



**QUARTERLY STATUS REPORT**  
**ROCKY FLATS CLEANUP AGREEMENT IMPLEMENTATION**  
**ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE**  
**THIRD QUARTER FISCAL YEAR 2002**

## **1.0 Introduction**

Pursuant to paragraphs 122 and 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). For the purposes of this report, the term, the Site, refers to both DOE and the Kaiser-Hill Company, L. L. C. (Kaiser-Hill).

This report describes activities that occurred from April 2002 through June 2002 (referred to as the third quarter of fiscal year [FY] 02). The sections of this report are organized into the following topics: (1) Introduction; (2) Site-wide Activities Implementing RFCA and Supporting RFETS Closure; (3) RFETS Closure Projects; (4) Water Management; and (5) List of Approved Decision Documents.

## **2.0 Site-wide Activities Implementing RFCA and Supporting RFETS Closure**

Site-wide activities implementing RFCA and supporting RFETS closure during the third quarter of FY02 included: (1) Closure Project Baseline and Status of RFCA Milestones; (2) Integrated Monitoring Plan (IMP) Update; (3) Actinide Migration Evaluation (AME) Update; (4) Site-wide Water Balance Update; and (5) Land Configuration Design Basis (LCDB) Update.

### **2.1 Closure Project Baseline and Status of RFCA Milestones (Pending #'s)**

In accordance with the RFCA earned value (EV) framework, which the RFCA Parties adopted for setting milestones pursuant to the requirements in RFCA Part 11, Subpart A, the following is the current Site status on achieving the FY02 Tier 1 milestones. The earned value amounts and percentages are through June 23, 2002. The earned values shown below represent those reported by Kaiser-Hill and have yet to be validated by DOE.

**Table 1. Status of FY02 RFCA Milestones through June 23, 2002**

(Numbers unvalidated by RFFO)

Milestone	Adjusted Carryover from FY2001 (\$)	100% EV (\$) Scheduled	50% EV (\$) Scheduled	EV Complete (includes adjusted carryover from FY2001) (\$)	Percent complete Of 50% EV (\$) Scheduled
M1:50% FY02 Scheduled Decontamination & Decommissioning EV	\$2.890M Surplus	\$47.170M	\$23.585M – 2.890M = \$20.695M	\$67.447M	326%
M2:50% FY02 Scheduled Low Level Waste EV	\$7.459M* Surplus	\$6.542M	\$3.271M	\$17.116M	523%
M3:50% FY02 Scheduled Transuranic Waste EV	\$0M*	\$1.628M	\$0.814M	\$0.725M	90%
M4: 50% FY02 Scheduled Environmental Restoration EV	\$0.183M	\$0.526M	\$0.263M	\$1.360M	517%
M5: FY01 Remaining EV		\$0.539M*		\$0.539M	100%

\* Actual low level waste surplus EV carryover was \$7.999M. However, \$0.539M of this surplus FY01 earned value was applied to meet M5: FY01 Remaining EV (this remaining FY01 EV to be earned resulted from the residual Transuranic waste EV not earned in FY01 that was moved from M3 to the new milestone M5).

The Site continued to accelerate decommissioning work efforts during the third quarter of FY02. This acceleration has been enabled by the continued improvement in safety related performance, which allows the buildings to operate without compliance related work stoppages. At the end of the third quarter of FY02, the major facilities are ahead of schedule in performing their decommissioning work activities. In addition to progress in decommissioning the Site has made significant progress in transuranic waste shipments.

The focus during the fourth quarter of FY02 will be to continue to accelerate Decontamination & Decommissioning (D&D) of the south side (uranium buildings and office structures). Continued accelerated progress in decommissioning of plutonium facilities, low level waste shipments and transuranic shipments is also expected.

For the period October 1, 2000 through June 23, 2002 the cumulative schedule variance reported by Kaiser-Hill for the four areas of RFCA Earned Value Milestones is:

- Decontamination and Decommissioning \$33.6 Million (56.6% ahead of plan)<sup>1</sup>
- Environmental Restoration \$1.1 Million (469.6% ahead of plan)<sup>1</sup>
- Low Level Waste Shipments \$11.2 Million (118.2% ahead of plan)<sup>1</sup>
- Transuranic Waste Shipments -\$983 Thousand (-42.3% behind plan)

<sup>1</sup> FY02 Milestone has been achieved assuming no changes to RFCA activities from DOE and regulator discussions.

