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Colorado Department  
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Dedicated to *protecting* and *improving* the health and *environment* of the people of Colorado

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December 7, 2004

Mr. Joe Legare  
Director, Project Management Division  
U.S. Department of Energy, Rocky Flats Project Office  
10808 Highway 93, Unit A  
Golden, CO 80403-8200

## RE: Pre-Demolition Survey Report (PDSR) for Building 707 - Approval

Dear Mr. Legare:

The Colorado Department of Public Health and Environment, Hazardous Materials and Waste Management Division has reviewed the PDSR for Building 707, which was provided as two separate PDSR documents. The two PDSR documents include the PDSR for the 2<sup>nd</sup> Floor and Exterior of Building 707 (Revision 0, dated October 20, 2004), and the PDSR for the 1<sup>st</sup> Floor (Revision 0, dated November 11, 2004). We have also received correspondence and a statement from the independent verification contractor, The Oak Ridge Institute for Science and Engineering (ORISE), that they concur the decommissioning criteria have been met. Based on this information, we are hereby approving the PDSR for B707, and demolition can proceed.

If you have any questions regarding this correspondence, please contact me at (303) 692-3367, or Edd Kray at (303) 966-2115.

Sincerely,

for  
Steven H. Gunderson  
RFCA Project Coordinator

Cc: Mark Aguilar, EPA  
David Shelton, KH

Sam Garcia, EPA  
Administrative Records Building T130G

ADMIN RECORD

5100

1/21

B707-A-000190



**ROCKY FLATS ENVIRONMENTAL  
TECHNOLOGY SITE**

**Decommissioning  
Closeout Report  
for the  
707 Closure Project**

**Revision 1**

**July 19, 2005**

Reviewed for Classification  
Name: [Signature]  
Date: 7/19/05

**ROCKY FLATS ENVIRONMENTAL  
TECHNOLOGY SITE**

**Decommissioning  
Closeout Report  
for the  
707 Closure Project**

**Revision 0**

**May 26, 2005**

Reviewed for Classification <sup>/UCN2</sup>  
Name: CJ FREEMAN -4/14-  
Date: 05/31/05

## 1.0 Introduction

In accordance with the Building 707 Closure Project Decommissioning Operations Plan (DOP), a closeout report is required upon completion of decommissioning activities. In accordance with the Building 707 DOP, Section 10.4, this closeout report will consist of a brief description of the work completed, including:

- Verification that remedial action goals have been met;
- Remedial action description;
- Dates and duration of specific activities;
- Any modifications to the original DOP;
- Final sampling and analysis reports;
- A description of the quantity and characteristics of the wastes generated and how the wastes were stored or disposed;
- Site reclamation; and
- Demarcation of wastes left in place.

The Building 707 Closure Project is comprised of Building 707 (including the 707A Annex) and various support facilities located within the Site's Industrial Area. The DOP identified Building 707 as a Type 3 facility; Buildings 708, 709, 718, 731, 732, 778, and Tank T-206 as Type 2 facilities; and Buildings T-707S, 711, 711A, and 20 aboveground tanks located within the Building 707 Closure Project as Type 1 facilities. Building 709 was re-characterized as a Type 1 facility as a result of the pre-demolition survey process as documented in Minor Modification #1 to the Building 707 DOP. This closeout report addresses all facilities within the Building 707 Closure Project. Figure 1 provides a map showing the locations of the Building 707 Project facilities.

Documentation that was submitted as part of this project, such as Pre-Demolition Survey Reports (PDSRs), will not be included in this report; instead, references to these documents are provided and a copy of the Administrative Record (AR) index for this project is included in Appendix A of this report. When completed and approved by DOE and the Lead Regulatory Agency (LRA), this Decommissioning Closeout Report will be submitted to the 707 Closure Project Administrative Record Post-decisional File.

### 1.1 Building Descriptions

**Building 707 (Type 3)** was a two-story structure with a single-story addition located on the east side of the main building. To the northwest was a freestanding two-story structure (i.e., the 707A Annex), which had a separate east wall, but was considered to be part of the main structure. The foundations for the building were cast-in-place concrete caissons and grade beams. The caissons were cast in holes drilled into bedrock and are connected by reinforced concrete tie beams. Structural framing consisted of a pre-cast, pre-stressed concrete twin-tee roof and second floor, supported on pre-cast concrete beams, girders, and columns.

### 3.2.3 Pre-Demolition Survey

Final radiological surveys were conducted in accordance with the site Pre-Demolition Survey Plan (PDSP) prior to demolition. For Type 2 and 3 facilities, the results were summarized in a PDSR that received approval from DOE and CDPHE. (For approval dates, refer to Table 2.) For Type 1 facilities, the PDS results were documented in the RLCR in accordance with the site PDSP. The results of these surveys demonstrated that Buildings 708, 709, 711, 711A, 718, 707S, and all 21 aboveground storage tanks met the unrestricted release limits specified in the PDSP prior to demolition. Buildings 707 and 778 had portions of the floor slabs and below-grade structures that were contaminated, with the remainder of the buildings meeting the unrestricted release limits. Buildings 731 and 732 were below grade waste pits with small above-ground access sheds; these facilities did not meet unrestricted release and were disposed entirely as low level waste.

The PDSRs included information on chemical contamination as well as radiological. Hazardous substances and wastes were removed from all buildings prior to demolition (with two exceptions noted below) and all RCRA units were appropriately closed. RCRA unit closures are summarized in Appendix B. Asbestos abatement was also completed prior to demolition in accordance with Colorado Air Quality Control Commission (CAQCC) Regulation No. 8, as certified in the Demolition Notification submitted to CDPHE. Beryllium surveys demonstrated that the buildings met the required release levels. Two instances were documented where hazardous constituents were not removed prior to demolition:

1. Non-friable asbestos piping that drained the foundation of cooling tower 709 was left in place 8 to 10 feet below grade.
2. Polychlorinated biphenyl (PCB) contaminated concrete on the vault roof of Building 707 resulting from a historical transformer spill was removed during demolition and dispositioned as Toxic Substances Control Act (TSCA) waste. Due to the thickness of the vault roof, this could not be remediated prior to demolition.

