

RFETS

QUARTERLY STATUS REPORT

RFCA IMPLEMENTATION

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

SECOND QUARTER FISCAL YEAR 1998

1.0 Introduction

Pursuant to paragraph 263 of the Rocky Flats Cleanup Agreement (RFCA or Agreement), this quarterly status report presents the progress toward implementation of activities covered under the Agreement. The RFCA is a legally binding agreement between the Department of Energy (DOE), the Environmental Protection Agency (EPA), and the Colorado Department of Public Health and Environment (CDPHE) to accomplish required cleanup of radionuclide and hazardous substance contamination at and from the Rocky Flats Environmental Technology Site (RFETS or Site).

This report describes activities that occurred from January, 1998 through March, 1998 (referred to as the second quarter of fiscal year [FY]98) and future planned activities. The sections of this report are organized into the following topics: (1) Introduction; (2) Site-wide Activities; (3) Implementation of the RFCA; (4) Water Management; (5) RFCA Milestones and Target Activities; (6) Site Closure Project; and (7) List of Approved Decision Documents.

2.0 Site-wide Activities

During the second quarter of FY98, several site-wide activities continued. These activities include: (1) the Draft 2006 Plan (formerly the Ten Year Plan); and (2) Actinide Migration Studies.

2.1 The Draft 2006 Plan (formerly the Ten Year Plan)

On June 12, 1997 the DOE simultaneously released both the National and Rocky Flats Discussion Draft, 2006 Plan (called "Accelerating Cleanup: Focus on 2006"). This document presented alternative planning scenarios to achieve accelerated Site closure when compared to the 1996 Baseline Environmental Management Report (BEMR).

In the Discussion Draft 2006 Plan, the DOE Headquarters established a goal of achieving cleanup of Rocky Flats by 2006. The DOE believes a 2006 cleanup can be achieved through re-engineering efforts, benchmarking to best-in-class commercial standards, developing innovative contractor incentive programs and implementing new technologies that result in cost and schedule improvement. At present, however, the Rocky Flats Closure Baseline shows a 2010 completion date at a cost of around \$7.3 billion.

The next draft of the 2006 Plan was released to Congress and the public in February, 1998 – the title of the plan officially changed to *Accelerating Cleanup: Paths to Closure*. This plan provides, for the first

time, a project-by-project projection of the technical scope, cost, and schedule required to complete all 353 projects at DOE's 53 remaining cleanup sites in the United States. These projections are essential for better management - they provide critical information on technical activities, budgets, worker health and safety, and risk to inform regulators, state and local officials, stakeholders, Tribal nations, and others.

Paths to Closure reflects the most recent evolution of DOE's ability to accurately project the cost, schedule, and scope of its massive cleanup effort. This document is part of a continuum from the first life-cycle cost estimates and risk analyses underlying the BEMR, reflecting DOE's strengthened and more organized commitment to listen and respond to stakeholder, regulator, Tribal Nation, and internal DOE concerns. The result is a more realistic projection of where we are headed, how we can accelerate cleanup and closure, and what the technical, policy, and other barriers are to the further acceleration of those goals. *Paths to Closure* will be released this summer as a "final" document, and then will be revised annually to reflect new technical, budgetary, and other opportunities and challenges.

2.2 Actinide Migration Studies

During the second quarter of FY98, the following Actinide Migration Studies activities were accomplished: (1) finalized FY98 work scope for the watershed modeling, mass loading analysis, and the experiments to be conducted by the Colorado School of Mines and Texas A&M; (2) finalized the Data Quality Objectives (DQOs) Document for the Actinide Migration Studies; (3) organized and attended a meeting with Stakeholders on March 4, 1998 to discuss Actinide Migration FY98 Work Scope and the Conceptual Model; (4) submitted response to comments prepared by Dr. Iggy Litaor of Tel-Hai College in Israel in a letter to Leroy Moore, dated February 25, 1998; (5) finalized report, Evaluation of Plutonium and Americium in Groundwater at RFETS; (6) initiated the Watershed Erosion Model on the South Interceptor Ditch; (7) completed draft mass loading analysis for Walnut and Woman Creek drainages; and (8) finalized work scope on the geochemical modeling calculations to be conducted by the United States Geological Survey. A status meeting on Actinide Migration Studies activities is planned for mid-June, 1998.

3.0 Implementation of the RFCA

Activities associated with the implementation of RFCA during the second quarter of FY98 include: (1) Continued negotiation on the National Pollutant Discharge Elimination System permit; (2) the Integrated Monitoring Plan; (3) the Closure Project Baseline; and (4) Potential In-State Disposal of Low Level/Low Level Mixed Waste. These RFCA implementation activities are discussed below.

