

# QUARTERLY STATUS REPORT

## RFCA IMPLEMENTATION

### ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

FOURTH QUARTER FISCAL YEAR 1997

#### 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 July 1997 through September 1997 (referred to as the fourth quarter of fiscal year [FY]97) 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) Waste Management; (6) Environmental Restoration; (7) Special Nuclear Material Management; (8) Decontamination & Decommissioning (D&D); and (9) List of Approved Decision Documents.

#### 2.0 Site-wide Activities

During the fourth quarter of FY97, several site-wide activities continued or were implemented. These activities include: (1) the Draft 2006 Plan (formerly the Ten Year Plan); (2) Actinide Migration Studies; and (3) Walnut Creek drainage plutonium source evaluations.

#### 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 plan is the culmination of work that began in July 1996 with the initial release of the "Draft Ten Year Plan" (called Ten Year Plan Version I). This plan is a strategic planning document that presents alternative scenarios to achieve accelerated Site closure. The Rocky Flats Discussion Draft 2006 Plan contains an evaluation of five scenarios (called "cases"), all of which would lead to the cleanup of the Site. All five cases achieve the same end state as envisioned in RFCA, but the period of time it takes to achieve the end state varies due to assumed annual funding levels and assumptions regarding when Rocky Flats Special Nuclear Materials will leave the Site. The time to achieve cleanup ranges from about 13 years to 30 years and the cleanup project cost ranges from \$7.3 billion to \$16.1 billion.

In the Discussion Draft 2006 Plan, the DOE has 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.

DOE is particularly interested in establishing a collaborative effort with stakeholders in shaping the future for the cleanup of the DOE Sites. The public comment period for the Discussion Draft (both the National and Rocky Flats plans) ended on September 9, 1997. DOE plans to release a comment disposition document in November, 1997.

The current Draft 2006 Plan Guidance calls for the next draft of the 2006 Plan to be released to Congress and the public in February, 1998. This plan will include a Status Plan which will address the status of existing action plans on issues/opportunities which have been identified by stakeholders, sites, and DOE for evaluation. For new issues/opportunities that can not be easily resolved, Action Plans will be developed to define the path forward, clarifying the decision to be made, the decision maker, opportunities for public involvement in the decision process and the schedule for resolution.

The Site will utilize the existing Life Cycle Baseline data to the greatest extent possible in preparation of the next Draft 2006 Plan.

## 2.2 Actinide Migration Evaluation

During the fourth quarter of FY97, the following Actinide Migration Studies activities were accomplished: (1) Rocky Mountain Remediation Services, L. L. C. (RMRS) finalized the report on existing actinide data and submitted it to DOE-Rocky Flats Field Office (RFFO) on September 30, 1997. DOE-RFFO, Kaiser-Hill Company L. L. C. (Kaiser-Hill or K-H), and Dr. Bruce Honeyman of the Colorado School of Mines met with regulators on August 8, 1997 and with Stakeholders on August 20, 1997 to discuss preliminary results of analyses. Activities will continue during FY98, starting with meetings with regulators and Stakeholders on October 28, 1997 to discuss the results of the FY97 work and FY98 proposed scope of work.

## 2.3 Watershed Improvements

All watershed improvements scheduled for FY97 were completed before the start of the fourth quarter. Selected exposed dirt areas were treated with TopSeal soil sealant to minimize erosion and contaminant transport. Areas selected for watershed improvements were chosen because of proximity to elevated levels of radionuclides as determined by soil, sediment, and surface water sampling. A discussion on the effectiveness of TopSeal will be incorporated in Progress Report #3 for the Walnut Creek Source Evaluation and Preliminary Mitigation Plan, scheduled for completion on December 31, 1997.

## 3.0 Implementation of the RFCA

Activities associated with the implementation of RFCA during the fourth quarter of FY97 include: (1) initiation of the 60-day public comment period for the National Pollutant Discharge Elimination System (NPDES) permit; (2) the Integrated Monitoring Plan (IMP); (3) the Integrated Site-wide Baseline and the selection of the FY97 milestones and target activities; (4) finalization of the Implementation Guidance Document (IGD); (5) a summary of analyses conducted at offsite laboratories; and (6) RFCA implementation-related significant activities of. These RFCA implementation activities are discussed below.

