

# QUARTERLY STATUS REPORT

## RFCA IMPLEMENTATION

### ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

#### SECOND QUARTER FISCAL YEAR 1999

#### 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 1999 through March 1999 (referred to as the second quarter of fiscal year [FY] 99) 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 FY99, several site-wide activities continued. These activities include (1) Accelerating Cleanup: Path to Closure, and (2) Actinide Migration Evaluation.

#### 2.1 Accelerating Cleanup: Path to Closure

This document provides, for the first time, a project-by-project forecast of the technical scope, cost, and schedule required to complete all 353 projects at DOE's 53 remaining cleanup sites in the United States. The *Path to Closure* document is part of a continuum from the first life-cycle cost estimates and risk analyses underlying the Baseline Environmental Management Report (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 DOE is headed, how DOE can accelerate cleanup and closure, and what the barriers are to further acceleration of those goals. At present, the Rocky Flats document shows a 2010 completion date at a cost of approximately \$7.3 billion.

A limited update of FY98 through FY00 costs, milestones and metrics was completed in the first quarter of FY99. A full update to the document is scheduled for completion in the third quarter of FY99. Currently, the Site initiated baselining costs and schedule for 2006; these will be discussed in the next quarterly report.

## **2.2 Actinide Migration Evaluation**

During the second quarter of FY99, the following activities were conducted: (1) initiated building of the watershed erosion (WEPP) modeling input files for Woman and Walnut Creek watersheds and the sediment transport modeling; (2) continued data gathering for the air modeling; (3) continued redox and colloid experiments; (4) collected soil samples for the Colorado School of Mines soil incubation experiments; and (5) held Actinide Migration Evaluation meeting with regulators and stakeholders on January 21-22, 1999. Discussion topics included: the form of plutonium in the environment, using natural analog sites to evaluate plutonium in the environment; and uranium inductively-coupled plasma/mass spectrometry (ICP/MS) analyses for the Solar Ponds Plume. The meeting summary from this meeting, dated March 1, 1999, has been distributed to regulators and stakeholders. The next Actinide Migration Evaluation Meeting will be on April 29, 1999, and will include a discussion with regulators and stakeholders on topics not yet finalized.

## **3.0 Implementation of the RFCA**

Activities associated with the implementation of RFCA during the second quarter of FY99 include: (1) continued negotiations on the National Pollutant Discharge Elimination System permit; (2) the Integrated Monitoring Plan (IMP); and (3) the Closure Project Baseline. These RFCA implementation activities are discussed below.

### **3.1 National Pollutant Discharge Elimination System (NPDES) Permit**

As of the end of the second quarter of FY99, the NPDES renewal permit remains unissued. The permit is on hold pending resolution of issues involving the State of Colorado's draft 401 certification, and a Colorado Water Quality Control Commission hearing scheduled for May 11, 1999.

### **3.2 Integrated Monitoring Plan (IMP)**

The IMP Working Group met on March 15, 1999, to status progress to date of the monitoring program at RFETS. The group had not met since mid-1998. The meeting provided an update to the group on the recent accomplishments and facilitated a discussion about the working groups' goals for the remainder of the year. One subgroup will meet to discuss data presentation to the communities. A second subgroup will meet to discuss how the IMP Working Group can better support the D&D and ER projects with advanced planning on the required monitoring. Both meetings have been set for early April 1999.

Additionally, both the Surface Water Group and the Groundwater Group felt that they needed to re-look at their sections of the monitoring plan and possibly make some minor changes in their previous documents. The Groundwater Group initiated these discussions in a meeting on March 25, 1999. The changes are expected to be minimal and non-substantive.

### **3.3 Closure Project Baseline (CPB)**

An external validation of the 2010 Closure Project Baseline began in the first quarter of FY99 with expected completion in the third quarter of FY99. Subsequent to the external validation, the major changes will be incorporated into the 2006 Plan and future updates to the *Paths to Closure* document.

## **4.0 WATER MANAGEMENT**

Water management activities during the fourth quarter of FY98 include: (1) watershed improvements; (2) surface water management; (3) surface water monitoring; (4) ground water monitoring; and (5) the Rocky Flats Water Working Group.

### **4.1 Watershed Improvements**

No watershed improvements were implemented during the first or second quarters of FY99. No watershed improvement discussions were initiated with the regulators during the first or second quarters of FY99.