These statistics are based upon the subset of activities coded as RFCA on the DOE approved Contract Predetermined Work Activity matrix. These statistics will not reflect any recent changes to the RFCA activities that may have resulted from recent negotiations between DOE and the regulators.

## **2.2 Integrated Monitoring Plan Update**

The IMP Working Group completed its review of the IMP in October 2001 and provided comment on all proposed changes to the 2002 IMP documents. The completed document was submitted in May to DOE for final review. No additional changes have been made in the monitoring that was agreed appropriate in the discussions leading to the presently drafted 2002 IMP.

The next IMP review cycle will start in early July. As stated in the last update, several relatively minor changes will likely be discussed. One topic to be discussed is the need to clarify the use of the phrase "performance monitoring" in situations where in fact the monitoring is being performed as a best management practice to assure stakeholders that no significant environmental releases have occurred during the execution of a demolition or remediation project. This contrasts with the phrase's more generally accepted use in the context of remedy performance. Another discussion may be framed around the use of gamma spectroscopy for assessment of air filters collected during demolition and remediation projects. Such spectroscopy, if adequately sensitive, would allow more rapid turn-around of monitoring results, and be more cost-efficient at the same time. Routine updates to the water monitoring networks will also be discussed. Potential changes in the ecological monitoring program are another likely topic.

## **2.3 Actinide Migration Evaluation Update**

DOE and Kaiser-Hill established an Actinide Migration Evaluation (formerly called the Actinide Migration Studies) Group to provide expert guidance and data on issues of actinide (plutonium, americium, and uranium) behavior and mobility in surface water, groundwater, air, soil, and biota environments.

The advisors to the AME Group have been delegated to draw on the state-of-the-art understanding in the scientific community on actinide chemistry, geochemistry, hydrogeology, and biological transport and apply them to actinide migration issues at RFETS.

During the third quarter of FY02, the AME Group distributed the Technical Appendix and the Summary Report of the Pathway Analysis Report. The AME Group held a workshop on April 30, 2002 to discuss the highlights and RFETS implications of the report.

The next step for the AME Group is to evaluate a path forward on how the Advisors will play a continued role in the RFETS closure.

## **2.4 Site-wide Water Balance Update**

The purpose of the Site-wide Water Balance is to develop information to support a hydrologic design basis for RFETS closure activities. The objectives of the Site-wide Water Balance are to provide RFETS with a management tool to (1) evaluate how the Site-wide hydrology is likely to change from its present configuration to the final configuration at closure; (2) assist in predicting surface water impacts from groundwater for the present and final configurations; (3) provide hydrologic profiles that guide decisions concerning the final Industrial Area configuration to protect surface water quality; and (4) provide information for the comprehensive risk assessment (CRA), and the Final Corrective Action Decision/Record of Decision (CAD/ROD).

During the third quarter of FY02, Kaiser-Hill completed and released the Site-wide Water Balance Model Report for the Rocky Flats Environmental Technology Site, dated May 2002, and held a meeting with regulators and stakeholders on May 30, 2002 to discuss the results.

## **2.5 Land Configuration Design Basis Update**

The purpose of the LCDB Project is to define the design basis upon which a final land configuration can be developed. In conjunction with identifying the functional design objectives and developing the design basis, three bounding scenarios were identified to represent relative extremes of distinct and unique approaches. These bounding scenarios represent a reasonable range of viable approaches and allow for evaluation of individual components of the condition. The bounding scenarios were modeled and subsequently evaluated by the AME Group. Output from these evaluations in conjunction with the preliminary report will be used in future development of an initial conceptual design.

During the first quarter of FY02, the scope for this phase of the project was modified. The data summaries and appendices under development were finalized and an initial Grading and Drainage Plan was developed for the Industrial Area. This Plan will be used as a discussion point and to help guide immediate D&D and Environmental Restoration (ER) interim decisions.