### 3.1 NPDES Permit

Attachment 5 of the RFCA states that once the changes to the water quality standards have been made, EPA will issue a new NPDES permit within six months of Colorado Water Quality Control Commission action. During the fourth quarter of FY97, EPA published the draft NPDES permit on August 15, 1997 for public comment and held a public information meeting on September 18, 1997. Comments on the draft permit are due by October 15, 1997. This will be followed by a 30-day comment resolution period. The revised permit will be issued after November 15, 1997 with an effective date of January 1, 1998.

### 3.2 Integrated Monitoring Plan (IMP)

During 1996, RFETS developed data quality objectives (DQO) for surface water, ground water, air, and ecological monitoring, and revised monitoring programs accordingly. The results of the DQO process are described in draft media-specific IMP sections. Monitoring to satisfy the IMP commitments was implemented in FY97. The final draft of the IMP was submitted to DOE on June 30, 1997. During the fourth quarter, K-H discussed the draft IMP with DOE, and in the first quarter of FY98 will address the remaining DOE issues and reconvene the IMP Working Group to resolve any outstanding issues.

### 3.3 Integrated Site-wide Baseline (ISB) / Milestones and Target Activities (M&TA)

Revision 2 of the life-cycle baseline (LCB), formerly known as the ISB, was issued in September, 1997. This revision merged the life-cycle baseline and Focus on 2006 Plan (Ten Year Plan) databases into a single baseline. The new resulting baseline is presently being reviewed and evaluated in detail through a process referred to as the "baseline improvement plan." This improvement effort is directed at resolving all high-level logic, work scope, and schedule conflicts between the current work plan (FY98), the Discussion Draft -- Focus on 2006 Plan, and LCB Revision 1. Findings from this effort will be evaluated, impacts determined, and baseline change proposal prepared -- as required -- to update the LCB.

The FY98 work plan was presented to the Site Change Control Board (SCCB) in late September, 1997. Approval from the SCCB was obtained on September 26, 1997. The FY98 work plan is wholly integrated with the LCB, and contains approved RFCA milestones and target activities. New milestones and target activities will be incorporated into the LCB via a baseline change proposal once approved. Consistent with the "rolling wave" planning concept, as FY98 progresses planning details will be added to the LCB for the FY99 work effort. The initial draft of the FY99 work plan should be completed in the Spring, 1998. As experience with the LCB increases, it is expected the planning horizon will be extended even further into the future each year.

Discussions were initiated in September on the FY98 and FY99 M&TAs. The EPA and CDPHE were provided with copies of the work plans for the relevant tasks. Discussions will continue, but fairly close alignment exists. The FY97 M&TAs were all successfully completed.

### 3.4 Implementation Guidance Document (IGD)

The RFCA describes the IGD as a guidance document that the Parties agree DOE will use in preparing work documents for activities regulated by the Agreement. A final IGD for FY97 was issued in August, 1997. The IGD will be updated annually beginning for FY98 in May, 1998.

### 3.5 Summary of Analyses Conducted at Offsite Laboratories

Attachment 1 contains a summary of analyses conducted for the site at offsite laboratories.

### 3.6 RFCA Implementation Related Activities of Significance

Significant efforts occurred during the fourth quarter of FY97 on activities related to RFCA implementation including: (1) final consent orders; (2) Buffer Zone and Natural Resources Management Plans; (3) efforts for off-site shipments of low level/low level mixed (LL/LLM) waste; and (4) activities associated with elevated plutonium and americium measurements on Walnut Creek.

Final consent orders on Chemical Wastes, Tanks, and Idle Equipment were signed by CDPHE, DOE, and K-H. The agreements lay out the plans to assure RCRA compliance in these three areas of significant legacy waste problems.

Initial meetings occurred on the Natural Resources Management Plan and the Buffer Zone Management Plan. It was agreed as a strategy that the two documents should be combined into one. Significant input from the stakeholders will be required for the successful completion of the document.

K-H continued procurement efforts to obtain an additional option for off-site LL/LLM waste treatment and disposal. The purpose of the procurement is to lower the cost and increase the options and reliability of RFETS LL/LLM waste management options by increasing competition and locating a site in Colorado.

Significant efforts occurred during the fourth quarter of FY97 on reporting activities related to elevated RFCA water-quality results measured at Walnut Creek Point of Compliance and Point of Evaluation monitoring locations in the Walnut Creek drainage. The source evaluation involved (1) revision of the Plan for Source Evaluation and Preliminary Proposed Mitigating Actions for Walnut Creek Water-Quality Results, and (2) preparation of Progress Report #1 to the Source Evaluation and Preliminary Mitigation Plan for Walnut Creek.