### **4.2 Surface Water Management**

#### **4.2.1 First Quarter of FY99**

During the first quarter of FY99, the Site completed the following pond water transfers and discharges totaling 38.69 Million Gallons (MG), a decrease of 70% compared to the first quarter of FY98 (126.83 MG). This decrease is attributable to abnormally dry weather patterns and no ongoing pond-related construction projects that required water management.

Pond A-3 activity included one routine outlet-valve direct discharge to pond A-4 totaling 3.19 MG. This discharge occurred during the period of November 30 through December 4, 1998.

Pond A-4 activity included one routine outlet-valve direct discharge to North Walnut Creek totaling 15.43 MG. This discharge occurred during the period of November 19 through 30, 1998. Water quality samples were collected and analyzed, and all approvals were obtained prior to the discharge. The City of Broomfield diverted the A-4 discharge around Great Western Reservoir via the Broomfield Diversion Ditch.

Pond B-5 activity included two routine pumped transfers to Pond A-4 totaling 20.17 MG. The first transfer of 9.99 MG occurred during the period of October 26 through November 2, 1998. The second transfer of 10.08 MG occurred during the period of December 1 through 8, 1998.

There were no Pond A-1, A-2, B-1, B-2, C-2, or Landfill activities during the first quarter of FY99.

Transfers and discharges from the Site ponds during the first quarter of FY99 are summarized in Table 1.

**Table 1. Site Pond-Water Transfers and Discharges - First Quarter FY99**

<b>Dates</b>	<b>Pond Activity</b>	<b>Total MG</b>	<b>Mode</b>
11/30 to 12/04	A-3 to A-4	3.19	Outlet-valve direct discharge
11/19 to 11/30	A-4 to NWC	15.43	Outlet-valve direct discharge
10/26 to 11/02	B-5 to A-4	9.99	Pumped transfer
12/01 to 12/08	B-5 to A-4	10.08	Pumped transfer
	<b>Total for Quarter</b>	<b>38.69 MG</b>	

#### 4.2.2 Second Quarter of FY99

During the second quarter of FY99, the Site completed the following pond water transfers and discharges totaling 44.41 MG, a decrease of 35% compared to the second quarter of FY98 (68.01 MG). This decrease is attributable to abnormally dry weather patterns and no ongoing pond-related construction projects that required non-routine water management.

There was no Pond A-1, A-2, B-1, B-2, C-2, or Landfill Pond water management activities during the second quarter of FY99.

Pond A-3 activity included one routine outlet valve direct discharge to Pond A-4 totaling 2.09 MG. This discharge occurred during the period of January 27 through 29, 1999.

Pond A-4 activity included two routine outlet valve direct discharges to North Walnut Creek totaling 21.88 MG. The first discharge of 11.39 MG occurred during the period of January 7 through 15, 1999. The second discharge of 10.49 MG occurred during the period of February 18 through 26, 1999. Water quality samples were collected and analyzed, and all approvals were obtained prior to the Pond A-4 discharges. The City of Broomfield diverted the Pond A-4 discharges around Great Western Reservoir via the Broomfield Diversion Ditch.

Pond B-5 activity included one routine pumped-transfer to Pond A-4 and one routine outlet valve direct discharge to South Walnut Creek totaling approximately 20.44 MG. The transfer of 10.34 MG occurred during the period of January 18 through 25, 1999. The direct discharge began March 22, 1999, and will continue through April 5, 1999. Volume attributed to the second quarter (March 22 through 31, 1999) is estimated to be 10.10 MG. Water quality samples were collected and analyzed, and all approvals were obtained prior to the Pond B-5 discharge. The City of Broomfield diverted the Pond B-5 discharge around Great Western Reservoir via the Broomfield Diversion Ditch.

Transfers and discharges from the Site ponds during the second quarter of FY99 are summarized in Table 2.