3.1 National Pollutant Discharge Elimination System (NPDES) Permit

Some issues surrounding the NPDES permit remained unresolved. The conditional certification of the permit issued by the Water Quality Control Division (Division) of CDPHE on November 15, 1997, was set to expire on January 15, 1998. Discussions between the agencies, EPA and CDPHE, and the prospective permittees, the DOE, Kaiser-Hill Company, L.L.C. (Kaiser-Hill), and Rocky Mountain Remediation Services, L.L.C. (RMRS), did not resolve the issue in early January, 1998. In this same time period, the permittees asked the Colorado Water Quality Control Commission (WQCC) to stay the

Division's actions and to set an Adjudicatory Hearing to address the conditions placed on the certification. On January 15, 1998, the Division extended the conditional certification until March 15, 1998, to allow for further discussions. The permittee's request before the WQCC was tabled until the discussions were completed.

The agencies informed the permittees that they would be meeting on March 5, 1998, to discuss the permit issues. On March 15, 1998, the division issued another extension of the conditional certification until June 15, 1998. On March 25, 1998, the agencies met with the permittees and informed them that the agencies had not yet reached agreement on permit issuance. As of the end of the second quarter of FY98, the permit remains unissued.

3.2 Integrated Monitoring Plan (IMP)

A meeting was held on March 5, 1998 as a follow up to the December, 1997 meeting where the FY97 IMP was presented. It was agreed at that time to meet periodically so the full IMP group could stay abreast of what has been happening in the media-specific subgroups. Since December's meeting, each of the media-specific subgroups has met at least once, and some several times, to review their programs and incorporate any changes needed. The Kaiser-Hill Program Manager from each subgroup presented a summary of the progress made to date.

A presentation was also made on data management activities to meet the FY99 RFCA commitment for making data available to the public. Additionally, in response to the Citizen's Advisory Board (CAB) recommendation for seeking "improvements ... in which environmental monitoring information and data is presented to the community," and to make it available in a form that is readily understandable by the public it was suggested to merge the two issues. Rather than generate two separate information mechanisms, it was felt that it would be prudent to try to combine the RFCA milestone with the CAB's recommendation since the data involved is the same. Making data and information presentable to the public has also been a topic that each of the subgroups is working on. Further, it was proposed to create a new subgroup to facilitate the DOE/CAB cooperative effort for data/information availability. The new subgroup would meet in the evenings and at locations around the area so as to include a broader spectrum of public ideas.

A brief discussion ensued regarding when a final IMP document for FY98/FY99 would be produced. Generally, in order for the IMP to be incorporated into the FY99 budget a draft is needed in late May or early June, 1998 time periods. It was agreed by the group to meet again on May 21, 1998 at which time a draft FY98/FY99 IMP will be distributed for review. A final IMP is anticipated around mid-July, 1998.

3.3 Closure Project Baseline (CPB)

The CPB - formerly referred to as the life-cycle baseline (LCB) - was completed by Kaiser-Hill in February, 1998. This document is the most recent refinement of the Site's evolving closure plan. This closure plan has been under development over the past two years, and describes the activities and costs required to cleanup and close the Site. The Site has made significant progress since the original Site cleanup concept was documented in the 1995 BEMR. That report described a \$20-\$40 billion cleanup effort over a 50- to 70-year period of time. Out continued refinement of the Site plan - including both

the Accelerated Site Action Plan (ASAP) and the LCB – has resulted in a fully-integrated, resource-loaded schedule with complete work scope descriptions and basis of estimate.

Preliminary reconciliation between the CPB and *Paths to Closure* has been completed. Significant changes (greater than 10 percent) have been noted at the Project Baseline Summary (PBS) level; additional review and analysis is required before the final CPB will be ready for validation. Subsequent to validation the major changes will be incorporated into the *Paths to Closure* document. The CPB has been placed under formal change control. As we refine the schedule and basis of estimate, examine assumptions, evaluate alternative closure project strategies, changes will be identified to the CPB and baseline change proposals prepared. Refinements currently underway will result in early completion of the FY99 initial budget request from Kaiser-Hill to the DOE Rocky Flats Field Office (RFFO).

3.4 Potential In-State Disposal of Low Level/Low Level Mixed (LL/LLM) Waste

The Site continued the procurement efforts to develop a site within Colorado as an alternative and additional treatment and disposal location for LL and LLM waste generated by the Site. This process has become more complicated and lengthy due to DOE Headquarters concerns and issues.

4.0 WATER MANAGEMENT

Water management activities during the second quarter of FY98 include: (1) watershed improvements; (2) surface water management; (3) surface water monitoring; and (4) ground water monitoring.

4.1 Watershed Improvements

No watershed improvements were scheduled during the second quarter of FY98. Plans are being formulated to implement erosion control measures at select locations during the fourth quarter of FY98.

4.2 Surface Water Management

During the second quarter of FY98, the Site completed the following pond water transfers and discharges. Non-routine transfers are noted below and were performed in support of the Pond B-5 outlet works upgrades project which occurred during the period of October 1, 1997 through March 6, 1998.

Pond A-3 activity included four routine outlet valve direct discharges to Pond A-4 totaling 20.7 million gallons (MG). The first discharge of 3.2 MG occurred during the period of January 14 through 16, 1998. The second discharge of 9.0 MG occurred during the period of February 23 through March 2, 1998. The third discharge of 4.0 MG occurred during the period of March 11 through 13, 1998. The fourth discharge of 4.5 MG occurred during the period of March 27 through 31, 1998.