Table 2 summarizes the project documentation for this phase of the project.

**Table 2 707 Closure Project Pre-Demolition Characterization Documentation**

Document	Date	AR Document Number
PDSR for B709 submitted to CDPHE	October 18, 2001	B707-A-000066
CDPHE approval of B709 PDSR	October 30, 2001	B707-A-000069
Regulatory Contact Record documenting discussion with CDPHE regarding removal of contaminated piping located beneath the slab in the autoclave vaults at the time of demolition	August 2, 2004	B707-A-000107
Regulatory Contact Record documenting notification to CDPHE for demolition of B711 cooling tower, a Type 1 facility.	August 11, 2004	B707-A-000104
Regulatory Contact Record documenting discussion with CDPHE regarding disposition of B778, with portions free-releasable and with contaminated portions to be removed as low	September 2, 2004	B707-A-000113

Document	Date	AR Document Number
level waste.		
Regulatory Contact Record documenting discussion with CDPHE regarding disposition of B731 and B732 as contaminated waste.	September 16, 2004	B707-A-000114
Regulatory Contact Record documenting discussion with CPDHE regarding disposition of PCB-contaminated concrete on vault roof at the time of demolition.	September 20, 2004	B707-A-000112
PDSR for B718 submitted to CDPHE	September 23, 2004	B707-A-000119
CDPHE approval of B718 PDSR	September 28, 2004	B707-A-000125
Regulatory Contact Record documenting discussion with CDPHE about disposition of B707 C Pit as contaminated waste after demolition of the building.	October 6, 2004	B707-A-000123
PDSR for B708 submitted to DOE and CDPHE	October 14, 2004	B707-A-000122
CDPHE approval of B708 PDSR	October 19, 2004	B707-A-000169
Regulatory Contact Record documenting notification to CDPHE for demolition of T707S, a Type 1 facility.	October 20, 2004	B707-A-000124
PDSR for B707 second floor and exterior submitted to DOE and CDPHE	October 25, 2004	B707-A-000127, 128
CDPHE approval of B707 second floor and exterior PDSR	November 2, 2004	B707-A-000148
Regulatory Contact Record documenting discussion with CDPHE regarding leaving asbestos pipe under B709.	November 3, 2004	B707-A-000175
Regulatory Contact Record documenting discussion with CDPHE regarding disposition of B707 contaminated portions of slab	November 4, 2004	B707-A-000132
Regulatory Contact Record documenting discussion with CDPHE regarding disposition of contaminated metal in the overhead of B707 during demolition.	November 8, 2004	B707-A-000135
PDSR for B707 first floor submitted to CDPHE	November 24, 2004	B707-A-000153
PDSR for B778 submitted to CDPHE	December 1, 2004	B707-A-000154
PDSR for B731 and B732 submitted to CDPHE	December 1, 2004	B707-A-000151
CDPHE approval of B778 PDSR	December 2, 2004	B707-A-000145
CDPHE approval of B731 and B732 PDSR	December 2, 2004	B707-A-000146
CDPHE approval of PDSR for 707 for first and second floors and approval to start demolition	December 7, 2004	B707-A-000156

**ROCKY FLATS ENVIRONMENTAL  
TECHNOLOGY SITE**

**Building 707 Closure Project  
Decommissioning Operations Plan**

**Revision 0  
December 21, 2000**

Reviewed for Classification/UCNI:

By: /s/ S. G. Mathiasmeier -U/NU-

Date: 01/23/01  
Approved for Public Release

## RECORD OF MODIFICATIONS

DOP Modification	Effective Date	Description
Revision 0	January 18, 2001	
Modification #1 (minor modification)	October 16, 2001	This modification includes the re-characterization of Type 2 facilities to Type 1 facilities and specific clean closure as the method of closure for Module E and Room 196.

Mod  
#1

## 6.0 CLOSURE OF RCRA-REGULATED UNITS

The RCRA-regulated units located within the Building 707 Closure Project are listed in Table 20 and associated unit-specific closure information is provided in Appendix C. These units will be closed in compliance with the closure performance standards described in this section. All units will be closed prior to facility demolition. The LRA will be provided with timely notification of RCRA closure activities.

All RCRA-regulated units or portions of RCRA-regulated units located within the building will be closed prior to facility demolition. Portions of units located beneath the building slab or outside the building footprint (e.g., the valve vaults and underground piping associated with the Building 374 process waste system) will be taken to a RCRA stable configuration during decommissioning and closed in accordance with the ER RSOP.

### 6.1 Closure Options

Closure may be conducted in two stages: first by rendering a unit or portion of a unit "RCRA stable" if it is a permitted or interim status unit,<sup>61</sup> or "physically empty" if it is a mixed residue unit<sup>62</sup>, then by completing the activities associated with the closure options described below. The RCRA closure process flow is depicted in Figure 13.

#### 6.1.1 Clean Closure

RCRA-regulated units may be "clean closed" by documenting the absence of contamination or by decontaminating the unit.

**Clean Closure Option #1:** For units having a complete, detailed operating history, clean closure will be demonstrated when the LRA agrees the following criteria have been met:

- A review of the RCRA Operating Record indicates hazardous or mixed waste was never spilled in the unit, or complete documentation exists to demonstrate releases were adequately cleaned up (i.e., if a spill did occur, visible residual liquids and solid wastes were removed and the spill area was decontaminated), and
- A visual inspection of the unit and associated ancillary equipment notes the absence of hazardous or mixed waste stains and/or residuals.