An interim project report was completed during the second quarter of FY02. *The Land Configuration Design Basis-Preliminary* (March 2002) contains the revised project work plan and interim work products including the design basis, evaluations of the potential bounding scenarios, a pond reconfiguration strategy, an industrial area (IA) grading and drainage plan; the initial conceptual design, and remaining data gaps that must be filled prior to finalization of the conceptual design and conceptual design report. The timeframe

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for completion of the conceptual design report is not currently known. No additional activities occurred during the third quarter.

### **3.0 RFETS Closure Projects**

RFETS Closure activities conducted during the third quarter of FY02 include: (1) Industrial Area Operable Unit, Building (B) 771; (2) Industrial Area Operable Unit, B776/777; (3) Industrial Area Operable Unit, B371/374; (4) Industrial Area Operable Unit, B707; and (5) Remediation, Industrial & Site Services Project (RISS).

#### **3.1 Industrial Area Operable Unit, Building 771 Closure Project**

The B771 Closure Project Decommissioning Operations Plan (DOP) was approved by CDPHE on January 11, 1999. During the third quarter of FY02, the B771 Closure Project Team conducted the following activities:

1. Completed five D&D work sets, i.e., Sets 61, 74, 77, 91 and 92.
2. Decontaminated seven gloveboxes and one plenum to surface contaminated object (SCO) levels using Cerium Nitrate. As a result, the gloveboxes were disposed of whole as low-level waste in cargoes. The plenums will be dispositioned as SCO waste.
3. Completed the successful entry and decontamination of Room 141 (infinity room).
4. Completed D&D of the incinerator and B774 plenums.

#### **3.2 Industrial Area Operable Unit, Building 776/777 Closure Project**

The B776/777 Closure Project DOP was approved by CDPHE on November 5, 1999. As of June 30, 2002, eight minor modifications to the DOP have been approved. During the third quarter of FY02, the B776/777 Closure Project Team conducted the following activities:

1. Completed six D&D work sets bringing the total to 61 sets completed to date. There are a total of eighty-four work sets in the 776/777 Project. The six sets completed this quarter were Sets 5, 8, 19, 48, 51, and 71. This quarter's sets included the removal of 31 glovebox sections bringing the total to 249 glovebox sections removed during the lifecycle of this project. This leaves 30 glovebox sections remaining in the building.
2. Removed approximately 1400 cubic meters of transuranic and low-level waste from the facility.

3. Closed by removal four Resource Conservation and Recovery Act (RCRA) mixed residue vacuum accumulator tanks (V-614, V-616, V-618, V-620).
4. Minor modification #8 to the B776/777 DOP was approved by CDPHE on May 1, 2002. This modification includes submittal of unit-specific closure information sheets for the remaining mixed residue systems, overhead RCRA piping, process waste tanks, pilot and production fluidized bed incinerators, and supercompactor.

Activities planned for the fourth quarter of FY02 include working on the D&D of Sets 4, 60, 61, 63, 64, 66, 72, and 78.

### **3.3 Industrial Area Operable Unit, Building 371/374 Closure Project**

During the third quarter of FY02, the B371/374 Closure Project Team conducted the following activities:

1. Removed Raschig rings in Set 15 (Room 2223) and Set 13 (Rooms 2307 and 2317). The vacuum system was successfully used in these sets. This brings the total of 30 tanks that have had the ring removed utilizing the vacuum system. Most of the tanks have been surveyed and confirmed SCO. The tanks that have not met the SCO criteria are being decontaminated utilizing the cerium technology.
2. Continued Dismantlement of Set 7 (Room 3305) and Set 14 (Room 2325). Most internal components have been removed from the gloveboxes. Four gloveboxes have been removed from Set 7. The Closure Project Team has removed a total of 42 gloveboxes.
3. Removed four gloveboxes in Room 1111 to support the activities associated with removing pallets from the Central Storage Vault. This space will be utilized for a bag out tunnel.
4. Placed the following RCRA tanks in B374 into RCRA stable status: Tanks D807A, D807B, D808, D813, D814, D815, D816, D825A, D825B, D844A, D844B, D848, D883A, and D883B.
5. Initiated the strip-out of Area AM (B374 Chemical Preparation Area). The Closure Project Team is currently isolating and removing electrical equipment. Four tanks have been removed from the area.