Pond A-4 activity included one routine outlet valve direct discharge to North Walnut Creek totaling 16.5 MG. This discharge occurred during the period of February 12 through 23, 1998. Water-quality samples were collected and analyzed, and all concurrences obtained prior to the discharge. The City of Broomfield diverted the Pond A-4 discharge around Great Western Reservoir via the Broomfield Diversion Ditch.

Pond B-3 activity included one non-routine pumped transfer to Pond A-3 totaling 9.5 MG. This transfer occurred during the period of January 2 through March 6, 1998.

Pond B-5 activity included one non-routine pumped transfer to Pond A-4 totaling 3.9 MG. This transfer occurred during the period of January 2 through March 6, 1998.

Landfill Pond activity included one routine pumped transfer to Pond A-3 totaling 4.1 MG. This transfer occurred during the period of March 9 through 18, 1998.

There were no Pond A-1, A-2, B-1, B-2, or C-2 activities during the second quarter of FY98.

Transfers and discharges from the Site ponds during the second quarter of FY98 are summarized in Table 1.

Table 1. Site Pond Water Transfers and Discharges - Second Quarter FY98

Dates	Pond Activity	Total MG	Mode
01/14 to 01/16	A-3 to A-4	3.2	Outlet valve direct discharge
02/23 to 03/02	A-3 to A-4	9.0	Outlet valve direct discharge
03/11 to 03/13	A-3 to A-4	4.0	Outlet valve direct discharge
03/27 to 03/31	A-3 to A-4	4.5	Outlet valve direct discharge
02/12 to 02/23	A-4 to NWC	16.5	Outlet valve direct discharge
01/02 to 03/06	B-3 to A-3	9.5	Pumped transfer
01/02 to 03/06	B-5 to A-4	3.9	Pumped transfer
03/09 to 03/18	Landfill to A-3	4.1	Pumped transfer
	Total for Quarter	54.7 MG	

4.2 Surface Water Monitoring

During the second quarter of FY98, 66 automated monitoring system samples were collected and submitted for analysis. For samples collected from RFCA Point of Compliance monitoring locations and Point of Evaluation locations, all 30-day moving average results were well below the RFCA standards and action levels.

The Walnut Creek Source Evaluation continued during the second quarter of FY98. Additional soil samples were collected upgradient of GS03 in February, 1998 to further investigate potential source areas tributary to Walnut Creek. Analytical results for the soil samples should be available in April, 1998. To date, no localized source responsible for the elevated 30-day average activities has been identified.

Four new gaging stations were installed during the second quarter of FY98 in support of ongoing source evaluations for GS03, GS10, and SW093. These new RFCA source location monitoring stations,

described in Table 2 below, have all been incorporated into the existing radio-telemetry system and are programmed to collect continuous, flow-paced, composite samples.

Table 2. New RFCA Source Location Monitoring Stations - Second Quarter FY98

Gaging Station ID	Location Description	Installation Date
GS34	Walnut Creek upstream from the confluence of McKay Ditch with Walnut Creek	02/03/98
GS38	Central Avenue Ditch immediately east of Eighth Street (GS10 drainage)	01/16/98
GS39	Central Avenue Ditch immediately north of the 904 Pad (GS10 drainage)	01/15/98
GS40	Concrete spillway east of Tenth Street and south of Building 997 (GS10 drainage)	03/03/98

Permanent freeze protection consisting of self-regulating AC heat tape, a conductive wrap, and foam insulation within a PVC casing was installed at RFCA Point of Compliance locations GS03 and GS11. No composite grab samples have been missed at either location since installation of the heat tape.

During the second quarter of FY98, significant progress was made revising the surface water section of the IMP. The site reviewed and updated the FY97 IMP to provide a FY98 strawman for the Surface Water Working Group (SWWG). The site reorganized the monitoring requirements and rewrote decision rules for several subsections including Sitewide Monitoring Objectives, Industrial Area Monitoring Objectives for Terminal Detention Pond Discharges and Water Leaving the Site. New Walnut Creek Source Location monitoring requirements and monitoring required for the administrative transfer of operable unit closure monitoring were incorporated in the strawman. The FY98 strawman was delivered to the SWWG to refine the outstanding issues section, made format changes consistent with other media sections, update supporting information, and integrated new monitoring requirements for the sanitary collection system. The SWWG is scheduled to complete the revisions by May 21, 1998.

4.3 Ground Water Monitoring

The 1997 Third Quarter RFCA Ground Water Monitoring Report included analyses on all but a few samples that were not received in time for evaluation. Public presentation of the Third Quarter data was done at the State Information Exchange meeting on February 25, 1998. Groundwater sampling for the first semiannual sampling period was completed on March 30, 1998. Ground water Working Group meetings are ongoing in order to complete the 1998 update to the ground water section of the IMP by May 21, 1998.

5.0 Status of RFCA Milestones and Target Activities (M&TAs)

The FY98 and FY99 M&TAs were established by EPA and CDPHE during the first quarter of FY98. A description and status of the FY98 M&TAs, including the second quarters accomplishments, are listed below. Attachment one is a table summarizing the status of each project.