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<sup>61</sup> "RCRA stable" is the first step toward closure of permitted or interim status units, whereby wastes are removed from the unit and the possibility of future waste input is eliminated. For tank systems, this means a tank and its ancillary equipment have been drained to the maximum extent possible using readily available means, with the objective of achieving less than one percent holdup, and with no significant sludge and no significant risk remaining. Physical means, such as lock out/tag out or blank flanges, must then be used to ensure no waste is introduced to the system is defined in Part X.E of the RFETS RCRA Part B Permit and Closure Plan for Interim Status Units.

<sup>62</sup> "Physically empty" is the "RCRA stable" counterpart for mixed residue tanks. "Physically empty" is defined in the Mixed Residue Tank Plan as the condition of a tank or ancillary equipment in which no liquid remains after verification from personnel who are familiar with the tank system or by a proven technology (e.g., by draining at low points or by non-destructive testing).

Table 20. Building 707 RCRA-Regulated Units

Site	Unit	Bldg	Unit Description	Regulatory Status	IEA Waste Code
1-10 and 12	707.1	707	Container Storage	PERMITTED	D001-D012, D015-D019, D021-D029, D033, D035-D038, D040-D043, F001-F003, F005-F007, F009, U227
1, 2, 3, 4, 5 and 7	92.001 to 92.019	707	Mixed Residue Tanks (Module C Pit): Tank V-100, V-30, V-31, V-1, V-12, V-13, V-14, V-15, V-16, V-17, V-18, V-19, V-2, V-3, V-4, V-5, V-6, V-7, V-8	RCRA STABLE (and also physically empty) per 99-DOE-03494 (1/28/99); approved by CDPHE 8/23/99; currently subject to quarterly inspections	F001, F002
1	707.1	707	Container Storage, Module A, Gloveboxes A-25, A-30 (90.106), A-35, A-45, and A-55	PERMITTED	D001-D012, D015-D019, D021-D029, D033, D035-D038, D040-D043, F001-F003, F005-F007, F009, U227
1	707.3A	707	Salt Stabilization Process: Module A, Gloveboxes A-70, A-75, A-80, A-85, A-90, A-100, A-120, A-125 (90.106), and Furnaces	PERMITTED but never activated; never used to treat hazardous waste.	NA
1	90.59	707	Container Storage, C-Cell, Module A	No longer subject to RCRA regulation; closed in accordance with "RCRA Closure Plan for Mixed Residue Container Storage Units," (11/22/98); closure certification signed 5/20/96 (ref. 96-DOE-07053, 5/28/96)	NA
3	90.146	707	Container Storage, Glovebox C-40, Module C	Never used for hazardous waste; not subject to RCRA regulation; withdrawn 10/26/94 (ref. 94-DOE-10453)	NA
4	707.3C	707	Dry Residues Repackaging Process: Module D, Gloveboxes D-30, D-35, D-40, D-45, D-75, D-90, D-95, and Crusher, Saws, Milling Machine, and Hand Tools	PERMITTED but never activated; never used to treat hazardous waste	NA