**Table 2. Site Pond Water Transfers and Discharges - Second Quarter FY99**

<b>Dates</b>	<b>Pond Activity</b>	<b>Total MG</b>	<b>Mode</b>
1/27 to 1/29	A-3 to A-4	2.09	Outlet valve direct discharge
1/07 to 1/15	A-4 to NWC	11.39	Outlet valve direct discharge
2/18 to 2/26	A-4 to NWC	10.49	Outlet valve direct discharge
1/18 to 1/25	B-5 to A-4	10.34	Pumped transfer
3/22 to 3/31 (will continue until 4/5)	B-5 to SWC	10.10 (preliminary estimate)	Outlet valve direct discharge
	<b>Total for Quarter</b>	<b>44.41 MG</b>	

### **4.3 Surface Water Monitoring**

#### **4.3.1 First Quarter of FY99**

During the first quarter of FY99, 45 automated monitoring system samples were collected and submitted for analysis. All 30-day moving average results for samples collected from RFCA Point of Compliance (POC) and Point of Evaluation (POE) monitoring locations were well below the RFCA action levels and standards.

The Walnut Creek Source Evaluation continued during the first quarter of FY99. Analytical results pertaining to the investigation for GS03, GS10, and SW093 continue to be received and evaluated.

Additionally, a Source Evaluation for RFCA POE SW027 has been initiated in response to the reportable values in FY98. The Source Evaluation Report for SW027 was delivered to the Stakeholders on October 29, 1998.

Freeze protection upgrades including line power improvements have been completed at RFCA POC GS11 monitoring station located at the outlet of Pond A-4.

#### **4.3.2 Second Quarter of FY99**

During the second quarter of FY99, 45 automated monitoring system samples were collected and submitted for analysis. All 30-day moving-average results for samples collected from RFCA POC and POE monitoring locations were well below the RFCA action levels and standards.

The Walnut Creek Source Evaluation and the Source Evaluation for RFCA POE SW027 continued during the second quarter of FY99. Analytical results pertaining to the investigations of GS03, GS10, SW027, and SW093 continue to be received and evaluated.

Freeze protection upgrades have been completed at RFCA POCs GS01, GS03, GS08, and GS11 monitoring stations. The final monitoring station scheduled for freeze protection upgrades is POC GS31, located at the outlet to Pond C-2. Line power upgrades have been completed at GS31, and final equipment installation will be completed prior to the next Pond C-2 discharge.

#### **4.4 Ground Water Monitoring**

The final 1997 Annual Rocky Flats Cleanup Agreement Groundwater Monitoring Report was provided to the regulators in November 1998.

The second (calendar) quarter 1998 groundwater monitoring report was presented to the stakeholders at the Quarterly Information Exchange Meeting on November 17, 1998.

The Groundwater Working Group met on March 25, 1999, to discuss the results of a radionuclide data usability evaluation for groundwater data conducted by CDPHE. The Site is reviewing the findings to assess the quality and use of the data.

The third (calendar) quarter 1998 RFCA groundwater monitoring report was presented to stakeholders at the Quarterly Information Exchange meeting on February 23, 1999.

#### **4.5 Rocky Flats Water Working Group**

During the first two quarters of FY99, the Rocky Flats Water Working Group met on a monthly basis with the technical sub-groups meeting more frequently. Two technical sub-groups, Technical Team #1 evaluating direct discharge from Pond B-5 and Technical Team #2 on the Solar Ponds Plume remediation/Interceptor Trench System, continued their work. Technical Team #1 conducted a drain vulnerability analysis and worked on finalizing a report with their recommendations. The Site received concurrence (with one abstention and one opposition) in March, 1999 for direct discharge of Pond B-5. The Technical Team #1 report will be finalized in April 1999, and then the team will be dissolved. Technical Team #2 worked on evaluating the Solar Ponds Plume remediation and ITS abandonment, conducting a nitrate and uranium-loading analysis into Walnut Creek, reviewed a flow diagram methodology, and reviewed the ITS water management scheme. In addition, during the second quarter of FY99, a Technical Team #3 was initiated to evaluate Site closure water issues. Technical Team #3 has prepared a scope statement, a draft cause-effect diagram for Site closure. The Rocky Flats Water Working Group meets on the first Tuesday of every month; the next meeting is May 4, 1999.

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

A description and status of the FY99 M&TAs, including the first and second quarter

accomplishments, are listed below. Attachment 1 is a table summarizing the status of each project.

- 5.1 Either a) ship cumulative amount of 78% of 10/01/96 pond/salt inventory offsite and evacuate all waste from Tent 9 by 9/30/99, or b) the additional onsite storage for pond/salt is operational by 9/30/99**  
[FY99 Milestone M1]

Shipments totaling 78% of the October 1, 1996, pond/salt inventory were completed during the first quarter of FY99. Efforts to evacuate all waste from Tent 9 are ahead of schedule and should be completed during the third quarter of FY99.