Activities planned for the fourth quarter of FY02 include: Raschig Ring removal will occur in Set 12, continued strip-out of Area AM, and utilization of the cerium decontamination system if this is determined necessary to ensure the tanks/gloveboxes

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meet the SCO criteria. In addition, strip-out of electrical, mechanical, and glovebox systems in Set 14 and Set 7 will continue.

### **3.4 Industrial Area Operable Unit, Building 707 Closure Project**

During the third quarter of FY02, the B707 Closure Project Team conducted the following activities:

1. Completed eleven sets which included Sets A2, A4, C3, D5, D6, E6, F3, F5, G1, G2, and 16 (second floor). This encompassed the removal of 86 (to date, 149 of total 377) glovebox/chainveyor equivalents, many of which were elevated sections. Notable accomplishments included the removal of a large die-cast furnace, the first T-based lathe, two very large and heavy Zeiss inspection centers, and the removal of several tanks, hydraulic units, and oil reservoirs from the second floor. This brings the total sets completed to date to 28 of 99 sets.
2. Removed approximately 1,500 cubic meters of transuranic and low level mixed waste. A total of approximately 6,400 cubic meters have been removed since January 2001.

Activities planned for the fourth quarter of FY02 include work on Sets A3, A5, B1, B2, C2, C5, F2, F4, J3, K1, and sets 02 and 19 on the second floor. Asbestos abatement/removal is expected to continue with the greatest effort focused on the second floor.

### **3.5 Remediation, Industrial & Site Services Project**

RISS activities supporting RFETS closure during the third quarter of FY02 include D&D as well as ER.

#### **3.5.1 Decontamination and Decommissioning**

During the third quarter of FY02, the following activities were completed:

1. Progress in the B886 Decommissioning Project included:
  - B886 demolition
  - B828 dismantlement (tank removal) and demolition
  - B875 decontamination and dismantlement
  - Completion of B875 Pre-Demolition Survey Report
2. Loose property removal and hazard stabilization continued in B883. This work is scheduled for completion by the fourth quarter of FY02. Hazard removal in B881 is expected to be complete early in the fourth quarter of FY02. Remaining personnel relocations, equipment removal, and duct remediation is expected to be complete in early July 2002. Sampling for Under-Building Contamination (UBC) was initiated.

3. B865 decommissioning status is as follows:
  - Asbestos abatement 25% complete
  - Dismantlement 15% complete
  - Structural decontamination 16% complete
  
4. Other significant third quarter FY02 decommissioning activities include:
  - B442 demolition
  - Substantial implementation of portable steam boilers to allow the isolation of the existing steam plant
  - Initiation of B850 demolition
  - Personnel relocations (~500) completed to B460 and Mountain View offsite facility
  - B460 build-out project for consolidation of low level waste
  - Initial installation of wireless fire reporting system
  - Trailer (T) 452 trailer complex demolition
  - B125 asbestos abatement initiated
  - T891 complex sale/demolition
  
5. Reconnaissance characterization for all Area 1 facilities has been completed. Characterization activities have been initiated in Areas 2 and 3 including B991 and B444. Table 2 is a summary of RISS D&D characterization activities.

**Table 2. Summary of RISS D&D Characterization Activities**

Facility	Comments
428, 663, 666, 884	Reconnaissance Level Characterization Report (RLCR) concurrence received from CDPHE.
880, T891B, T891D, T891F, T891P, T893A, T893B, T900E, T904A, T891E	RLCR concurrence received from CDPHE
850, 890, 881C, 883C, 881G, 881H, C-865, T690N	RLCR concurrence received from CDPHE
B444 Complex	RLCR expected to be submitted in the fourth quarter of FY02
T452C, 827, B443	RLCR concurrence received from CDPHE

### 3.5.2 Environmental Restoration

ER activities implementing RFCA and supporting closure during the third quarter of FY02 included: (1) Buffer Zone (BZ) Operable Unit (OU), Group 900-11; (2) Plume Maintenance and Monitoring; (3) OU 1; (4) Group 000-5 Present Landfill, Group 000-1 Solar Ponds, and Group SW-2 Original Landfill Cap; (5) Group 100-4 UBC 123, Group 100-5 Security Incinerator Pad; and (5) IA Characterization.

