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Quarterly Report on Program Cost and Schedule

Fourth Quarter FY 1991

U.S. Department of Energy
Office of Civilian Radioactive Waste Management
Washington, DC 20585

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PREFACE

This report is intended to provide a summary of the cost and schedule performance for the Civilian Radioactive Waste Management Program. Historical and current cost profiles (extracted from the DOE Financial Information System) are presented for each of the major program elements. Also included in this report are the program schedule baseline, the status of near-term program milestones and the status of the Nuclear Waste Fund revenues and disbursements. This report includes data through September 1991.

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TABLE OF CONTENTS

	<u>Page</u>
1. COST AND SCHEDULE HIGHLIGHTS	1
2. NUCLEAR WASTE FUND OVERVIEW	
Receipts, Disbursements and Net Balance Projections	2
Projected versus Actual Fund Revenues	4
Cost Profile for the Total Nuclear Waste Fund	6
3. PROGRAM SCHEDULE	
Program Schedule Baseline	8
Near-Term Milestone Summary	11
4. FIRST REPOSITORY	
Cost Profiles	12
5. TRANSPORTATION	
Cost Profile	18
6. MONITORED RETRIEVABLE STORAGE	
Cost Profile	20
7. SYSTEMS INTEGRATION	
Cost Profile	22
8. ENGINEERING DEVELOPMENT	
Cost Profile	24
9. PROGRAM MANAGEMENT/TECHNICAL SUPPORT	
Cost Profile	26

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SECTION 1. COST AND SCHEDULE HIGHLIGHTS

- The following are selected major milestones from the Operations Management Tracking System that were reported as complete for the fourth quarter of FY 1991.

Program Management

- Issue Project Decision Schedule, Revision 1 (August 1991)
- Issue Draft Mission Plan Amendment for Public Comment (September 1991)

Yucca Mountain Site Characterization Project

- Start New Surface-Based Testing (July 1991)
- Start Peer Review of Site Suitability Study (August 1991)
- Complete ESF Title I Design Summary Report (September 1991)

- Actual FY91 costs for the total Nuclear Waste Fund through the fourth quarter were \$302.4 million. Breakdown of cost by program element is as follows:

- Total First Repository costs - \$188.7 million (\$181.1 million for the Yucca Mountain Site Characterization Project and the remainder for basalt and salt closeout, technical support and repository technology program activities).
- Transportation - \$19.8 million
- MRS - \$5.5 million
- Systems Integration - \$15.0 million
- Engineering Development - \$9.1 million
- Program Management/Technical Support - \$64.4 million

SECTION 2. NUCLEAR WASTE FUND OVERVIEW

RECEIPTS, DISBURSEMENTS AND NET BALANCE PROJECTIONS

Projection of Receipts and Disbursements

- For FY 1983 through FY 1990, receipts were actual amounts collected from utilities while disbursements included actual disbursements and interest paid on the appropriated debt. The appropriated debt was repaid in FY 1985. Receipt and disbursement projections for FY 1991 through FY 1993 are based on information contained in the FY 1992 Congressional budget submission.

Projected Net Balance

- The current net balance projection (September 1991) assumes the revenues from the 1 mill per kWh fee contained in the Energy Information Administration projection dated October 1990. Revenues from the one time fee and earned interest are extracted from the FY 1992 Congressional budget submission. Disbursements for FY 1991 through FY 1993 assume the budget outlay estimates contained in the FY 1992 budget submittal.
- The January 1985 and February 1986 projections are provided to show the effect of the one-time payment for fuel generated before 1983. The January 1985 projection assumed that \$770 million would be received in June 1985 for the one-time payment while the February 1986 projection reflects the fact that \$1.4 billion was actually collected.
 - The February 1986 net balance projection assumed the cost estimates, revenues (both from the 1 mill per kWh fee and the one-time fee), and earned interest contained in the FY 1987 budget submittal.
 - The January 1985 net balance projection was based on revenue and cost projections (escalated to current dollars by an average annual growth rate of 5 percent per year) in the FY 1986 budget submitted to Congress. The projection of net balance assumed that a positive yearly balance earns interest at a rate of 7 percent per year.

PROJECTED NUCLEAR WASTE FUND

RECEIPTS & DISBURSEMENTS (AS OF 9/91)

PROJECTED NET BALANCE

OF WASTE FUND

PROJECTED VERSUS ACTUAL FUND REVENUES

- Actual revenues from the 1 mill/kWh fee for the fourth quarter of FY91 were \$148.8 million. The projection of revenues for this quarter made by the Energy Information Agency in their memorandum dated October 5, 1990 was \$19.2 million less than actual revenues.
- The December 1984 projection of revenues for this quarter was \$12.4 million less than actuals. Comparison of December 1984 projection of revenues from the 1 mill/kWh fee with actual collections on a quarterly basis indicates that the projections have fallen within -\$12 million to +\$45 million of actual amounts. The +\$45 million difference in the December 1984 projection versus the actual amount collected in the fourth quarter of FY86 was due to credits given to the utilities for previous overpayment as a result of the change in the fee basis from gross to net generation.
- These revenue projections do not reflect the March 17, 1989 decision of the U.S. Court of Appeals concerning calculation of the 1 mill/kWh fee.

WASTE FUND REVENUES FROM 1 MILL/KWH FEE: ACTUAL VS. PROJECTED

COST PROFILE FOR TOTAL NUCLEAR WASTE FUND

- FY91 actual costs through the fourth quarter for the Nuclear Waste Fund were \$302.4 million.
- Through the fourth quarter of FY91, cumulative actual costs (from FY83) for the entire program totaled \$2,998 million.