- 5.2 Ship 670 m<sup>3</sup> TRU/TRM to WIPP by 9/30/99, assuming a January 1999 opening**  
[FY99 Milestone M2]

By letter dated March 10, 1999, EPA and CDPHE removed this milestone since the assumption within this milestone had not been met. Subsequently, the WIPP initiated operations on March 26, 1999, through receipt of its first shipment of TRU waste from the Los Alamos National Laboratory. The Rocky Flats shipping schedule has not been determined, but it is currently estimated that the first shipment will be during this fiscal year.

- 5.3 Ship 1,750 cubic meters of low level waste by 9/30/99**  
[FY99 Milestone M3]

This milestone was completed in mid-March 1999.

- 5.4 Complete installation and operate remedial action described in decision document for Solar Ponds Plume (N. Walnut Creek) by 9/30/99**  
[FY99 Milestone M4]

This milestone is on schedule. A draft Decision Document was prepared and submitted to the regulators for review and comment during the second quarter of FY99. Comments will be incorporated and the Decision Document will be made available for public comment during the third quarter of FY99. The remediation system will be designed, and construction plans and specifications will be prepared during the third quarter of FY99.

- 5.5 Complete installation and operate remedial action described in decision document for East Trenches/903 Pad/Ryan's Pit Mound plume (S. Walnut Creek) by 9/30/99**  
[FY99 Milestone M5]

This milestone is on schedule. The Decision Document (Proposed Action Memorandum) for the East Trenches Plume was finalized and design of the remediation system was completed during the second quarter of FY99. Construction plans and specifications, the Field Implementation Plan, and the Health and Safety Plan were prepared during the second quarter of FY99. Construction of the remediation system was initiated during the second quarter of FY99 and should be completed during the third quarter of FY99.

**5.6 Develop a comprehensive characterization/remediation strategy for the Industrial Area soils and ground water by 9/30/99**

[FY99 Milestone M7]

This milestone is on schedule. The historical data search continued during the second quarter of FY99. Development of the strategy continued with identification of the data sets and grouping of the sites for characterization and remediation. The strategic approach was presented at a public meeting during the second quarter of FY99. Work will continue in the third quarter of FY99.

**5.7 Complete off-site shipment by 9/30/99 for treatment and/or disposal of all T-1 waste streams not returned to T-1, and for which treatment or disposal locations are available and controlling documents are in place by 4/30/99**

[FY99 Milestone M8]

This milestone is on schedule. A Waste Characterization and Disposition Pathways Report was completed during the second quarter of FY99. The Report characterized the waste streams and evaluated potential treatment and disposal alternatives. Waste streams identified include radioactive metals such as depleted uranium, natural and depleted uranium sample, and thorium; cemented cyanide; soil; and miscellaneous wastes such as decanted lathe coolant, excavated debris, and project-generated debris. The proposed waste stream dispositions are:

1. Radioactive metals -

Depleted uranium - offsite storage and treatment

Depleted uranium (DU) ingots - Land disposal at Nevada Test Site (NTS)

Thorium waste - offsite storage and treatment

Historic samples (natural uranium) - offsite storage and treatment

2. Cemented cyanide

Cemented cyanide - offsite storage and treatment

Cemented cyanide-related debris - offsite storage and treatment

3. Soil

Soil ( $5000 \leq \text{cpm} < 10000$  and organic vapor analyzer [OVA]  $< 25$  ppm above background) - Land disposal at Envirocare - **May 1999 time frame for disposition**

Soil ( $\text{cpm} > 10000$  and OVA  $< 25$  ppm above background) - Land disposal at Envirocare

Soil (OVA  $\geq 25$  ppm above background) - offsite storage and treatment

4. Lathe coolant and debris

Decanted lathe coolant (aqueous) - treatment at CWTF (Building 891): **DONE**

Decanted lathe coolant (aqueous and organic liquids) - offsite storage and treatment

Excavated debris - Land disposal at Envirocare (or offsite storage and treatment)

Project generated debris - Land disposal at NTS

Project generated PPE - Land disposal at NTS: **DONE**

Acceptable near-term treatment options are not yet available for the uranium waste. Documentation for shipment of the cemented cyanide waste and low-level/low-level mixed soils is expected to be completed in the third quarter of FY99.

