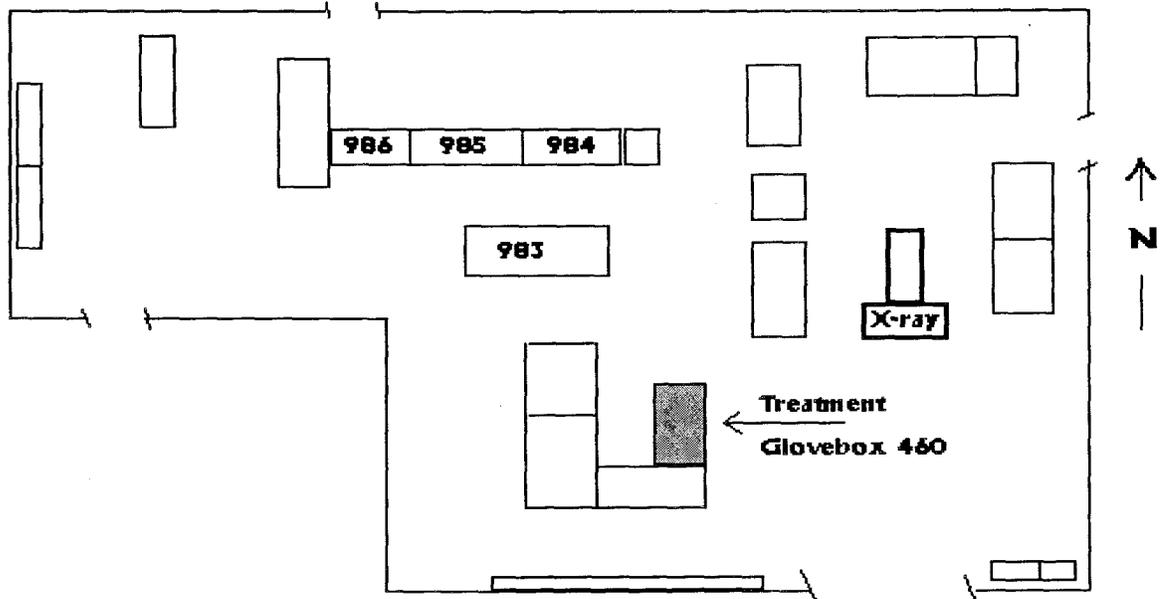
#### 9.0 REFERENCES

1. Code of Colorado Regulations, Vol. 6, No. 1007-3, Part 264, Subpart G, Sections 264.110 through 264.120.

2. Rocky Flats Environmental Technology Site RCRA Permit, Part X, Closure, pages X-1 through X-14.
3. Konwinski to R.M. Leitner, "Request for Authorization to Perform Hydrolysis Treatment Process Under RCRA Unit 881.3B in Building 779, Room 222, GRK-245-97.

10.0 FIGURES

Figure 1 - Location of Glovebox 460 Within Room 222 in Building 779



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