Table 20. Building 707 RCRA-Regulated Units

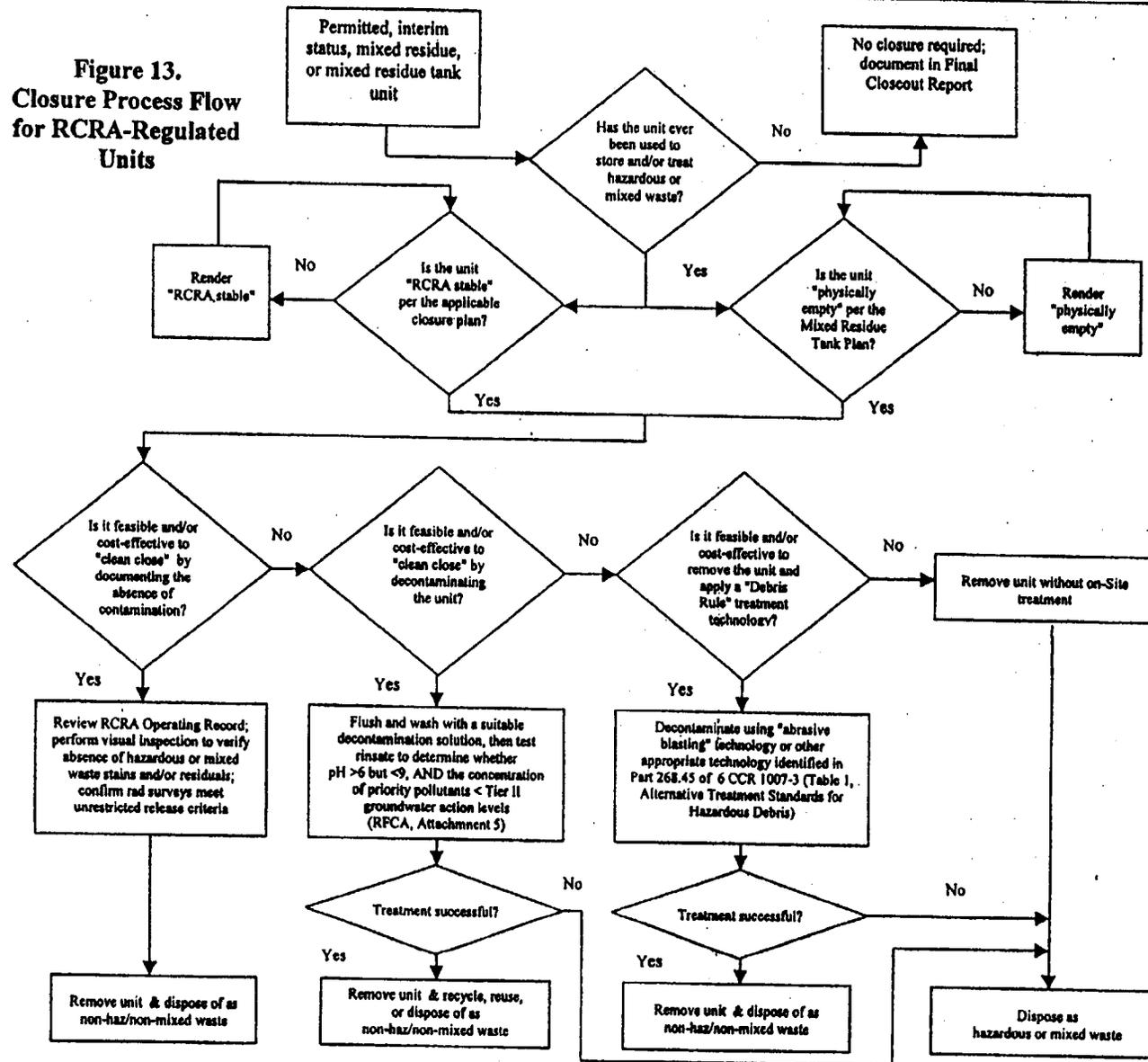
Set #	Rebaseline Set #	Unit #	Bldg	Unit Description	Regulatory Status	EPA Waste Codes
5	E1, E3, E5	707.1	707	Container Storage, Module E, Gloveboxes E-30, E-55 and E-115	PERMITTED	D001-D012, D015-D019, D021-D029, D033, D035-D038, D040-D043, F001-F003, F005-F007, F009, U227
5	E2, E3, E4, E5	707.3B	707	Ash Stabilization Process: Module E, Gloveboxes E-20, E-25, E-30, E-55, E-60, E-65, E-70, E-95, E-105, E-110, E-115, E-125, hammer mill, sieves, and furnaces	PERMITTED	D004-011, F001, F002, F005-F007, F009
7	NA	90.105	707	Container Storage, Rm. 130B	Never used for hazardous waste; not subject to RCRA regulation; withdrawn 10/26/94 (ref. 94-DOE-10453)	NA
8	H1	90.75	707	Container Storage, Rm. 136 (H-Vault)	Never used for hazardous waste; not subject to RCRA regulation; withdrawn 10/26/94 (ref. 94-DOE-10453)	NA
8	H1	90.76	707	Container Storage, Module H, (H-Cage)	Never used for hazardous waste; not subject to RCRA regulation; withdrawn 10/26/94 (ref. 94-DOE-10453)	NA
9	J2	707.1	707	Container Storage, Module J, Gloveboxes J-35 and J-55	PERMITTED	D001-D012, D015-D019, D021-D029, D033, D035-D038, D040-D043, F001-F003, F005-F007, F009, U227
9	J1	90.74	707	Container Storage, Rm. 141 (J-Vault)	Mixed Residue unit; not in active use, but not RCRA stable	TBD
9	NA	90.98	707	Container Storage, Rm. 142 (J-Closet)	Never used for hazardous waste; not subject to RCRA regulation; withdrawn 10/26/94 (ref. 94-DOE-10453)	NA
9	J2	92.020	707	Plutonium Stabilization Unit, Glovebox 25, Module J	Never used for hazardous waste; not subject to RCRA regulation	NA
9	J3	92.021	707	Plutonium Stabilization Unit, Glovebox 60, Module J	Never used for hazardous waste; not subject to RCRA regulation	NA

Mod #2

Table 20. Building 707 RCRA-Regulated Units

Site	Unit	BLD	Unit Description	Regulation Status	RCRA Waste Code
10	90.147	707	Container Storage, Glovebox K-45, Module K	Never used for hazardous waste; not subject to RCRA regulation; withdrawn 10/26/93 (ref. 94-DOE-10453)	NA
10	707.1	707	Container Storage, Module K, Gloveboxes K-65 and K-75	PERMITTED	D001-D012, D015-D019, D021-D029, D033, D035-D038, D040-D043, F001-F003, F005-F007, F009, U227
12	92 series	707	Overhead piping associated with the Module C Pit Mixed Residue Tanks	PERMITTED	F001, F002
12	90.27	707	Container Storage, C&D Halls	Never used for hazardous waste; not subject to RCRA regulation; Withdrawn 10/26/94 (ref. 94-DOE-10453).	NA
12	90.28	707	Container Storage, E&F Halls	No longer subject to RCRA regulation; closed in accordance with "RCRA Closure Plan for Mixed Residue Container Storage Units," (11/22/98); closure certification signed 5/26/96 (ref. 96-DOE-07053, 5/28/96)	NA
12	90.60	707	Container Storage, G&H Halls	No longer subject to RCRA regulation; closed in accordance with "RCRA Closure Plan for Mixed Residue Container Storage Units," (11/22/98); closure certification signed 5/26/96 (ref. 96-DOE-07053, 5/28/96).	NA
17	40.16	732	Laundry Waste Tank T-4	INTERIM STATUS	F001-F003, F005, F007-F009

**Figure 13.**  
**Closure Process Flow**  
**for RCRA-Regulated**  
**Units**



**Clean Closure Option #2:** Units to be "clean closed" by chemical decontamination will be flushed and washed with a suitable decontamination solution to remove visible waste residuals and contaminants of concern, then rinsed with clean water. The final rinsate will be tested to determine whether:

- The pH of the rinsate is between 6 and 9, and
- The concentrations of priority pollutants (identified as having been managed in the unit) and heavy metals are below the Tier II action levels for ground water, as defined in Attachment 5 of RFCA. Rinsate meeting the Tier II groundwater action levels for listed waste constituents associated with the unit and the LDR standards for characteristic waste (as required for disposal) will be deemed to be "no longer contained in" and will be managed as non-hazardous waste.