**5.8 Complete information management system for integrated sitewide monitoring and environmental database by 9/30/99**  
[FY99 Milestone M9]

This milestone was completed this quarter. An information management system for environmental monitoring data has been established on the RFETS Intranet, and is updated as monitoring data becomes available, and is validated. Improvements to the system for website access are continuing.

**5.9 Either a) construct and operate new storage facility for TRU/TRM by 9/30/99, or b) by 9/30/99 demonstrate adequate storage available for TRU/TRM through 9/30/00**  
[FY99 Milestone M10]

This milestone is on schedule. During the second quarter of FY99, Tents 2 and 12 on the 750 Pad continue to be modified to allow for storage of repackaged residue TRU and TRM waste in pipe overpack components. The tents are currently planned to be operational for accepting TRU/TRM residue waste beginning at the end of April 1999.

The ability to ship TRU waste to WIPP (mixed waste will not be shipped pending issuance of the WIPP RCRA permit) will certainly minimize the need for additional storage; however, it may not eliminate the need altogether. As a result, other contingent storage options continue to be evaluated in the event that shipments can not be sustained at a rate necessary to keep pace with ongoing generation or inventory elimination needs.

**5.10 Complete characterization of the 903 Pad as defined in the approved Sampling Analysis Plan by 9/30/99 (with the exception of the remaining radiologic boreholes, which will be completed by 12/31/99)**  
[FY99 Milestone M11]

This milestone is on schedule. The gamma spectroscopy field survey was completed during the second quarter of FY99. Eight surface soil samples and 1,111 gamma spectroscopy measurements were collected, and fifteen boreholes for subsurface radiological samples were drilled during the second quarter of FY99. Drilling and sampling for volatile organic compounds (VOCs) characterization will be completed and the radiological data will be evaluated during the third quarter of FY99.

**5.11 Thermally stabilize 90% of the plutonium oxide generated during the year by 9/30/99**

[FY99 Target Activity T1]

This target activity is on schedule. Plutonium oxide is thermally stabilized as it is generated throughout the year.

**5.12 Complete the offsite shipment of the pits by 9/30/99**

[FY99 Target Activity T2]

This target activity is on schedule.

**5.13 Drain 6 systems in building 771 by 9/30/99**

[FY99 Target Activity T3]

This target activity is on schedule. Four systems have been drained. The remaining two systems are scheduled to be drained during the third quarter of FY99.

**5.14 Remove solid Cat I and II SNM (not holdup and composites) from building 776/777 by 9/30/99**

[FY99 Target Activity T5]

This target activity is on schedule.

**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 (BZ) and Industrial Area (IA) 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 second quarter of FY99.

**6.1.1 OU1**

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 (LRA) 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 completed in FY99.

### **6.1.2 OU5**

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

### **6.1.3 OU6**

DOE staff has reviewed background information for OU6 in preparation for finalizing the RFI/RI Report and preparing the Proposed Plan. DOE will request final RFI/RI Report approval and to draft the OU6 proposed plan during FY99.

### **6.1.4 OU7**

The passive aeration system was installed during the first quarter of FY99. The passive seep collection system continues to operate with no changes since the first quarter of FY99. The flow meter will be replaced during the third quarter of FY99 due to a malfunction.

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

### **6.1.5 IHSS 118.1**

The Sampling and Analysis Plan for monitoring of Natural Attenuation at IHSS 118.1 was approved on October 29, 1998. It included the installation of 8 wells and sampling of footing drains. The monitoring wells were installed in February 1999, and the footing drain outfalls were located in preparation for sampling and flow observations. Based upon observation, the footing drains seem to drain to the north and not to Bowman's Pond. The wells and footing drains were sampled in March 1999, and results are expected in May 1999.

## **6.2. D&D Cluster Closure Projects**

### **6.2.1 Decommissioning Program Plan (DPP)**

The DPP was approved by CDPHE on November 4, 1998, and by EPA on November 12, 1998. Meetings held subsequently with CDPHE and EPA resulted in a proposed modification regarding non-structural fixed equipment removal. A draft modification to the DPP, incorporating this proposal, was released for public comment on March 5, 1999 (which will end on April 20, 1999).