## 4.0 WATER MANAGEMENT

Water management activities during the fourth quarter of FY97 include: (1) surface water management; (2) surface water monitoring; (3) ground water monitoring; and (4) the Interceptor Trench System.

### 4.1 Surface Water Management

During the fourth quarter of FY97, the Site completed the following pond water transfers and discharges:

Pond A-2 operations included one routine floating siphon line transfer to Pond A-3 totaling 1.2 million gallons (MGals). This transfer occurred during the period of July 10-13, 1997.

Pond A-3 operations included three routine outlet valve direct discharges to pond A-4 totaling 13.7 MGals. The first discharge of 2.7 MGals occurred during the period of July 15-18, 1997. The

second discharge of 6.3 MGals occurred during the period of August 7-13. The third discharge of 4.6 MGals occurred during the period of September 8-12, 1997.

Pond A-4 operations included two routine outlet valve direct discharges to North Walnut Creek totaling 22.2 MGals. The first discharge of 4.3 MGals occurred during the period of August 5-7, 1997. The second discharge of 17.9 MGals occurred during the period of August 29 through September 8, 1997. Water quality samples were collected and analyzed, and all approvals obtained prior to the discharges. The City of Broomfield diverted the Pond A-4 discharges around Great Western Reservoir via the Broomfield Diversion Ditch.

Pond B-2 operations included one routine pumped transfer to Pond A-2 totaling 0.8 MGals. This transfer occurred during the period of August 28, 1997 through September 3, 1997.

Pond B-3 activity included one non-routine pumped transfer to Pond A-3 totaling 5.2 MGals. This transfer occurred during the period of September 8-30, 1997.

Pond B-5 activity included three routine pumped transfers to Pond A-4 and one non-routine outlet valve direct discharge to South Walnut Creek totaling 28.2 MGals. The first pumped transfer of 6.6 MGals occurred during the period of July 7-13, 1997. The second pumped transfer of 6.8 MGals occurred during the period of August 7-13, 1997. The third pumped transfer of 6.8 MGals occurred during the period of September 8-14, 1997. The non-routine outlet valve direct discharge of 8.0 MGals occurred during the period of September 24-30, 1997. Water quality samples were collected and analyzed, and all approvals obtained prior to the direct discharge. The City of Broomfield diverted the B-5 direct discharge around Great Western Reservoir via the Broomfield Diversion Ditch.

There was no Pond A-1, B-1, Landfill, or C-2 activity during the fourth quarter.

#### 4.2 Surface Water Monitoring

During the fourth quarter of FY97, 57 automated monitoring system samples were collected and submitted for analysis. For samples collected from RFCA Point of Compliance monitoring location GS03 from mid-June to early July, the Site reported elevated 30-day moving average results for Pu of 0.465 pCi/L and Am of 0.256 pCi/l. The DOE, K-H, and RMRS met with EPA, CDPHE and the City of Broomfield on August 25, 1997 to discuss the data. The investigation of these results were to be combined with the GS10 Point of Evaluation and Mitigating Actions Plan and delivered to the RFCA Parties on September 15, 1997. For samples collected from RFCA Point of Evaluation monitoring location SW093 from August 2-3, 1997, the Site reported elevated 30-day moving average results for plutonium of 0.181 pCi/l. All parties agreed to include the review of this result in the ongoing investigation in the Walnut Creek drainage basin.

Additional sediment and surface water sampling of Walnut Creek from Pond A-4 to Walnut and Indiana were performed during the fourth quarter as part of the Walnut Creek source investigations. Sampling results will be used to investigate potential local source factors which may have contributed to the GS03 elevated readings. Two new flow-paced monitoring stations were also installed on No Name Gulch (GS33) and McKay Ditch (GS35) to study the contributions of these tributaries to GS03 as part of the Walnut Creek source investigation. These gaging stations were instrumented with radio telemetry hardware to enable remote monitoring capability

#### 4.3 Ground Water Monitoring

The 1997 First Quarter RFCA Ground Water Monitoring Report included analyses on all but a few samples that were not received in time for evaluation. In addition, the metals analyses that were missing in the Fourth Quarter 1996 Report were reported. Public presentation of the First Quarter data was done at the State Information Exchange Meeting on August 26, 1997. Issues dealing with data quality in the quarterly groundwater reports was discussed with CDPHE and EPA prior to submitting the 1997 First Quarter RFCA Ground Water Monitoring Report. In addition, the draft 1996 Groundwater Monitoring Annual Report for the Rocky Flats Environmental Technology Site was submitted to DOE-RFFO on September 30, 1997. The Annual Report will be submitted to the CDPHE and EPA on November 17, 1997.