The final rinsate will not exceed a volume of two gallons per 100 ft<sup>2</sup> of surface area rinsed, and for internal surfaces, such as tank systems, the final rinsate will not exceed a volume of 5 percent of the capacity of the system. If test results indicate the standard has been met, the unit will be considered "clean closed." Units that cannot be decontaminated to meet the performance standard will be removed prior to building demolition and managed as hazardous or mixed waste.

Decontamination residuals (i.e., the rinsate and equipment used to decontaminate the unit) will be characterized and disposed of in accordance with the applicable regulations.

**Clean Closure Option #3:** A third "clean closure" option will be available for floors and/or foundations within RCRA-regulated units that have been scabbled, hydrolased, or decontaminated using another abrasive technique. This option will be used when a floor and/or foundation will be left in place after facility demolition.

Following decontamination using an abrasive technique, floors and/or foundation surfaces meeting the following criteria will be considered "clean closed":

- A visual inspection of the unit and associated ancillary equipment confirms the absence of hazardous or mixed waste stains and/or residuals; and
- Radiological surveys verify surfaces are at or below the unrestricted release criteria listed in Table 4.

Areas not meeting the visual inspection criteria will be removed as hazardous or mixed debris. Residuals will be collected, characterized, packaged, and disposed in accordance with the applicable waste management procedures and requirements (see Section 5.0).

### 6.1.2 Unit Removal in Conjunction with "Debris Rule" Treatment

Alternatively, RCRA-regulated units may be closed by removal and treatment under the "debris rule." The "debris rule" applies to unit equipment or structures that have no intended use or reuse, and are slated for removal and discard. To meet the "debris rule" standard, decontamination will be conducted using the "abrasive blasting" physical extraction technology, or other appropriate technology identified in Part 268.45 of 6 CCR 1007-3 (Table 1, Alternative Treatment Standards for Hazardous Debris).

For example, tanks and gloveboxes containing hazardous constituents and high levels of radiological contamination may be decontaminated by chemical extraction, using a solution of cerium (IV) and nitric acid (i.e., cerium nitrate). Cerium (IV) is a powerful oxidizing agent that, when applied to radioactively contaminated stainless steel surfaces, serves to decontaminate the surfaces to significantly lower levels and, in some instances, to unrestricted release levels. The cerium (IV) is combined with .5 to 7 molar nitric acid to remove several microns of the stainless steel surface, thus releasing and dissolving

embedded plutonium, uranium, and americium, as well as surface scale. The resulting surface has the appearance of new stainless steel. After applying the cerium wash, the waste liquid will be collected and treated with ferrous sulfate to reduce the cerium (IV) to cerium (III). As a side benefit, this process also reduces chromium (IV) to chromium (III).

The cerium nitrate will be introduced, (i.e., "fogged") into a contaminated tank or glovebox through a prefabricated port that has been secured to the tank or glovebox. A spray header (i.e., the cerium nitrate delivery system) will then be affixed to the prefabricated port and the cerium nitrate will be applied to the internal surfaces of the tank or glovebox. In addition, the tank or glovebox may be fogged with water to rinse residual acid from the equipment. The resulting aqueous waste stream will then be transferred to the caustic waste treatment system in Building 374, or other approved treatment facility, for final processing. Since the cerium nitrate and water will be fogged into the tank or glovebox system, very little liquid waste will be generated. The spray header will then be removed and the tank or glovebox will be inspected to confirm the absence of hazardous or mixed waste stains. As a final step, the equipment will be sealed, pending final disposition as non-hazardous debris.

If, after "debris rule" treatment, the equipment or structure meets the standard for a "clean debris surface,"<sup>63</sup> and it does not exhibit a hazardous waste characteristic, it will no longer be considered a hazardous waste and will be managed as a solid waste. In the event the standard is not met, the equipment or structure will be removed and managed as hazardous or mixed waste. Treatment residuals, including rinsates generated from extraction and/or destruction technologies used in the closure of RCRA-regulated units, will be characterized in compliance with 6 CCR 1007-3, Part 262.11, and managed accordingly.

### 6.1.3 Unit Removal without On-Site Treatment

RCRA units that are not decontaminated to meet the "clean closure by decontamination" standard will be removed, size-reduced, if necessary, and packaged to meet the waste acceptance criteria (WAC) of the approved disposal facility. In the event this waste cannot be shipped directly to a disposal facility, it will be stored in compliance with the remediation waste management requirements identified in individual Building Operations Orders and with the ARARs identified in Appendix D.

## 6.2 Closure Documentation

For units undergoing clean closure in accordance with Section 6.1.1 of this DOP, a closure certification will be prepared and signed by an independent, Colorado registered, professional engineer. The closure certification will be submitted to the LRA for review and concurrence within 60 days after completion of the associated closure activities. Units removed in accordance with Sections 6.1.2 and 6.1.3 will not require a professional engineer's certification.

In addition, RCRA unit closure activities will be documented in the Building 707 Closure Project AR File and referenced in the PDSR, which will be completed prior to building demolition. Upon final closure of each RCRA-regulated unit, the Site's Master List of RCRA Units will be updated to reflect the new closure status of the unit and the unit will be removed from the RCRA Part A and Part B Permits in accordance with the applicable hazardous waste regulations.<sup>64</sup>

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<sup>63</sup> See footnote 55.