- 5.1 Either a) construct new facility for storage of TRU/TRM by 9/30/98 or b) by 9/30/98 demonstrate adequate storage available for TRU/TRM
[FY98 Milestone M1]

In February, 1998, a report titled "Transuranic and Transuranic Mixed Waste Inventory Management Strategy" was drafted to evaluate the need for additional storage based on the facts and assumptions at that time. The conclusion of the report indicates that storage capacity will be adequate for FY98, but a capacity deficit could occur by mid-FY99 if generation increases and/or there is a delay in shipments to the Waste Isolation Pilot Plant (WIPP). It is anticipated this report will be forwarded to the agencies to satisfy completion of this milestone.

- 5.2 Complete construction of a new TRU/TRM repackaging facility by 9/30/98
[FY98 Milestone M2]

A design/build contract was awarded in January, 1998, and design of the repack module was 70 percent complete in March, 1998. Construction is scheduled to begin in May, 1998. Additional funding for the project is being requested through the change control board.

- 5.3 Complete removal of 40 gloveboxes from Building 779 by 9/30/98
[FY98 Milestone M3]

The 779 Cluster Decommissioning Operations Plan (DOP) was approved by CDPHE on February 6, 1998. Subsequently, and consistent with the DOP, a Management Review (MR) was conducted to evaluate RFETS's operational readiness and ability to safely remove the contaminated gloveboxes in Building 779. This review concluded that the removal of contaminated gloveboxes, permitted under the current authorization basis, may safely commence upon the satisfactory completion of specific tasks in the corrective action plans developed for each of the MR identified (12) pre-start deficiencies. The specific tasks in the corrective action plans were completed on March 27, 1998. Removal of contaminated gloveboxes, required to support this RFCA milestone, is now scheduled to begin in early April, 1998.

As a result of DOE's action to invoke the RFCA dispute resolution process to address the acceptance by DOE of this milestone, a memorandum to record dated March 19, 1998 was issued by CDPHE. This memorandum of record formally documents the agreement reached by the RFCA Parties.

- 5.4 Either a) ship cumulative amount of 48% of 10/1/96 pondcrete/saltcrete inventory off-site and evacuate all wastes from Tents 2, 8, and 12 by 9/30/98 or b) make the decision to construct additional onsite storage for pondcrete/saltcrete by 12/31/97
[FY98 Milestone M4]

This milestone is on schedule; as of March 5, 1998, 2096.4 m³ of saltcrete/pondcrete have been shipped.

5.5 Ship 375 drums of TRU/TRM to WIPP by 9/30/98, assuming a May 1, 1998 opening [FY98 Milestone M5]

This activity is on schedule. WIPP is currently scheduled to open in May, 1998. The New Mexico Environmental Department (NMED) has informed DOE-Carlsbad Area Office (CAO) that they will not have approved the Part B permit for disposal of regulated waste by May, 1998. Potential approval dates for the permit range from the first to second quarters of FY99. If the Part B permit is not approved by May, 1998, then approximately half of the drum inventory characterized in FY97 is not eligible for disposal at WIPP as non-regulated waste. Approximately 58 percent of the characterization effort for FY98 was completed during the first two quarters of the FY. DOE-CAO conducted a final certification audit February 9 through 13, 1998. DOE-CAO granted authority on March 26, 1998, for RFETS to characterize and certify retrievably-stored waste and load TRUPACT-II vessels for transport to the WIPP site.

Scheduled for the next quarter are continued characterization of additional waste volumes, hosting a DOE-CAO audit of the procedures for processing Salt Residues and repackaging of LECO crucibles, and initiating TRU shipments to WIPP.

5.6 Meet or exceed the previous years off-site shipment of LL waste (FY97 shipped amount = 1287 m³) [FY98 Milestone M6]

This milestone is on schedule; as of March 5, 1998, 646.8 m³ of LL waste have been shipped.

5.7 Complete Trench T-1 accelerated cleanup by 9/30/98 [FY98 Milestone M7]

In preparation for the remediation of Trench T-1, a burial site of depleted uranium, a Proposed Action Memorandum (PAM) was prepared and approved by the EPA in August, 1997. The PAM was revised to document a change from on-site treatment of the depleted uranium and associated materials to off-site treatment. The uranium waste stream will be packaged, stabilized for transport, and shipped off-site for treatment. The uranium may be recycled after treatment. Contaminated soils will be packaged and staged for off-site disposal. The revised PAM was approved by EPA in March, 1998.

During the second quarter of FY98, progress continued on the activity control envelope (ACE) planning process. The T-1 ACE and cross-table review teams evaluated the project hazards and controls associated with the treatment process and the weather shelter. ACE team members included representatives from RMRS, Safe Sites of Colorado, L.L.C. (SSOC), Kaiser-Hill, DOE RFFO, and the treatment subcontractors. The T-1 ACE document and the cross-table review report were completed in March, 1998.

Site preparation activities that continued in the second quarter of FY98 included: (1) installation of the T-1 perimeter fence; and (2) design and installation of the project weather protection shelter. The shelter will provide a controlled environment for excavating and managing the uranium and associated wastes and soils, and provide protection for the workers and the work area from precipitation and high winds.