### **6.2.2 Building (B) 779 Cluster Closure Project**

The Decommissioning Operations Plan (DOP) for the B779 Cluster Project was approved by CDPHE on February 6, 1998. Approval was granted to initiate and pursue decommissioning activities within the B779 cluster in accordance with plans and commitments as described within the DOP. Decommissioning activities were initiated in FY98 with equipment and glovebox removal. As of March 31, 1999, 125 gloveboxes, out of a total of 133, had been removed and packaged as waste. Also, subcontracts (2) have been placed for the strip out and demolition of B729, and B779 (Including all remaining cluster facilities). As of March 31, 1999, B729 had been completely stripped out and final radiation surveys were in process. In addition, as of March 31, 1999, the B779 subcontractor had initiated strip out of equipment and asbestos in B779.

### **6.2.3 B886 Cluster Closure Project**

CDPHE approved the Interim Measure/Interim Remedial Action (IM/IRA) for the B886 Cluster Closure on August 3, 1998. Decommissioning activities were initiated in accordance with the approved IM/IRA in FY98, with strip out and removal of selected equipment and systems in Rooms 101 and 103 of B886. Decommissioning activities currently funded for FY99 include the removal of nine tanks and all associated piping and pumps in Room 103. The Management Reviews for these activities were completed by March 31, 1999, with strip out and removal work planned to begin in the third quarter of FY99.

### **6.2.4 B771 Cluster Closure Project**

The B771 Closure Project scope includes the deactivation, D&D, and demolition of B771/774, ancillary support structures, trailers, plant systems and utilities, underground tank systems, and waste sites associated with the B771 complex.

Implementation of an integrated approach towards closure is expected to accelerate closure of this cluster. The B771 closure project is being developed to integrate the final mission or risk reduction work, SNM holdup removal, deactivation, and decommissioning. On January 11, 1999, CDPHE approved the Building 771/774 Closure Project DOP. The DOP provides a general description of the steps that will be followed to decommission the B771/774 Cluster. A detailed technical approach to decommission an area/room of the closure project will be developed and approved in accordance with the Integrated Work Control Process (IWCP).

Two significant characterization efforts have been completed, SNM holdup characterization and the Reconnaissance Level Characterization Report. Several key risk reduction activities have been completed – all liquid tanks have been drained, all residues have been removed from the building, 2000 square feet of Benelex shielding has been removed, and six liquid piping systems have been drained and the piping has been removed. Draining of an additional ten liquid piping systems is planned. Removal of piping is planned within the next six months.

D&D work activities for the Building 771/774 cluster have been divided into 97 distinct areas or work sets. Three D&D work sets are essentially complete; an additional five work sets are planned to be completed in the next six months.

### **6.2.5 B776/777 Cluster Closure Project**

The B776/777 Cluster Closure Project is currently focusing on deactivation while supporting waste, residue and SNM activities (e.g., characterization, storage, transfer and consolidation, sampling, repackaging and consolidation, assay, and activities that prepare for offsite shipping). Deactivation activities are focused on SNM inventory reduction, SNM holdup removal, and preparing the buildings for D&D.

The following major activities have been accomplished since FY97:

- (1) Three RCRA storage units have been emptied
- (2) Five mixed residue pencil tanks have been closed
- (3) 4,000 chemicals have been excessed
- (4) Seven RCRA tanks have been emptied
- (5) All tanks have been sampled and purged, as necessary, of hydrogen
- (6) SNM has been removed from three vaults
- (7) 134 gloveboxes have been scanned for SNM holdup
- (8) Seven of fifteen identified areas have had SNM holdup removed
- (9) Over 2,000 gallons of oil have been removed from idle equipment
- (10) 230 containers of legacy waste have been dispositioned from the building
- (11) Microwave treatability study samples have been removed from B701
- (12) Reconnaissance Level Characterization Report has been prepared
- (13) Decommissioning Operations Plan (DOP) has been submitted to DOE for review.  
DOE comments are currently being incorporated into the DOP.

## **7.0 List of Approved Decision Documents**

CDPHE approved the B771/774 Closure Project Decommissioning DOP on January 11, 1999.

EPA approved the PAM for the East Trenches Plume remediation project during the second quarter of FY99.

No other decision documents were approved during the second quarter of FY99.