<sup>64</sup> Code of Colorado Regulations, 6 CCR 1007-3, Section 100.63, Permit Modification at the Request of the Permittee.



# ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE REGULATORY CONTACT RECORD

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**Date/Time:** November 4, 2004 / 3:00 p.m.

**Site Contact(s):** Carolyn Hicks  
**Phone:** 303-994-9555

**Regulatory Contact:** Harlen Ainscough  
**Phone:** 303-692-3337

**Agency:** CDPHE

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**Purpose of Contact:** Discuss RCRA closures in Buildings 707 and 778 and characterization of waste removed as part of RCRA debris rule cleaning and demolition

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**Discussion:**

Four RCRA secondary containment areas in Buildings 707 and 778 were washed and rinsed to meet RCRA closure requirements in accordance with the Building 707 Decommissioning Operations Plan (DOP). The data were provided to Mr. Ainscough on October 25, 2004 via email.

These areas included:

B707 J Vault - RCRA Unit 90.74, mixed residue container storage area

B707 B Module - portions of floor that provided secondary containment for mixed residue piping

B707 floor trench - beneath floor from A module to C pit - provided secondary containment for mixed residue piping

B778 hallway - secondary containment beneath mixed residue transfer lines from B707 to B777

J vault (Room 141) was used for storage of small cans of mixed residue in fixed positions on shelves and carts. The shelves were previously closed under the debris rule and removed. The other three areas provided secondary containment for mixed residue piping associated with RCRA units 92.001 - 92.019.

The RCRA rinsates did not meet the closure performance standards for all parameters. However, the metals and volatile organics that were above the RFCA Tier II action level were well below the RCRA Universal Treatment standards. The DOP states, "In the event the standard is not met, the LRA will be consulted to determine whether the results are protective of human health and the environment."

J Vault, B Module, and Corridor D (breezeway connecting Building 707 and 778 hallway)

After RCRA washing, floors in these areas were shaved to remove paint and some concrete for the purpose of radiological decontamination prior to building demolition. These activities allowed the debris treatment standard in 6 CCR 1007-3 Part 268.45 to be achieved, and thus these units met the closure performance standard in the B707 DOP, Section 6.1.2, "Unit Removal in Conjunction with "Debris Rule" Treatment".

The floor shaving debris (paint and concrete), generated as part of concurrent radiological decontamination/RCRA debris rule treatment, must be characterized and managed appropriately. The rinsate data, discussed above, support a non-hazardous waste determination for the debris. Although the

RCRA areas held F-listed wastes in containers and piping, any releases to secondary containment would have been cleaned up promptly because of the high level of radionuclides in the wastes, and the floors were washed/rinsed prior to shaving, with the rinsate data supporting a "contained out" determination for the debris. In addition, a previous sample of floor shaving debris from H Module, comprised of paint and concrete, also was below TCLP levels for all metals.

Mr. Ainscough has concurred that these RCRA units in Building 707 have been closed by removal, and has concurred that the floor shaving debris may be managed as non-hazardous low-level waste for disposal, based on the project conducting the appropriate decontamination and removal activities.

#### Floor Trench

The floor trench from A module to C pit is a metal pipe embedded in the concrete floor slab, which previously contained an inner waste transfer pipe. The floor trench has had the ends grouted, and will be removed during demolition of the floor slab and managed as low level waste. This agreement is documented in a Contact Record between Dyan Foss and Edd Kray dated August 2, 2004. Mr Ainscough has concurred that the rinsate results are adequately protective and this floor trench is closed under RCRA, contingent on removal and disposal as low level waste.

#### Building 778 Hallway

The portion of the 778 hallway between Corridor D in Building 707 and the breezeway connecting to Building 777 meets the radiological unrestricted release criteria, and will not be shaved prior to demolition. A review of the RFETS Release Database from January 1990 through the present and the Environmental Compliance Action Tracking System (ECATS) from June 1995 through the present listed no spills or releases from this transfer line. Any releases to secondary containment that may have occurred prior to 1990 or that were not listed in the site databases would have been addressed promptly to mitigate the release of high level radionuclides within the waste streams. Although the hallway contained piping with F-listed wastes, no radiological contamination is present, and the rinsate data supports the determination that the floor is not characteristic waste as well as supporting a "contained out" determination for the listed waste. Mr. Ainscough concurred that this area has been closed under RCRA, contingent on final disposition of the building by removal. The waste will be managed as non-hazardous sanitary waste for disposal.

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**Contact Record Prepared by:** Carolyn Hicks

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#### Required Distribution:

M. Aguilar, USEPA  
S. Bell, DOE-RFPO  
B. Birk, DOE-RFPO  
C. Deck, K-H Legal  
D. Foss, K-H 707/776/777  
S. Garcia, USEPA  
C. Gilbreath, K-H 771/774  
S. Gunderson, CDPHE  
J. Legare, DOE-RFPO

R. Leitner, K-H 371/374  
J. Mead, K-H ESS  
G. Morgan, DOE-RFPO  
S. Nesta, K-H RISS  
K. North, K-H ESS/MS  
R. Schassburger, DOE-RFPO  
D. Shelton, K-H ESS  
C. Zahm, K-H Legal

#### Additional Distribution:

H. Ainscough, CDPHE  
J. Hindman, CDPHE  
E. Kray, CDPHE  
G. Schuetz, DOE-RFPO  
D. DelVecchio, K-H 707/776/777  
T. Vaughn, K-H 707/776/777