#### 3.5.2.1 Buffer Zone Operable Unit, Group 900-11 (903 Pad)

BZ Sampling and Analysis Plan (SAP) was approved by the EPA in April 2002. The BZSAP is the sampling plan to gather analytical data from individual hazardous substance sites (IHSSs) and potential areas of concern (PACs) in the BZ for future decision-making purposes. These data will be evaluated to determine whether no further action (NFA), additional characterization, or remedial/management action is required. The plan was written to enable analytical results from samples collected outside IHSSs and PACs (white space) to be used for the CRA that evaluates residual risk following completion of all accelerated actions. The BZSAP sampling requirements contain the final site characterization requirements for the RFETS BZ.

The BZSAP FY02 addendum was approved by the EPA in April 2002. BZSAP addenda will be prepared for each IHSS, IHSS group, or PAC that provides background information of the IHSS or PAC, sampling requirements to meet the BZSAP's data quality objectives (DQOs), and analytical data currently available and usable to support the identified sampling requirements. Each BZSAP addendum will define the study area and optimize the sampling design for the IHSS or PAC to meet the DQOs identified in the BZSAP.

The 903 Pad remediation project planning began in April 2002. This work will be performed pursuant to the ER RFCA Standard Operating Protocol (RSOP). The ER RSOP FY02 Notification for IHSS Group 900-11, IHSS 112 – 903 Pad is scheduled for public comment in July 2002. The 903 Pad remediation work is scheduled to begin in October 2002.

A surface water monitoring network designed to establish baseline (pre-remediation) water quantity for surface waters draining from the 903 Pad and Lip Areas was installed in FY01. A total of seven surface water sampling stations, two existing and five new stations, comprise the network. The May 23 through 24, 2002, storm event provided sufficient surface water runoff in the vicinity of the 903 Pad to trigger sampling events at several of the surface water Performance Monitoring stations. Two samples were collected from location SW055 and one sample was collected from GS52. GS51 collected a partial sample and GS54 triggered, but only collected a partial grab sample.

Air Quality Management prepared the Performance Monitoring for Radionuclides: 903 Pad Remediation Project (IHSS 112 and 155) Plan in May 2002. The Performance Monitoring for the 903 Pad project will utilize the existing Radioactive Ambient Air Monitoring Program (RAAMP) sampling network. Two new samplers (S-212 and S-213) will be added to the RAAAMP network and one existing sampler (S-206) will be moved closer to the 903 Pad (becoming S-216) to ensure adequate coverage to the east and southeast of the project area. All samplers will run continuously during the accelerated action.

### **3.5.2.2 Plume Maintenance and Monitoring**

Operation, maintenance and monitoring continue for the three reactive barriers and two other plume treatment systems at Rocky Flats. The reactive barriers are the Mound Site Plume, East Trenches Plume and Solar Ponds Plume groundwater collection and treatment systems. The other two plume systems collect and treat groundwater at OU1 – 881 Hillside and at the OU 7 – Present Landfill Seep.

The activities and performance monitoring data for the five systems are provided in the Annual Report for the Rocky Flats Groundwater Plume Treatment Systems that was completed March 27, 2002.

### **3.5.2.3 OU1**

The DOE and EPA signed the final Modification to the OU1 CAD/ROD in January 2001. Because soil removal was not necessary, the modified remedy deleted the requirement to remove soil and included pumping and treating groundwater from the OU1 Collection Well for a period of one year after signing the final Modification, and continued groundwater monitoring at IHSS 119.1 consistent with the RFETS IMP. No other activities were performed during the first quarter of FY02.

Data are evaluated and reported in the Annual Plume Treatment reports (see Section 3.5.2.2). The Collection Well monitoring data continued to be below the Action Levels and Standards Framework Tier 1 action levels and pumping and treating of groundwater was discontinued. The Collection Well will be designated as a Plume Definition Well and initially monitored quarterly, consistent with the IMP.