#### 4.4 Interceptor Trench System (ITS)

During the fourth quarter of FY97, the Kaiser-Hill team completed the study of treatment and management alternatives for mitigating contamination in the area of the Solar Evaporation Pond Nitrate Plume begun in mid-June. A total of eleven alternatives were considered, including direct and managed release, conventional treatment (e.g., denitrification or evaporation) and innovative treatment (e.g., phytoremediation, wetlands, iron/peat passive systems). The field of alternatives was evaluated using a set of criteria comprising implementability, acceptability to stakeholders, cost effectiveness, and the ability to meet goals, among others. This effort identified four alternatives that will be subjected to further evaluation in FY98, namely: enhanced evaporation, phytoremediation, treatment at the wastewater treatment plant, and managed release. The study describes planning activities and assessments which, when complete, will support a final recommendation for remediation of the Solar Pond Plume.

#### 5.0 Waste Management Milestones

The FY97 Milestones include five for waste management: (1) Construct/modify and operate B440 for storage of wastes (LL and/or TRU) by 9/30/97; (2) (a) Ship 18% of current pondcrete/saltcrete inventory off-site by 9/30/97; or (b) ship 7.8% of current pondcrete/saltcrete inventory offsite and submit a permit application for additional onsite storage of pondcrete/saltcrete by 9/30/97; (3) Ship 608 cubic meters of LL offsite by 9/30/97; (4) Remove 60% of all containerized wastes (except residues; per the October 1, 1996 inventory) from all buildings in the PA (excluding the 750 Pad and B991) by 9/30/97; and (5) Certify 350 drums of TRU/TRM to WIPPWAC by 9/30/97. The scope of these projects, including the fourth quarters accomplishments, is listed below.

##### 5.1 Construct/modify and operate B440 for storage of wastes (LL and/or TRU) by 9/30/97 [FY97 Milestone M1]

This milestone was completed on June 9, 1997.

##### 5.2 (a) Ship 18% of current pondcrete/saltcrete inventory off-site by 9/30/97; or (b) ship 7.8% of current pondcrete/saltcrete inventory offsite and submit a permit application for additional onsite storage of pondcrete/saltcrete by 9/30/97 [FY97 Milestone M2]

This milestone was completed September 4, 1997.

##### 5.3 Ship 608 cubic meters of LL offsite by 9/30/97 [FY97 Milestone M3]

This milestone was completed July 28, 1997.

- 5.4 Remove 60% of all containerized wastes (except residues; per the October 1, 1996 inventory) from all buildings in the PA (excluding the 750 Pad and B991) by 9/30/97 [FY97 Milestone M4]

This milestone was completed on July 24, 1997.

- 5.5 Certify 350 drums of TRU/TRM to WIPPWAC by 9/30/97 [FY97 Milestone M5]

This milestone was completed September 26, 1997.

## 6.0 Environmental Restoration

The FY97 Milestones include three for environmental restoration: (1) Submit final draft Operable Unit (OU) 3 Corrective Action Decision/Record of Decision (CAD/ROD) to CDPHE/EPA by 4/15/97; (2) Complete Phase I of Trench T-1 (IHSS 108, Buffer Zone OU [BZ OU]) accelerated cleanup and submit Proposed Action Memorandum (PAM) or Interim Measures/ Interim Remedial Action (IM/IRA) by 9/30/97; and (3) Complete source removal and soil treatment at Mound by 9/30/97 (IHSS 113, BZ OU). Attached to this report is a table summarizing the status of each milestone (Attachment 2). In addition, the site is continuing efforts to close OUs that are not currently associated with a milestone. These projects, including the fourth quarter's accomplishments, are listed below.