Planning activities that continued in the second quarter of FY98 included: (1) preparation of the Field Implementation Plan (FIP); (2) preparation of the Health and Safety Plan (HASP); (3) preparation of the Sampling and Analysis Plan (SAP); (4) completion of the ALARA Job Review (AJR); preparation and completion of an Air Pollution Emission Notice (APEN); (5) completion of an Auditable Safety Analysis (ASA); (6) preparation of Integrated Work Control Packages (IWCPs); and (7) numerous Operations Orders. The SAP was submitted to EPA and CDPHE for review. Project control documents are expected to be completed by May, 1998.

Planned activities for the third quarter of FY98 include: (1) completion of all project control documents; (2) completion of the installation of the weather protection shelter; (3) completion of project readiness assessments; (4) completion of specialized training for project workers; (5) project start-up drills; and (6) initiation of excavation, stabilization and shipping of the depleted uranium and associated waste streams.

The scheduled date for completion of the milestone for accelerated cleanup of Trench T-1 is September 30, 1998. Cleanup includes removal of waste and buried debris from Trench T-1, off-site shipment of depleted uranium, and packaging and appropriately storing other generated wastes.

5.8 Complete work described in PAM for Building 123 and 123S by 9/1/98
[FY98 Milestone M8]

The Building 123 Decommissioning Project is on schedule for completion by April 21, 1998. Accomplishments for the second quarter of FY98 include: (1) the completion of the Building Demolition Plan; (2) submission of the Building Demolition Plan to the State in mid-February, 1998; (3) completion of the asbestos abatement program on March 31, 1998; and (4) the capping and foaming of all exposed conduit. The closing and foaming of concealed pipes and conduits has been delayed and will be accomplished as the demolition work progresses. The demolition contractor is scheduled to mobilize around the first of April, 1998. Demolition is planned for April 21, 1998. The associated under-building contamination and Individual Hazardous Substance Sites (IHSS) 148 and 121 will either be sufficiently evaluated for the Environmental Restoration (ER) Ranking or a justification for a No Further Action Determination will be prepared by September 1, 1998.

5.9 Develop, finalize, and begin implementation of a site-wide natural resource management plan by 9/30/98 [FY98 Milestone M9]

The RFFO initiated the planning process for developing a draft Natural Resource Plan. During the third quarter of FY98, RFFO will continue development of the draft Natural Resource Plan, expand stewardship issues and process participation with stakeholders/regulators.

5.10 Install and operate SPS in B707 by 9/30/98
[FY98 Target Activity T3]

The SPS System is currently scheduled for operation by March, 1999. Negotiations with British Nuclear Fuels (BNFL) are continuing and currently established a delivery date for the system around April 30, 1998. Work is continuing in preparing Building 707 for the installation of the system. BNFL is planning to complete the SPS system and continue system checkout.

DOE withdrew its initiation of the RFCA dispute resolution process for this target activity; however, the State and EPA have been put on notice that the Site will not meet this target date. When an alternative plan is developed it will be submitted to the regulators as the basis for an amendment to this target activity.

- 5.11 Thermally stabilize 90% of the plutonium oxide generated during the year by 9/30/98
[FY98 Target Activity T5]

Stabilization of 90 percent of the plutonium oxide generated during the year is on schedule.

- 5.12 Ship 35 SNM shipments off-site by 9/30/98
[FY Target Activity T7]

The shipment of Special Nuclear Material (SNM) is currently on schedule for completion of 35 shipments by September 30, 1998. Issues that could affect our ability to achieve this include: (1) funding for receiver sites to receive RFETS shipments; and (2) priority at receiver sites versus other programs. Efforts are continuing with DOE Headquarters to identify funding sources for these activities.

- 5.13 Close three plutonium ES&H vulnerabilities by 9/30/98
[FY98 Target Activity T9]

The closure of three plutonium vulnerabilities is on schedule. Work will continue with special emphasis on the pit shipments during the year. Receiver site availability may adversely affect meeting this target activity.

6.0 Site Closure Project

The site is continuing efforts to close Operable Units (OUs) that are not currently associated with a milestone. These projects, including the second quarter's accomplishments, are listed below.

6.1 Environmental Restoration

The OU consolidation under RFCA established the Buffer Zone and Industrial Area OUs, and left OUs 1, 3, and 7 intact. Operable Units 5 and 6 remain in place with some minor modifications. The following actions were completed for each OU during the second quarter of FY98.

6.1.1 OU 1

Pursuant to the OU1 Corrective Action Decision/Record of Decision (CAD/ROD), a remedial action for IHSS 119.1 was initiated in April, 1997 using closure funds. As required by the CAD/ROD, an investigation was completed for potential downgradient sources. Another investigation was completed to acquire information for determining worker health and safety requirements. Based on the results, it was concluded by the lead regulatory agency and DOE to proceed with an amendment to the CAD/ROD calling for long term monitoring with No Further Remedial Action. Alternatives to support this action are being evaluated, and the Amendment is expected to be drafted in FY98.