	A	B	C	D	E	F	G	H	I	J
	Unit No.	Building	Unit Description	Regulatory Status	Closure Status	Closure Date	Closure Document Approval	SET	Closure document submittal	CDPHE approval
157	90.105	707	Container Storage, Rm. 130B	WITHDRAWN - Never used for haz. waste	WITHDRAWN 10/26/94 (ref. 94-DOE-10453).	NA	ltr 10/26/94		NA	NA
188	90.146	707	Container Storage, Glovebox C-40, Module C	WITHDRAWN - Never used for haz. waste	WITHDRAWN 10/26/94 (ref. 94-DOE-10453).	NA	NA		NA	NA
189	90.147	707	Container Storage, Glove box K-45, Module K	WITHDRAWN - Never used for haz. waste	WITHDRAWN 10/26/94 (ref. 94-DOE-10453).	NA	NA		NA	NA
203	90.27	707	Container Storage, C&D Halls	WITHDRAWN - Never used for haz. waste	WITHDRAWN 10/26/94 (ref. 94-DOE-10453).	NA	NA		NA	NA
204	90.28	707	Container Storage, E&F Halls	Mixed Residue - CLOSED per Closure Plan for Mixed Residue Container Storage Plan	CLOSED in accordance with "RCRA Closure Plan for Mixed Residue Container Storage Units," (11/22/98); Closure Certification signed 5/20/96 (ref. 96-DOE-07053, 5/28/96).	5/20/96	CDD 11/22/98 DOP 12/21/00 last Mod (3) 11/2/04		CC 5/20/98 COR 6/20/05	PDSR 11/2/04 & 12/7/04 COR
235	90.59	707	Container Storage, C-Cell, Module A	Mixed Residue - CLOSED per Closure Plan for Mixed Residue Container Storage Plan	CLOSED in accordance with "RCRA Closure Plan for Mixed Residue Container Storage Units," (11/22/98); Closure Certification signed 5/20/96 (ref. 96-DOE-07053, 5/28/96). Note: There was a new C-cell in Module A that has been closed as part of permitted unit 707.1.	5/20/96	CDD 11/22/98 DOP 12/21/00 last Mod (3) 11/2/04		CC 5/20/98 COR 6/20/05	PDSR 11/2/04 & 12/7/04 COR
236	90.60	707	Container Storage, G & H Halls		CLOSED in accordance with "RCRA Closure Plan for Mixed Residue Container Storage Units," (11/22/98); Closure Certification signed 5/20/96 (ref. 96-DOE-07053, 5/28/96).					
237	90.61	707	Container Storage, F & G Halls		CLOSED in accordance with "RCRA Closure Plan for Mixed Residue Container Storage Units," (11/22/98); Closure Certification signed 5/20/96 (ref. 96-DOE-07053, 5/28/96).					
240	90.74	707	Container Storage, Rm. 141 (J-Vault)	Mixed Residue - CLOSED per a RFCA decision document	Storage shelves cleaned under debris rule and closed by removal. Secondary containment was washed and rinsed, and the top layer of paint/concrete was removed by shaving, meeting the closure standard of removal under the "debris rule", as documented in a contact record dated 11/4/04.	11/14/04	DOP 12/21/00 last Mod (3) 11/2/04		COR 6/20/05	PDSR 11/2/04 & 12/7/04 COR
241	90.75	707	Container Storage, Rm. 136 (H-Vault)	WITHDRAWN - Never used for haz. waste	WITHDRAWN 10/26/94 (ref. 94-DOE-10453).	NA	NA		NA	NA
242	90.76	707	Container Storage, Module H (H-Cage)	WITHDRAWN - Never used for haz. waste	WITHDRAWN 10/26/94 (ref. 94-DOE-10453).	NA	NA		NA	NA
243	90.77	707	Container Storage, G-Corridor Cage	WITHDRAWN - Never used for haz. waste	WITHDRAWN 10/26/94 (ref. 94-DOE-10453).	NA	NA		NA	NA
257	90.98	707	Container Storage, Rm. 142 (J-Closet)	WITHDRAWN - Never used for haz. waste	WITHDRAWN 10/26/94 (ref. 94-DOE-10453); file letters and memos also indicate that this unit was triple rinsed to remove residual contamination (CMM-308-94, 11/8/94, and ltr from M. Keller [ERM] to K. Ticknor [EG&G] 2/10/95).	NA	NA		NA	NA
296	92.001	707	Tank V-100, Module C Pit							
297	92.002	707	Tank V-30, Module C Pit							
298	92.003	707	Tank V-31, Module C Pit							
299	92.004	707	Tank V-1, Module C Pit							
300	92.005	707	Tank V-12, Module C Pit							
301	92.006	707	Tank V-13, Module C Pit							
302	92.007	707	Tank V-14, Module C Pit							
303	92.008	707	Tank V-15, Module C Pit							
304	92.009	707	Tank V-16, Module C Pit							
305	92.010	707	Tank V-17, Module C Pit							
306	92.011	707	Tank V-18, Module C Pit							
307	92.012	707	Tank V-19, Module C Pit							
308	92.013	707	Tank V-2, Module C Pit							
309	92.014	707	Tank V-3, Module C Pit							
310	92.015	707	Tank V-4, Module C Pit							
311	92.016	707	Tank V-5, Module C Pit							
312	92.017	707	Tank V-6, Module C Pit							
313	92.018	707	Tank V-7, Module C Pit							
314	92.019	707	Tank V-8, Module C Pit							
315	92.001 - 92.019	707	C pit waste collection system		CLOSED BY REMOVAL in December 2002 in accordance with B707 DOP	Dec-02	DOP 12/21/00 last Mod (3) 11/2/04		COR 6/20/05	PDSR 11/2/04 & 12/7/04 COR
316	92.020	707	Pu Stabilization Unit, Glove box 25, Module J	WITHDRAWN - Never used for haz. waste	N/A; administratively withdrawn. Withdrawal request approved by CDPHE on 1/10/02 with Building 707 DOP Minor Modification #2.	1/10/02	NA		NA	NA
317	92.021	707	Pu Stabilization Unit, Glove box 60, Module J							