### 6.1 FY97 Milestone Progress

- 6.1.1 Submit Final draft OU3 CAD/ROD to CDPHE/EPA by 4/15/97 [FY97 Milestone M6]

The Final draft OU3 CAD/ROD was submitted by DOE to EPA and CDPHE on April 15, 1997. This milestone is complete. CDPHE submitted comments and those comments were resolved. Both Agencies signed the CAD/ROD in June, 1997.

- 6.1.2 Complete Phase I of Trench T-1 accelerated cleanup and submit PAM or IM/IRA by 9/30/97 (IHSS 108, BZ OU) [FY97 Milestone M7]

In preparation for the remediation of Trench T-1, a burial site of depleted uranium and waste oil, a sizable effort has been scoped to include final evaluation/characterization of existing data and treatment options and preparation of the PAM (or IM/IRA) for submittal to DOE. This Phase I step is necessary in support of final (Phase II) remediation. Due to the pyrophoric nature of the buried material and its anticipated condition from being buried for over 40 years, thorough planning is prudent and is the basis for segmenting this effort into phases.

The PAM was approved by the EPA on August 27, 1997. Other fourth quarter activities include: completion of the Activity Control Envelope Report; the product activity-based management planning; development of planning and field documents including an auditable safety analysis, activity hazards analysis, and field implementation plan; and initiation of subcontract procurement.

- 6.1.3 Complete source removal and soil treatment at Mound by 9/30/97 (IHSS 113, BZ OU) [FY97 Milestone M8]

Volatile organic compounds in the subsurface has contributed contamination to the ground water and surface water of South Walnut Creek. The drums and debris once buried in the Mound have long-since been removed, but a relatively small area (approximately 15 feet by 20 feet) remains as an ongoing source. The scope of the project includes source removal through excavation followed by treatment of the excavated material using low temperature thermal desorption. The soil will be replaced back into the excavation if it meets all appropriate concentrations.

Activities during the fourth quarter of FY97 included treatment of 700 cubic yards of material which was stockpiled following third quarter excavation. The treated soil was analyzed to verify performance standards were met and then placed into the excavation. Waste generated during treatment (granular activated carbon and spent system filters) were appropriately disposed of off-site.

Approximately 8 cubic feet of untreated soil from the stockpile area was identified as being remnant from a previous project in that area (T3/T4) and was placed at the bottom of the Mound excavation based on gamma spectroscopy results indicating that the soil had uranium-238 levels above background but below Tier II action levels. The accuracy of those results was subsequently questioned, and the soil may be as high as Tier I. The treated Mound soil was re-excavated to allow retrieval of the 8 cubic feet and all wastes generated, including the retrieved soil, were disposed of off-site.

This milestone was completed August 20, 1997.

## 6.2 OPERABLE UNITS (OU)

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 fourth quarter of FY97.

### 6.2.1 OU 1

Pursuant to the OU1 CAD/ROD, a remedial action for 119.1 was initiated with closure funds provided in April. As required, a sampling program was completed for potential downgradient sources and other sampling programs were completed in the source areas to pinpoint the source of groundwater contamination. An extensive evaluation of the data indicated excavation is not necessary as described in the CAD/ROD, and it was concluded by the lead regulatory agency and DOE to proceed with an Amendment to the CAD/ROD calling for long-term monitoring and No Further Remedial Action. This Amendment will be drafted in the first quarter of FY98.

### 6.2.2 OU 3

The submittal of the final draft OU3 CAD/ROD to CDPHE/EPA by April 15, 1997 is RFCA milestone M6. For a status update on the milestone, see section 6.1.1.

### 6.2.3 OU 5

In light of the fact that four areas within OU5 contain depleted uranium 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 their ER

ranking system sequence. In addition, DOE requested written approval from the lead regulatory agency (EPA) on the RFI/RI Report.

#### 6.2.4 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 the second quarter of FY98.

#### 6.2.5 OU 7

The passive seep collection system continues to operate with no changes since last quarter. Discussions are still underway to identify the technical issues concerning the cessation of treatment. A sampling program has been initiated in the fourth quarter to demonstrate a monitoring history consistent with turning the system off after a specified period of time. The sampling program will continue into the first quarter of FY98, and a recommendation should be made in the second quarter FY98.

#### 6.2.6 Buffer Zone OU

##### 6.2.6.1 Mound Plume

The site continues to work on a collection/treatment system for the Mound Site Plume. The design of the system was finalized during the fourth quarter. In addition a draft decision document for the system was developed and submitted for public comment on August 25, 1997. If funding continues in FY98 from DOE-HQ (EM-50 Office of Technology and Development) the system will be installed in the first or second quarter of FY98 ahead of the proposed RFCA milestone schedule of FY99.