6.1.2 OU 5

In light of the fact that four areas within OU5 contain radionuclides in subsurface soils in excess of the RFCA Soil Action Level, DOE submitted a written proposal to the regulators to consolidate the OU5 IHSSs into the Buffer Zone OU and address them according to the ER Ranking. In addition, DOE requested written approval from the EPA on the Resource Conservation and Recovery Act (RCRA) Facility Investigation/Remedial Investigation (RFI/RI) Report. A response from EPA has not been received.

6.1.3 OU 6

DOE staff has reviewed background information for OU6 in preparation for finalizing the RFI/RI Report and preparing the Proposed Plan. DOE expects to ask for final RFI/RI Report approval and to draft the OU6 proposed plan during FY98.

6.1.4 OU 7

The passive seep collection system continues to operate with no changes since last quarter. A sampling program was conducted in the fourth quarter of FY97 and first quarter of FY98 to demonstrate a monitoring history. The data collected was evaluated in the second quarter FY98 and a recommendation for future operating conditions will be made in the third quarter FY98.

The OU7 landfill will be addressed when it moves up in priority on the ER Ranking list.

6.1.5 Buffer Zone OU

6.1.5.1. Trench T-1 (IHSS 108, BZ OU)

The completion of the Trench T-1 accelerated cleanup is RFCA milestone M7. For a status on the milestone, see section 5.7.

6.1.5.2 903 Pad and Lip Area (IHSSs 112/155, BZ OU)

A SAP for characterization of the 903 Pad, Lip Area and Americium Zone was submitted to EPA and CDPHE during the first quarter of FY98. The purpose of this characterization program is to further refine the volume estimates of radiologically-contaminated surface and subsurface soils and volatile organic compound (VOC) contaminated soils for selection of appropriate remedial designs. Approval of the subsurface VOC and radiological investigation was received in January, 1998 and subsurface sampling began in early February, 1998. This program will continue into the third quarter of FY98. The radiologically contaminated surface soil program is expected to be approved by the regulatory agencies and begin in the third quarter of FY98.

6.1.5.3 Mound Plume

The site continues to work on a collection/treatment system for the Mound Site Plume. Funding

continues in FY98 from DOE Headquarters (EM-50 Office of Technology and Development). It is anticipated that installation of the system will begin in the third quarter of FY98 ahead of the proposed RFCA milestone schedule of FY99. During the second quarter of FY98, the subcontractor to install the system was procured.

6.1.5.4 East Trenches and 903 Pad/Ryan's Pit Plumes

A subcontractor was procured to characterize, select a remedial action, and develop a conceptual design for these VOC-contaminated plumes in December, 1997. A SAP was developed and submitted to the regulatory agencies in February, 1998 and characterization began in the middle of March, 1998. During the third quarter, characterization of the plumes will continue and will be followed by evaluation of the data and preliminary development of the conceptual design.

6.1.5.5 Solar Ponds Plume

During the first and second quarters of FY98, efforts were focused on further evaluation of the nature and extent of the plume and of the phytoremediation alternative. Sampling of existing vegetation in the Solar Ponds Plume was conducted in the fall of 1997 to evaluate the uptake of uranium in native plants. Sampling of the groundwater in the vicinity of the plume was conducted in December and January to evaluate the nature and extent of the plume. In addition, sampling of soils to determine agronomic conditions for phytoremediation was conducted in January, 1998. A preliminary conceptual model was also developed for the plume area during the second quarter of FY98. Preliminary evaluations of phytoremediation and treatment at the wastewater facility were initiated.

During the third quarter of FY98 limited sampling of the contaminated groundwater will continue to evaluate temporal differences and an evaluation of all of the data collected will be conducted. Further evaluation of phytoremediation and treatment at the wastewater treatment facility will continue and modeling efforts will begin to determine the long term impacts of the plume and the best remediation strategy.

6.1.6 Industrial Area OU (IA OU)

The annual IA Interim Measures/Interim Remedial Action (IM/IRA) report was submitted to the agencies on March 31, 1998.

Based on the data collected from the sampling activities conducted in the fall of 1997, it appears that IHSS 118.1 is not impacting surface water and that there are physical and chemical constraints that are limiting contaminant migration. Therefore, a technical memorandum has been developed that recommends a monitored natural attenuation approach for IHSS 118.1. This will include installation of new wells and monitoring of new and existing wells to evaluate whether natural attenuation and containment of the source of contamination continue to limit contaminant migration. The technical memorandum will be submitted to the regulatory agencies in third quarter of FY98.

6.2. Decontamination & Decommissioning Cluster Closure Projects

6.2.1 Decommissioning Program Plan

Meetings held with CDPHE and EPA, resulted in progress being made in reaching agreements on document intent and content. Subsequently, a decision was made to reconvene the Facility Disposition Working Group (FDWG) to rewrite the Decommissioning Program Plan (DPP) incorporating agreements reached. The FDWG draft DPP was completed in February, 1998 and is currently being reviewed by CDPHE and EPA for release for public comment. While all parties recognize the desirability of the DPP, no final date for completion has yet been established.