### **3.5.2.4 Group 000-5 (Present Landfill), Group 000-1 (Solar Ponds) and Group SW-2 (Original Landfill)**

#### **Group 000-5 (Present Landfill)**

This project involves the design and construction of an evapotranspiration cover at the Present Landfill for RCRA interim status closure. The draft conceptual design report (CDR) was submitted and reviewed by the regulators and stakeholders during the third quarter of FY02. A draft Interim Measure/Interim Remedial Action (IM/IRA) Decision Document has been submitted for regulator and informal stakeholder review. Approval of the IM/IRA is anticipated in the fourth quarter of FY02. Subcontractor services for cover design and construction have been procured. Cover construction is scheduled to be initiated during the second quarter of FY03.

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### **Group 000-1 (Solar Ponds)**

The Solar Evaporation Ponds (SEPs), considered a RCRA interim status unit, are proposed to be closed under RCRA alternative closure requirements allowing corrective action to be used in lieu of unit specific closure requirements. CDPHE is considering allowing this flexibility to be used in establishing closure requirements for the SEPs, since other units exist in this area, including a portion of IHSS 121 (the Original Process Waste Lines, OPWL), RCRA Units 21 and 48 (RCRA stable concrete pads), and PAC 900-1310 (Interceptor Trench System water spill). This alternative approach allows the SEPs and a portion of OPWL to be closed under RCRA through the corrective action program, as well as to remediate/close these other units. This flexibility allows all of these units to be evaluated holistically as one area of contamination and the remediation of contaminated soils to risk-based levels.

Based on alternative closure requirements, an Area of Contamination (AOC) has been identified to include all these units including soil contamination for purpose of performing a risk assessment. The data associated with this AOC was submitted to the regulatory agencies for review during the third quarter of FY02. In addition, this same data was used to perform a risk assessment of this AOC. An ER RSOP notification letter was submitted to the agencies for hot spot removal based on risk and closure of RCRA units 21, 48, and a portion of OPWL. Based on the risk assessment and with the removal of hot spots, it is anticipated that the risk associated with the SEPs, as well as the other units within the AOC, will be below the  $10^{-4}$  to  $10^{-6}$  risk range. Therefore, no additional action is anticipated with these units and a Proposed Action Memorandum (PAM) will be written summarizing the actions taken under the ER RSOP, as well as the results of the risk assessment. A PAM for the SEPs and these other units is scheduled for release and regulatory approval anticipated in the fourth quarter of FY02. Once approved, the SEPs area, scheduled to begin and end in the first quarter of FY03, will be re-graded by pushing in the berms.

Consistent with RFCA, existing groundwater contamination associated with the SEPs, will be managed separately. A minor modification to the Solar Ponds Plume IM/IRA was submitted in FY02, proposing the installation of a pump in the solar ponds treatment system. Comments from the regulatory agencies were received. Kaiser-Hill anticipates installing the pump in the solar ponds treatment system during the fourth quarter of FY02.

### **Group SW-2 (Original Landfill)**

The Original Landfill project completed the data adequacy evaluation, alternatives analysis, and a preliminary evaluation of the alternatives during the third quarter of FY02. The draft IM/IRA is scheduled to be available for agency and informal stakeholder review

the fourth quarter of FY02. Approval of the IM/IRA is anticipated in the second quarter of FY03 with field activities commencing the second quarter of FY04.

### 3.5.2.5 Industrial Area Characterization

IASAP Addenda for FY02 were prepared to describe soil-sampling locations in IHSSs, PACs, and UBC sites. The IASAP Addenda contain maps of existing sampling locations and data, where available, and proposed new sampling locations. Table 3 lists the status of IASAP Addenda.

**Table 3. Status of IASAP Addenda**

<b>Addendum Number</b>	<b>Delivered to Agencies</b>	<b>Approved</b>
IA-02-01	September 01	November 01
IA-02-02	December 01	February 02
IA-02-03	February 02	March 02
IA-02-04	March 02	April 02
IA-02-05	March 02	April 02

CDPHE and EPA provided a partial response to the Draft CRA Methodology. The response included opening the discussion on the size of the exposure units for the CRA. These discussions are ongoing.

## 4.0 Water Management

Water management activities during the third quarter of FY02 are summarized by: (1) Watershed Improvements; (2) Surface Water Management; (3) Surface Water Monitoring; (4) Groundwater Monitoring; and (5) the Rocky Flats Water Working Group.