##### 6.2.6.2 Preparation of the IM/IRA for the 903 Pad and Lip Area (IHSSs 112/155, BZ OU)

The FY97 scope for the 903 Pad Area which was to revise the remediation approach and draft a new IM/IRA has been modified in recognition of a more immediate need for additional data. The IM/IRA will not be revised this FY, but a data summary analysis and a draft Sampling Analysis Plan was submitted to DOE in early September, 1997.

#### 6.2.7 Industrial Area OU (IA OU)

A preliminary sampling and analysis program was performed in anticipation of performing interim action at IHSS 118.1- the Carbon Tetrachloride Spills, ranked number 8 on the ER Ranking list. The program consisted of acquiring subsurface soil samples using a hydraulic push-technique at nine borehole locations. Due to the presence of light and dense non-aqueous phase liquids, six small-diameter wells were installed to collect liquid samples. This program will enable first quarter FY98 comprehensive data evaluation needed to design an appropriate remediation strategy.

#### 7.0 Special Nuclear Material Management Target Activities

The FY97 Target Activities include five for special nuclear material (SNM) management: (1) Identify corrective actions for the plutonium and the HEU vulnerabilities by 9/30/97; (2) Complete

pipe component development for residue packing by 6/30/97; (3) Install and operate EU decon system by 9/30/97; (4) Thermally stabilize 90% of the plutonium oxide generated during the year by 9/30/97; and (5) Ship 25 SNM shipments offsite by 9/30/97. The scope of these projects, including the fourth quarters accomplishments, is listed below.

7.1 Identify Corrective Actions for the Plutonium and the HEU vulnerabilities by 9/30/97 [FY97 Target Activity T-1]

The DOE has approved the corrective actions for the plutonium vulnerabilities. Closure for an additional five plutonium vulnerabilities have been approved by DOE. The total plutonium vulnerabilities dispositioned this fiscal year is 41.

The DOE is still reviewing the corrective actions for the HEU vulnerabilities. An additional HEU vulnerability has been closed. The total HEU vulnerabilities dispositioned this fiscal year is two.

Activities planned for the fourth quarter of FY97 included: (1) received approval of the corrective actions from DOE for the HEU vulnerabilities; and (2) continue to submit additional plutonium and HEU vulnerabilities for closure.

Progress is being made faster than expected due to DOE Headquarters defining various closure categories for vulnerabilities in the first quarter of FY97. Also, closure methodology was developed with DOE in the first quarter of FY97 which defined format and content of closure documents.

This target activity was completed on September 30, 1997.

7.2 Complete Pipe Component Development for residue packing by 6/30/97 [FY97 Target Activity T-2]

This target activity was completed on February 25, 1997.

7.3 Install and operate EU Decon System by 9/30/97 [FY97 Target Activity T-3]

The management review has been completed for the system and operations have begun. Initial results indicated the parts were not achieving the expected decontamination level (less than 20 DPM transuranic nuclides). However, after additional material was removed from some of the parts, the site has achieved the desired level (three to date). A memorandum of understanding for decontamination levels has been proposed to Oak Ridge.

Activities planned for the fourth quarter of FY97 included: (1) finalize process parameters to routinely achieve desired decontamination levels; and (2) finalize memorandum of understanding with Oak Ridge.

This target activity was completed on July 15, 1997.

7.4 Thermally Stabilize 90% of the Plutonium Oxide generated during the year by 9/30/97 [FY97 Target Activity T-4]

Oxide is being stabilized as it is generated. The site will continue to generate and stabilize oxide during the FY. This target activity was completed on September 30, 1997.

7.5 Ship 25 SNM shipments offsite by 9/30/97 [FY97-Target Activity T-5]

This target activity was completed July 31, 1997.

7.6 Initiate Treatment of High Concentration Liquids in B771 9/30/98 [FY98 Target Activity T-4]

Processing of the B771 high concentration liquids through the B371 Caustic Waste Treatment System (CWTS) was started on September 24, 1997. This RFCA Target activity was completed well ahead of schedule due to rebaselining this project in March, 1997.