A	B	C	D	E	F	G	H	I	J
Unit No.	Building	Unit Description	Regulatory Status	Closure Status	Closure Date	Closure Document Approval	SET	Closure document submittal	CDPHE approval
527	707.1	707		CLOSED. Rooms 167, 169, 171, 175, 179, and 180. CLOSED in accordance with 707's DOP. Clean Closure Option #1 on 5-9-01. Reference PE certification letter.	5/9/01				
528	707.1	707		P.E. closure certification for clean closure approved by CDPHE 11/12/04 (04-DOE-00843). C-Cell cleaned using debris rule and CLOSED by removal in November 2002.	c-cell 11-02-11/12/04				
529	707.1	707		P.E. closure certification for clean closure approved by CDPHE 11/12/04 (04-DOE-00843).	11/12/04				
530	707.1	707		P.E. closure certification for clean closure approved by CDPHE 10/29/04 (04-DOE-00746).	10/29/04				
531	707.1	707		CLOSED: Room 125, CLOSED in accordance with 707's DOP. Clean Closure Option #1 on 3-16-01. Room 126, CLOSED in accordance with 707's DOP. Clean Closure Option #1 on 5-9-01. Reference PE certification letters.	Rm 125 3/16/01 Rm 126 5/9/01				
532	707.1	707		CLOSED: Room 133, CLOSED in accordance with 707's DOP. Clean Closure Option #1 on 5-9-01. Reference PE certification letter.	5/9/01				
533	707.1	707		P.E. closure certification for clean closure approved by CDPHE 10/29/04 (04-DOE-00746).	10/29/04				
534	707.1	707	PERMITTED - CLOSED per a RFCA decision document	CLOSED: East rack CLOSED BY REMOVAL in January 2003. West two racks CLOSED BY REMOVAL in September 2003.	West racks - Sept 03. East rack - Jan 03.	DOP 12/21/00 last Mod (3) 11/2/04		COR 6/20/05	PDSR 11/2/04 & 12/7/04 COR
535	707.1	707		CLOSED BY REMOVAL in accordance with Building 707 DOP. GBs A-25, A-35, A-45, A-55 CLOSED Sept 02. GB A-30 CLOSED Jun 02.	A-25, 35, 45, 55 - 9/02. A-30 - 6/02				
536	707.1	707		P.E. closure certification for clean closure approved by CDPHE 10/29/04 (04-DOE-00746).	10/29/04				
537	707.1	707		CLOSED: GBs E-30, E-115 CLOSED BY REMOVAL March 2002. GB E-55 CLOSED BY REMOVAL with set E5, September 2003.	GBs E-30, E-115 March 2002, GB E-55 Sept 2003				
538	707.1	707		CLOSED BY REMOVAL with set J2, September 2003.	9/3/03				
539	707.1	707		CLOSED BY REMOVAL with set K3, September 2003.	9/3/03				
540	707.1	707		CLOSED in accordance with 707's DOP. Clean Closure Option #1 on 5-9-01. Reference PE certification letter.	5/9/01				
541	707.1	707							
542	707.1	707		P.E. closure certification for clean closure approved by CDPHE 11/12/04 (04-DOE-00843).	11/12/04				
543	707.1	707							
644	707.3A	707	WITHDRAWN - Never used for haz. waste	Requested WITHDRAWAL from the permit. Permit Modification 01-10. NEVER ACTIVATED/NEVER USED TO TREAT haz. WASTE. All glove boxes have been removed.	NA	NA		NA	NA
645	707.3B	707	PERMITTED - CLOSED per a RFCA decision document	GBs E-20, E-25, E-30, E-95, E-105, E-110, E-115, E-125 closed Mar 02. GB E-60, E-65 and E-70 closed Dec 01. S-7 chainveyor closed June 02. GB E-55 Closed by removal with set E5, September 2003.	E-20, 25, 30, 95, 105, 110, 115, 125 - 3/02. E-60, 65, 70 - 12/01. S-7 - 6/02. E-55 - 9/03	DOP 12/21/00 last Mod (3) 11/2/04		COR 6/20/05	PDSR 11/2/04 & 12/7/04 COR
646	707.3C	707	WITHDRAWN - Never used for haz. waste	Requested WITHDRAWAL from the permit. Permit Modification 01-10. NEVER ACTIVATED/NEVER USED TO TREAT haz. WASTE. All glove boxes have been removed.	NA	NA		NA	NA
892	881.3B	707	PERMITTED - CLOSED per a RFCA decision document	Treatment in Building 707, Unit 707.1, A Module repack tent, under treatment unit 881.3B in the site RCRA permit. 04/17/03 from Carolyn Hicks to James Hindman serves as the required 7 day notification required by the permit. The A Module repack tent where this treatment occurred has been CLOSED by removal.	3/1/04	707		COR 6/20/05	PDSR 11/2/04 & 12/7/04 COR

10/1/05

RFETS MASTER ICRA UNITS

	A	B	C	D	E	F	G	H	I	J
	Unit No.	Building	Unit Description	Regulatory Status	Closure Status	Closure Date	Closure Document Approval	SET	Closure document submittal	CDPHE approval
1 902	S002	707	Organic/Aqueous Solidification	PERMITTED - CLOSED per a RFCA decision document	Unit 707.1 Module A per contact record between Tom Baker and James Hindman dated 12/16/03. The A Module repack tent where this treatment occurred has been CLOSED by removal.	3/1/04	776/777		COR 6/20/05	PDSR 11/2/04 & 12/7/04 COR