6.2.2 Building Radiation Closure Standards

The Working Group (DOE, CDPHE, EPA, and Kaiser-Hill Team), formed to recommend building radiation closure standards, was placed on hold pending evaluation of Nuclear Regulatory Commission (NRC) decommissioning regulations. The NRC issued separate decommissioning regulations in August that could impact RFETS. Implementation guidance tentatively planned to be available in February, is still in process. A separate evaluation group may be established to evaluate the guidance for application as RFETS closure standards. Depending upon this outcome, this evaluation group may terminate or be re-chartered.

6.2.3 Decommissioning Operations Plan for the Building 779 Cluster Closure Project

The DOP for the 779 Cluster Project was approved by CDPHE on February 6, 1998. Approval was granted to initiate and pursue decommissioning activities within the 779 cluster in accordance with plans and commitments as described within the DOP.

6.2.5 Building 886 Cluster Closure Project

FY98 decommissioning funding has been approved to initiate decommissioning planning which includes the preparation of RFCA required decision documentation. Specific documentation to be completed with the authorized funding includes the Reconnaissance Level Characterization Report (RLCR) and an IM/IRA.

The RLCR was submitted to DOE for review and approval and transmitted by DOE to CDPHE and EPA on March 2, 1998.

A draft IM/IRA for the B886 Cluster Closure, submitted to DOE on January 5, 1998, was reviewed by DOE, CDPHE and EPA. Comments received on that draft were dispositioned and incorporated in a substantially completed draft issued for regulator comments on March 20, 1998. Comments on the March 20, 1998 draft, were dispositioned at a consultative meeting with DOE and the regulators on March 31, 1998. The consultative process will continue to be used during the third quarter of FY98 to prepare this document for submittal for public review and comment.

6.2.6 Building 771 Cluster Closure Project

The 771 Closure Project scope includes the deactivation, decontamination, decommissioning, and demolition of Building 771/774, ancillary support structures, trailers, plant systems and utilities, underground tank systems, and waste sites associated with the 771 complex.

An integrated approach towards closure is being implemented that is expected to accelerate closure of this complex significantly. The B771 closure project is being developed to integrate the final mission or risk-reduction work, SNM holdup removal, deactivation, and decommissioning.

Risk-reduction efforts are currently in process -- all liquid tanks have been drained and all residue drums have been removed from the B771 Annex; tapping and draining of process piping is in progress; SNM hold-up removal will begin next quarter, as will removal of an unused glovebox line and tank farm; and all packaged residues will be shipped from the building by September 30, 1998. A RLCR was submitted to DOE in December, 1997 and a DOP for the B771 closure project was delivered to DOE in February, 1998. These documents are being reviewed for subsequent submission to the regulatory agencies. Briefings for stakeholders have been conducted to introduce them to the B771 Closure project. Follow-on briefs and tours of the building are scheduled for the third quarter of FY98.

6.2.7 Building 776/777 Cluster Closure Project

The Building 776/777 Cluster Closure Project supports the DOE Strategic Plan by providing dismantlement by FY2006 and closure by FY2007. Planning for this project has been included in the LCB, which governs the interface of multiple projects and programs. The ultimate goal is to completely close down the Building 776/777 cluster by completing the programmatic work; remove the SNM, LL/LLM/Transuranic/Transuranic Mixed wastes and residues; deactivate, decontaminate, decommission and demolish the buildings; and remediate the high risk IHSSs. The most efficient way to execute this strategy is to plan the effort as a "closure project." This means there will be overlaps between major activities in order to maintain a seamless transition towards closure.

Current functions include support for SNM activities, e.g., storage, transfer and consolidation, residue sampling and repacks. Another function is to consolidate, reduce, sample, characterize, assay, and store waste and residue.

Near term milestones supported by this plan include:

- Develop a final draft Basis of Interim Operations (BIO) by March 31, 1998;
- Develop a RLCR by August 30, 1998;
- Develop a final draft DOP by September 30, 1998;
- Perform scans on known areas that contain SNM holdup by September 30, 1998; and
- Remove SNM holdup from two areas containing holdup by September 30, 1998.

Since FY97, three RCRA storage units have been emptied; five mixed residue pencil tanks closed; 2000 chemicals excessed; two RCRA tanks emptied; all tanks sampled and purged, as necessary, of hydrogen; and SNM removed from one vault.

7.0 List of Approved Decision Documents

During the second quarter of FY98, the following decision documents were approved:

1. The Decommissioning Operations Plan for the 779 Cluster Interim Measure/Interim Remedial Action was approved by the CDPHE on February 6, 1998.
2. The Proposed Action Memorandum for the Source Removal at Trench 1, IHSS 108 was revised in February, 1998 and was approved by EPA in March, 1998.

Pursuant to RFCA paragraph 122, DOE has updated the list of all approved documents, other approvals, and final resolutions of dispute contained in Attachment 12. The updated list is attached to this report (Attachment 2). DOE will place a copy of the updated list in each of the Repositories.