8.0 Decontamination & Decommissioning

8.1 Decommissioning Program Plan

The draft Decommissioning Program Plan (DPP) submitted to DOE for review and comment on April 18, 1997, has been reviewed and comments received. Comments were dispositioned and the final draft DPP delivered to the Facility Disposition Working Group for review. Current plans are for the DPP to be submitted to the regulatory agencies on October 31, 1997 for approval and public comment.

8.2 Decommissioning Operations Plan for the Building 779 Cluster Closure Project

A revised Decommissioning Operations Plan (DOP) has been prepared and submitted to DOE, CDPHE and EPA for review and comment. This revised DOP includes disposition of comments from the April, 1997 draft and also incorporates the elements of an IRA in order that the document can be submitted as a stand alone RFCA approval document. The decision to proceed with the DOP as a stand alone document, to be approved independent of the DPP, was agreed to by DOE, CDPHE and EPA in order to expedite the Building 779 Cluster Closure project.

8.3 Building 123 and Building 980 Complex

The Building 123 PAM was approved. A contract has been awarded and preparations are under way to begin Decommissioning. Demolition of Building 123 is planned for February, 1998. The Building 980 PAM was also approved and the complex demolished to slab by September 30, 1997.

8.4 Building Radiation Closure Standards

The working group (DOE, CDPHE, EPA and K-H) formed to recommend building radiation closure standards, continued to focus on reaching agreement on the proper modeling system to use in analyzing the various flow path scenarios, the management of construction debris, and incorporation of public participation in the approval process. The NRC issued separate decommissioning regulations in August that could impact RFETS. Implementation guidance is tentatively planned to be available in February. The working group will be evaluating the guidance for application as RFETS closure standards.

## 8.5 First Quarter FY98 Activities

D&D activities for the next quarter will include: issuing the final draft DPP for public review and comment; issuing the draft Building 779 DOP as a stand alone document for public review and comment; preparation for Building 779 decommission activities; continuing the Building Closure Standards evaluation; and Building 123 stripout with demolition scheduled for February, 1998.

## 9.0 List of Approved Decision Documents

During the fourth quarter of FY97, the following decision documents were approved:

1. The Final Proposed Action Memorandum for the Source Removal at Trench 1, IHSS 108 was issued on July 23, 1997;
2. The Building 123 Proposed Action Memorandum (PAM) was issued on August 18, 1997 and was approved by CDPHE (with request to submit additional documentation) on August 25, 1997; and
3. The Building 980 Cluster PAM Revision 0, August 19, 1997 and was approved by CDPHE (with request to submit additional documentation) on August 25, 1997.

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.

**ATTACHMENT 1  
APPROVED LABORATORIES USED BY RFETS**

<b>LABORATORY</b>	<b>APPROVED ANALYSES</b>
AccuLabs	Water Quality
Advanced Terra Testing	Geotechnical Parameters
Barringer	Drinking Water
Environmental Physics, Inc	Tritium, Total Uranium by KPA, Bioassay, Gamma Spectroscopy, Isotopics, Gross Alpha/Beta
General Engineering Laboratory	Toxicity Characteristics for Inorganics and Organics, Pesticides, PCBs
Johns Manville	Industrial Hygiene - General Chemistry
LAS Laboratories	Tritium, Gross Alpha/Beta
Lawrence Factor	Breathing Air
Paragon Analytics	Isotopics, Strontium, Volatile Organics, Semi-volatile Organics, Pesticides, PCBs, Inorganics, Toxicity Characteristics for Inorganics and Organics
Quanterra - Denver	Volatile Organics, Semi-volatile Organics, Metals
Quanterra - Richland, WA	Strontium, Bioassay
RECRA - Lionville, PA	Inorganics, Pesticides, PCBs
RECRA - University Park, IL	Inorganics, Pesticides, PCBs
Reservoirs Environmental	Asbestos
Sanford Cohen and Assoc	Isotopics
SeaCrest	Whole Effluent Toxicity
Southwest Laboratory of OK	Tritium
Southwest Research Institute	T0-14

ATTACHMENT 2  
Update to the Rocky Flats Cleanup Agreement Attachment 12  
Fourth Quarter, FY 1997

PAMs

\_. Department of Energy, Final Proposed Action Memorandum for the Source Removal at Trench 1 IHSS 108, Revision 4, Rocky Flats Environmental Technology Site, Golden, Colorado, July 23, 1997.

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