**Attachment 1: RFCA Milestone (R-M), Target Activities (R-T), and Closure Projects  
Tracking Table FY99**

<b>Driver</b>	<b>Commitment</b>	<b>Due Date</b>	<b>At Risk</b>	<b>Status/Comments</b>
R-T	FY99-T1 Thermally stabilize 90% of the plutonium oxide generated during the year by 9/30/99	9/30/99	N	On Schedule
R-T	FY99-T2 Complete the offsite shipment of the pits by 9/30/99	9/30/99	N	On Schedule
R-T	FY99-T3 Drain 6 systems in Building 771 by 9/30/99	9/30/99	N	On Schedule; 4 systems have been drained.
R-T	FY99-T5 Remove solid Categories I and II SNM (not holdup and composites) from Building 776/777 by 9/30/99	9/30/99	N	On Schedule
R-M	FY99-M1 Either (a) ship cumulative amount of 78% of 10/01/96 pond/salt inventory off site and evacuate all waste from Tent 9 by 9/30/99; or (b) the additional on site storage for pond/salt is operational by 9/30/99	9/30/99	N	On schedule. 78% of 10/01/96 pond/salt inventory has been shipped offsite. Evacuation efforts are ahead of schedule.
R-M	FY99-M3 Ship 1,750 cubic meters of low-level waste by 9/30/99	9/30/99	N	Complete
R-M	FY99-M4 Complete installation and operate remedial action described in decision document for Solar Pond plume (N. Walnut Creek) by 9/30/99	9/30/99	N	On Schedule. A draft decision document was prepared and submitted to the regulators for review during the second quarter of FY99.
R-M	FY99-M5 Complete installation and operate remedial action described in decision document for East Trenches/903Pad/ Ryan's Pit Mound plume (S. Walnut Creek) by 9/30/99	9/30/99	N	On Schedule. The decision document was approved by the regulators during the second quarter of FY99.
R-M	FY99-M7 Develop a comprehensive characterization/remediation strategy for the Industrial Area soils and groundwater by 9/30/99	9/30/99	N	On Schedule. The Kaiser-Hill Team has prepared an annotated outline of the planned strategy. A historical data search is underway.
R-M	FY99-M8 Complete off-site shipment by 9/30/99 for treatment and/or disposal of all T-1 waste streams not returned to T-1, and for which treatment or disposal locations are available and controlling documents are in place by 4/30/99	9/30/99	N	On Schedule.
R-M	FY99-M9 Complete information management system for integrated Site-wide monitoring and environmental database by 9/30/99	9/30/99	N	Complete.
R-M	FY99-M10 Either (a) construct and operate new facility for storage of TRU/TRM by 9/30/99 or (b) by 9/30/99 demonstrate adequate storage available for TRU/TRM through 9/30/00	9/30/99	N	On Schedule.
R-M	FY99-M11 Complete characterization of the 903 Pad as defined in the approved Sampling Analysis Plan by 9/30/99 (with the exception of the remaining radiologic boreholes which will be completed by 12/31/99).	9/30/99	N	On Schedule.
Closure Project	B771	N/A	N/A	CDPHE approved the B771/774 Closure Project Decommissioning DOP on January 11, 1999.

<b>Driver</b>	<b>Commitment</b>	<b>Due Date</b>	<b>At Risk</b>	<b>Status/Comments</b>
Closure Project	B776/777 Cluster Closure Project	N/A	N/A	DOE comments are currently being incorporated into the DOP.
Closure Project	B779 Cluster Closure Project	N/A	N/A	DOP approved 2/6/98. CDPHE approved the B729 Demolition Plan on 11/13/98. Demolition of B729 is expected to be completed in FY99.
Closure Project	B886 Cluster Closure Project	N/A	N/A	Interim Measure/Interim Remedial Action approved 8/3/98. Strip out of Room 103 will continue in FY99.
Closure Project	Operable Unit 7	N/A	N/A	Modifications to the passive seep collection system were completed during the first quarter of FY99. The passive aeration system was installed during the first quarter of FY99. Sampling is being performed in accordance with the approved, modified Sampling and Analysis Plan.
Closure Project	IHSS 118.1	N/A	N/A	The Sampling and Analysis Plan for IHSS 118.1 was completed and submitted to the agencies for review during the first quarter of FY99. Installation of monitoring wells was completed in the second quarter of FY99.