COST PROFILE FOR THE TOTAL NUCLEAR WASTE FUND

HISTORICAL

(ENTRIES MAY NOT ADD TO TOTAL DUE TO INDEPENDENT ROUNDING)

SECTION 3. PROGRAM SCHEDULE BASELINE

- Figure 1 represents the current program schedule as contained in the Program Cost and Schedule Baseline (PCSB), Revision 1. This schedule was approved by the OCRWM Program Change Control Board on March 11, 1991.

REFERENCE SCHEDULE FOR THE OCRWM PROGRAM

NEAR-TERM MILESTONE SUMMARY

- The following milestones were completed during the fourth quarter FY91 as reported in the Operations Management Tracking System.

Program Management

- Complete Quality Assurance Management Assessment (July 1991)
- Issue Project Decision Schedule Revision 1 (August 1991)
- Provide Recommendation to RW-1 License Application Strategies for Review (August 1991)
- Program Change Control Board Approves Program Management System Manual Rev. 4 (August 1991)
- Issue Draft Mission Plan Amendment for Public Comment (September 1991)

Yucca Mountain Site Characterization Project

- Start New Surface-Based Testing (July 1991)
- Complete Exploratory Studies Facility Functional Analysis (July 1991)
- District Court Status Hearing on Progress of Water Permit Applications (July 1991)
- Program Change Control Board Approves Yucca Mountain Project Plan (August 1991)
- Start Peer Review of Site Suitability Study (August 1991)
- Complete Repository Program Plan (September 1991)
- Complete Exploratory Studies Facility Title I Design Summary Report (September 1991)

SECTION 4. TOTAL FIRST REPOSITORY

COST PROFILE

- FY91 actual costs through the fourth quarter for the first repository were \$188.7 million. The distribution by project was \$181.1 million for the Yucca Mountain Site Characterization Project, \$5.7 million for technical support/repository technology program (RTP) activities, \$1.4 million for the basalt project (BWIP) closeout, and \$0.4 million for the salt project (SRP) closeout.
- Through the fourth quarter of FY91, cumulative actual cost (from FY83) for the first repository projects totaled \$2,198.4 million of which 48 percent (or \$1,055.0 million) was accounted for by YMP, 23 percent (or \$514.4 million) by SRP, 22 percent (or \$482.2 million) by BWIP, and 7 percent (or \$146.7 million) by technical support/RTP activities.

COST PROFILE FOR TOTAL FIRST REPOSITORY

HISTORICAL

(ENTRIES MAY NOT ADD TO TOTAL DUE TO INDEPENDENT ROUNDING)

COST PROFILES

BWIP

SRP

COST PROFILE FOR YMP

HISTORICAL

(ENTRIES MAY NOT ADD TO TOTAL DUE TO INDEPENDENT ROUNDING)

COST PROFILE FOR TECHNICAL SUPPORT/RTP

HISTORICAL

(ENTRIES MAY NOT ADD TO TOTAL DUE TO INDEPENDENT ROUNDING)

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SECTION 5. TRANSPORTATION

COST PROFILE

- FY91 actual costs through the fourth quarter were \$19.8 million. The breakdown is as follows: Idaho Operations Office - \$12.8 million and Chicago Operations Office - \$7.0 million.
- Through the fourth quarter of FY91 the cumulative costs since 1984 were \$103.3 million.

COST PROFILE FOR TRANSPORTATION

HISTORICAL
(ENTRIES MAY NOT ADD TO TOTAL DUE TO INDEPENDENT ROUNDING)

SECTION 6. MONITORED RETRIEVABLE STORAGE

COST PROFILE

- FY91 actual costs for the MRS project through fourth quarter were \$5.5 million.
- Through the fourth quarter of FY91, the cumulative costs since 1983 were \$47.3 million.

COST PROFILE FOR MRS

HISTORICAL

(ENTRIES MAY NOT ADD TO TOTAL DUE TO INDEPENDENT ROUNDING)

SECTION 7. SYSTEMS INTEGRATION

COST PROFILE

- FY91 actual costs for combined systems integration activities through the fourth quarter were \$15.0 million.
- Through the fourth quarter of FY91, the cumulative costs since 1985 were \$51.7 million.

COST PROFILE FOR SYSTEMS INTEGRATION

HISTORICAL

(ENTRIES MAY NOT ADD TO TOTAL DUE TO INDEPENDENT ROUNDING)

SECTION 8. ENGINEERING DEVELOPMENT

COST PROFILE

- Work on engineering development is administered through the Idaho Operations Office.
- FY91 actual costs through the fourth quarter for the engineering development activities were \$9.1 million.
- Through the fourth quarter of FY91, the cumulative costs since 1985 were \$46.5 million.

COST PROFILE FOR ENGINEERING DEVELOPMENT

HISTORICAL

(ENTRIES MAY NOT ADD TO TOTAL DUE TO INDEPENDENT ROUNDING)

SECTION 9. PROGRAM MANAGEMENT/TECHNICAL SUPPORT

COST PROFILE

- Activities include program management (federal salaries, benefits, and travel); contractual services (administrative support costs); and technical support (i.e., NWF audit services and fee verification, technical support activities, program integration, external relations and policy).
- FY91 actual costs through the fourth quarter for the program management/technical support activities were \$64.4 million.
- Through the fourth quarter of FY91, the cumulative costs since 1983 were \$469.5 million (includes NRC fees).

COST PROFILE FOR PROGRAM MANAGEMENT/TECHNICAL SUPPORT

HISTORICAL

(ENTRIES MAY NOT ADD TO TOTAL DUE TO INDEPENDENT ROUNDING)