### 4.1 Watershed Improvements

In accordance with the Storm Water Pollution Prevention Plan (SWPPP), the annual Comprehensive Site Compliance Evaluations inspections of all Site facilities have begun. The inspections will be completed by September 30, 2002 and the SWPPP will be updated by October 26, 2002.

Drawing updates and field walkdowns of previously identified culverts and structures needing maintenance were completed during the third quarter of FY02. Efforts are ongoing to determine repair priorities for FY02. Repairs and cleanouts which do not require soil disturbance permits have begun.

### 4.2 Surface Water Management

During the third quarter of FY02, the Site completed the following pond water transfers and discharges totaling 31.22 Million Gallons (MG), a decrease of 65% compared to the third quarter of FY01 (89.49 MG). This decrease is attributable to regional drought conditions during the quarter.

Pond A-3 activity included two outlet-valve direct discharges to Pond A-4 totaling 7.58 MG. The first discharge of 1.34 MG occurred during the period of April 22 through 25, 2002. The second discharge of 6.24 MG occurred during the period of May 26 through June 3, 2002.

Pond A-4 activity included one outlet-valve direct discharge to North Walnut Creek totaling 5.82 MG. This discharge occurred during the period of May 16 through 23, 2002. Water-quality samples were collected and analyzed, and all approvals were obtained prior to the discharge. The City of Broomfield opted to impound the Pond A-4 water discharge within Great Western Reservoir.

Pond B-1 activity included two transfers of treated effluent from the B995 Wastewater Treatment Plant (WWTP) totaling 0.20 MG. The first transfer of 0.10 MG occurred during the period of April 23 through 24, 2002. The second transfer of 0.10 MG occurred during the period of May 28 through 30, 2002. The transfers were performed to supply adequate water in Pond B-1 to keep the pond sediments covered.

Pond B-5 activity included one routine outlet-valve direct discharge to South Walnut Creek totaling 17.62 MG. This discharge occurred during the period of May 16, 2002 through June 3, 2002. Water-quality samples were collected and analyzed, and all approvals were obtained prior to the discharge. The City of Broomfield opted to impound the Pond B-5 water discharge within Great Western Reservoir.

There were no Pond A-1, A-2, B-2, C-2, or Landfill Pond transfers or discharges during the third quarter of FY02.

Transfers and discharges from the Site ponds during the third quarter of FY02 are summarized in Table 4.

**Table 4. Site Pond Water Transfers and Discharges - Third Quarter FY02**

Dates	Pond Activity	Total MG	Mode
4/22 to 4/25	A-3 to A-4	1.34	Outlet-valve direct discharge
4/23 to 4/24	WWTP to B-1	0.10	WWTP effluent transfer
5/16 to 5/23	A-4 to NWC	5.82	Outlet-valve direct discharge
5/16 to 6/3	B-5 to SWC	17.62	Outlet-valve direct discharge
5/26 to 6/3	A-3 to A-4	6.24	Outlet-valve direct discharge
5/28 to 5/30	WWTP to B-1	0.10	WWTP effluent transfer

	<b>Total for Quarter</b>	<b>31.22 MG</b>	
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### 4.3 Surface Water Monitoring

During the third quarter of FY02, 92 composite samples were collected by the RFCA automated monitoring system and submitted for analysis. This represents a 28% reduction in sampling activity during the FY02 drought year when compared to the average activity (average of 127 samples) for the same period during the prior four years of RFCA sampling (Q3FY01: 135 samples, Q3FY00: 69 samples, Q3FY99: 152 samples, Q3FY98: 151 samples). Only the third quarter of FY00 had fewer composite samples (69 total) collected and analyzed.

Also during the third quarter of FY02, a reportable value for americium (Am) at Point of Evaluation surface water monitoring location GS10 occurred. The calculated 30-day moving average for americium (Am) triggered the reporting requirements under RFCA Attachment 5, Section 2.4 (B) for the period April 29, 2002 through May 10, 2002 inclusive (for details, see Table 1). Validated analytical results for all samples that were used in the calculation are listed in Table 2. Although 30-day moving average values for plutonium (Pu) did not exceed the reporting threshold during this period, the plutonium analytical results are included in Table 2 for completeness. The RFFO gained knowledge of this data on July 22, 2002. Oral notifications to the Colorado Department of Public Health and Environment (CDPHE) and the Environmental Protection Agency (EPA) were made on the same day.