Status of RFCA Milestones, Target Activities and Site Closure Projects

Driver	Commitment	Official Due Date	At Risk? (Y/N)	Status/ Comments	Actual Compl.
R/MILE STONE	FY98-M1 Either A) construct new facility for storage of TRU/TRM by 9/30/98; or B) by 9/30/98 demonstrate adequate storage available for TRU/TRM.	9/30/98	N	Description of demonstration has been provided to regulators.	
R/MILE STONE	FY98-M2 Complete construction of a new TRU/TRM repackaging facility by 9/30/98.	9/30/98	N	A design/build contract was awarded in 1/98. Design of the repack module was 70% complete in 3/98. Construction scheduled to begin in 5/98.	
R/MILE STONE	FY98-M3 Complete removal of 40 gloveboxes from Building 770 by 9/30/98.	9/30/98	Y	Management Review complete; removal scheduled to begin 4/98.	
R/MILE STONE	FY98-M4 Either A) ship cumulative 48% of 10/1/96 pondcrete/saltcrete inventory offsite & evacuate all wastes from Tents 2, 8, 12 by 9/30/98 and OR B) make the decision to construct additional onsite storage for pondcrete/saltcrete by 9/30/98.	9/30/98	N	On schedule; as of 3/5/98 2096.4 cubic meters of saltcrete/pondcrete have been shipped.	
R/MILE STONE	FY98-M5 (98-4) Ship 375 drums of TRU/TRM to WIPP by 9/30/98 assuming a May 1, 1998 opening.	9/30/98	N	Pending EPA audit; DOE-CAO granted authority on 3/26/98, for RFETS to characterize and certify retrievably-stored waste and load TRUPACT - II vessels for transport to the WIPP site.	
R/MILE STONE	FY98-M6 Meet or exceed the previous year's offsite shipment of LLW.	9/30/98	N	On Schedule; as of 3/5/98 646.8 cubic meters of LLW has been shipped.	
R/MILE STONE	FY98-M7 Complete Trench T-1 accelerated cleanup by 9/30/98.	9/30/98	N	On Schedule; PAM revised 3/98.	
R/MILE STONE	FY98-M8 Complete work described in PAM for Building 123 and 123S by 9/1/98.	9/1/98	N	On Schedule	
R/MILE STONE	FY98-M9 Develop, finalize, and begin implementation a sitewide natural resources management plan by 9/30/98.	9/30/98	N	On Schedule. Natural resources mgt. plan & the buffer zone mgt. plan have been combined.	
R/TARGET	FY98-T3 Install and operate SPS in B707.	9/30/98	Y	SPS system currently scheduled for operation by 3/99.	
R/TARGET	FY98-T5 Thermally stabilize 90% of the plutonium oxide generated during the year.	9/30/98	N	On schedule	
R/TARGET	FY98-T7 Ship 35 SNM shipments offsite by 9/30/98. (External uncertainties recognized)	9/30/98	N	On schedule	
R/TARGET	FY98-T9 Close three plutonium ES&H vulnerabilities by 9/30/98.	9/30/98	N	On schedule	
CLOSURE PROJECT	OU1			Preparing Amendment to CAD/ROD specifying long-term monitoring w/NFRA.	
CLOSURE PROJECT	OU5			Awaiting final RFI/RI report approval.	
CLOSURE PROJECT	903 Pad and Lip Area.			Approval of subsurface VOC and radiological investigation received in 1/98; subsurface sampling initiated in 2/98.	
CLOSURE PROJECT	Mound Plume			Installation of Collection/treatment system scheduled for 3rd qtr. FY98.	
CLOSURE PROJECT	East Trenches and 903 Pad/Ryan's Pit Plumes			SAP was developed and submitted to the regulatory agencies in 2/98 and characterization began in mid-March.	
CLOSURE PROJECT	Solar Ponds Plume			Soil sampling complete; a preliminary conceptual model was developed for the plume area during the 2nd qtr FY98. Limited sampling of gw scheduled for the 3rd qtr.	
CLOSURE PROJECT	IHSS 118.1			Data Summary Report Complete; a draft technical memorandum draft was initiated in the 2nd qtr. of FY98.	
CLOSURE PROJECT	Building 779 Cluster Closure Project			DOP approved 2/6/98.	
CLOSURE PROJECT	Building 886 Cluster Closure Project				
CLOSURE PROJECT	Building 771 Cluster Closure Project			A draft IM/IRA was submitted to the regulatory agencies during the 2nd qtr. of FY98.	
CLOSURE PROJECT				A draft DOP was submitted to DOE during the 2nd qtr. FY98.	

ATTACHMENT 2
Update to the Rocky Flats Cleanup Agreement Attachment 12
Second Quarter, FY 1998

DOPs

_. Department of Energy, Decommissioning Operations Plan for the 779 Cluster Interim Measure/Interim Remedial Action, Rocky Flats Environmental Technology Site, Golden, Colorado, February, 1998, Approved February 6, 1998.

PAMs

_. Department of Energy, Final Proposed Action Memorandum for the Source Removal at Trench 1, IHSS 108, Revision 5, Rocky Flats Environmental Technology Site, Golden, Colorado, February 18, 1998, Approved March, 1998.