The calculated 30-day average for Am diminished to 0.15 pCi/L on May 11, 2002 and has remained below the reporting threshold through June 9, 2002 (analytical results after June 9 were not available as of July 22, 2002). This newest GS10 reportable event is consistent with seasonal water-quality observations made every spring/summer since 1997 at this location, following implementation of RFCA flow-paced monitoring.

#### Reportable Value Description

*Table 1 – Reportable 30-Day Average Values for RFCA POE Monitoring Location GS10*

Analyte	Dates of Reportable Value	Range of Reportable 30-day Avg. Values (pCi/L)
Americium	4/29/02 – 5/10/02	0.16 – 0.18

*Table 2 – Validated Analytical Results for Composite Samples Collected at GS10 used in the 30-day average calculation for Americium.*

Composite Sample Start Date	Americium Analytical Result (pCi/L)	Plutonium Analytical Results (pCi/L)
3/14/02	0.028	0.042
4/3/02	0.176	0.081
5/3/02	0.113	0.020

Written notification and a plan addressing the requirements for source evaluation are being developed and will be submitted to CDPHE and EPA in accordance with the reporting requirements in RFCA.

During the third quarter of FY02, two new surface water performance-monitoring stations (GS55 and SW036) were installed and enabled for sampling. Monitoring data from these new locations will be used to develop water quality baselines for D&D and remediation projects. GS55 provides surface-water monitoring coverage for the area south of B883 and B881. SW036 provides surface-water monitoring coverage in the South Interceptor Ditch for the Original Landfill environmental remediation project.

Finally, consultations began with the Fish and Wildlife Service to obtain approval to install two more surface water performance-monitoring stations (GS59, and GS56) which will be located in Preble's Mouse Habitat. GS59 will provide surface-water monitoring coverage in Woman Creek for the Original Landfill environmental remediation project. GS56 will provide surface-water monitoring coverage in No Name Creek for the existing Landfill Pond environmental remediation project.

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

The Fourth (calendar) Quarter 2001 groundwater monitoring report was presented to the Stakeholders at the Quarterly Information Exchange Meeting on May 28, 2002.

Other activities completed during the second quarter of FY02 included:

1. Fourteen wells supporting the IA Plume Evaluation were sampled.
2. All groundwater samples and water level measurements for the third quarter of FY02 were completed on June 28, 2002.
3. The Well Abandonment and Replacement Program Work Plan was finalized and abandonment of wells has begun.
4. A project to compile and organize the well permit data for DOE has been completed.

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

The RFETS Water Working Group followed the Quarterly Exchange of Information Meeting held on May 28, 2002. The following items were included in the agenda:

1. Minor Modification of IM/IRA for Solar Ponds Plume
2. Nutrient Update for Big Dry Creek

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3. Status of stakeholder accessibility of Environmental Data Dynamic Information Exchange (EDDIE)
4. Pond Status summary and estimated dates for routine pond discharges

The next Water Working Group will be held on August 27, 2002, directly following the Quarterly Exchange of Information meeting.

## 5.0 List of Approved Decision Documents

This list of approved decision documents provides the information for the update to RFCA Attachment 12.

1. Minor Modification #8 to the B776/777 DOP was approved by CDPHE on May 1, 2002. This modification includes submittal of unit-specific closure information sheets for the remaining mixed residue systems, overhead RCRA piping, process waste tanks, pilot and production fluidized bed incinerators, and supercompactor.
2. Field Modification number 01 changed Section 6.2 of the B371/374 DOP to more accurately describe the transfer of the 231 A&B Tanks and the Process Waste Transfer System (PWTS) from B374 Operations to RISS. Originally, B374 was to have brought the tanks and PWTS to RCRA Stable prior to transferring the units to RISS. However, subsequent plans for wastewater treatment after B374 ceased operations included using both tanks and part of the PWTS. This modification eliminates the RCRA Stable requirement prior to transfer of the units to RISS.
3. Field Modification number 02 added two RCRA units to Appendix A of the B371/374 DOP. The two added units were older, "to be closed" units that were not included in the Permit and were missed in the original version of the DOP.