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Quarterly Report on Program Cost and Schedule

Second Quarter FY 1990

U.S. Department of Energy
Office of Civilian Radioactive Waste Management
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MASTER

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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 final Financial Information System (FIS) reports) are presented for each of the major program elements. Also included in this report is the status of the Nuclear Waste Fund revenues and disbursements. This report includes data through March 1990.

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HIGHLIGHTS

- The following significant accomplishments were reported in the Scientific Investigation Plan - Rev. 0 (Near Term Decision Plan) for the second quarter of FY 1990:

S-1 OCRWM DECISIONS

- Approve New Schedule and Interim Functional Realignment (1 March 90)

MANAGEMENT

- Issue Draft Revision Project Decision Schedule for Federal Agencies Review (1 March 90)
- Document Change Proposal for Revised Schedule Baseline Approved by Program Change Control Board (4 January 90)
- Issue Waste Management System Requirements Document Volume 1 (30 January 90)
- Issue Waste Management System Description (30 March 90)

YUCCA MOUNTAIN

- File Suit to Secure Permits (25 January 90)
- Receive Biological Opinion (14 February 90)

REPOSITORY PROGRAM

- Lead Report to Congress (9 February 90)

MRS

- Revised MRS Strategy to S-1 (2 March 90)

TRANSPORTATION

- Start Legal Weight Truck Cask Final Design (8 January 90)

- The following additional accomplishments were reported by the Yucca Mountain Project Office for the second quarter of FY 1990:
 - Authorization was received to proceed with Phase IE of the prototype drilling/coring program at the Apache Leap, Arizona site.
 - The Clark County Yucca Mountain Information Office was opened to the public on February 17, 1990.
 - The award of the FY90 grant request for the State of Nevada was completed.

HIGHLIGHTS (Con't)

- Actual FY90 costs for the total Nuclear Waste Fund through the second quarter were \$121.8 million. Breakdown of cost by program element is as follows:
 - Total First Repository costs - \$80.0 million (\$66.3 million for the Yucca Mountain project and the remainder for basalt and salt closeout, first repository technical support and repository technology program activities).
 - Second Repository - \$0 million
 - Transportation - \$10.8 million
 - MRS - \$0.7 million
 - Systems Integration - \$3.0 million
 - Engineering Development- \$3.0 million
 - Program Management/Technical Support - \$24.2 million.

SECTION 1. PROGRAM OVERVIEW

NUCLEAR WASTE FUND PROJECTIONS

- For FY 1983 through FY 1989, receipts were actual amounts collected from utilities while disbursements included both actual disbursements and interest paid on the appropriated debt.
- The current projection (May 1990) assumes the revenues from the 1 mill per kWh fee contained in the latest EIA projection (September 1989). Revenues from the one time fee and earned interest are based on the FY 1991 Congressional budget submission. Disbursements for FY 1990 through FY 1992 assume the budget outlay estimates contained in the FY 1991 budget submittal.
- The February 1986 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.
- Projection of net balance made in January 1985 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 in January 1985. The projection assumed that \$770 million would be received in June 1985 for the one-time payment for fuel generated before 1983 (compared to the \$1.4 billion that was actually collected). 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 5/90)

PROJECTED NET BALANCE

OF WASTE FUND

PROJECTED VERSUS ACTUAL FUND REVENUES

- Actual revenues from the 1 mill/kWh fee for the second quarter of FY90 were \$143.0 million. The projection of revenues for this quarter made on September 27, 1989 was \$7.8 million less than actual revenues. The June 1984 projection of revenues was \$1.5 million more than actuals.
- Comparison of June 1984 projection of revenues from the 1 mill/kWh fee with actual collections on a quarterly basis indicates that the projections have fallen within -\$6 million to +\$45 million of actual amounts. The +\$45 million difference in the June 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 revenues.

COST PROFILE FOR TOTAL NUCLEAR WASTE FUND

- FY90 actual costs through the second quarter for the Nuclear Waste Fund were \$121.8 million.
- Through the second quarter of FY90, cumulative actual costs (from FY83) for the entire program totaled \$2,512 million.

COST PROFILE FOR THE TOTAL NUCLEAR WASTE FUND

HISTORICAL

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

SECTION 2. PROGRAM SCHEDULE

REFERENCE SCHEDULE FOR THE RESTRUCTURED PROGRAM

- The "Report to Congress on Reassessment of the Civilian Radioactive Waste Management Program" was issued in November 1989. This report was based on a comprehensive program review by the Secretary of Energy including the schedule for the repository, the MRS facility, and the transportation program. Figure 1 represents this schedule reevaluation.

FIGURE 1. REFERENCE SCHEDULE FOR RESTRUCTURED PROGRAM *

NEAR TERM DECISION PLAN

- The following major milestones were completed during the second quarter FY90 as reported on the Scientific Investigation Plan - Rev. 0 (Near Term Decision Plan):

S-1 OCRWM DECISIONS

- Coordinated with Congress on Legislation (Late January 90)
- Approve New Schedule and Interim Functional Realignment (1 March 90)
- Review Interactions with Congress re: Legislation (15 March 90)

MANAGEMENT

- Issue Draft Revision Project Decision Schedule for OCRWM Review (8 January 90)
- Issue Draft Revision Project Decision Schedule for Federal Agencies Review (1 March 90)
- Final Program Participant/Contractor Review Recommendations to RW-1 (11 January 90)
- Director Proposes Headquarters Interim Realignment (16 January 90)
- Document Change Proposal for Revised Schedule Baseline Approved by Program Change Control Board (4 January 90)
- Issue Cost Baseline Guidance (2 February 90)
- Start Preparation Annual Energy Systems Acquisition Advisory Board Presentation (3 January 90)
- Dry Run (15 February 90)
- Issue Waste Management System Requirements Document Volume 1 (30 January 90)
- Issue Waste Management System Description (30 March 90)
- Decision on Negotiator (12 February 90)

YUCCA MOUNTAIN

- File Suit to Secure Permits (25 January 90)
- Receive Biological Opinion (14 February 90)
- Complete Management Plan (12 January 90)
- Management Review of Major Options Identified (30 March 90)
- Complete Implementation Plan (12 January 90)
- Draft Waste Package Program Plan (8 March 90)

REPOSITORY PROGRAM

- Lead Report to Congress (9 February 90)

MRS

- Revised MRS Strategy to RW-1 (5 January 90)
- Final Draft to RW-1 (1 February 90)
- Revised MRS Strategy to S-1 (2 March 90)
- Review Transportation Strategy (1 March 90)

NEAR TERM DECISION PLAN (cont'd)

TRANSPORTATION

- Start Legal Weight Truck Cask Final Design - (8 January 90)

SECTION 3. TOTAL FIRST REPOSITORY

COST PROFILE

- FY90 actual costs through the second quarter for the first repository were \$80.0 million. The distribution by project was \$66.3 million for the Yucca Mountain project (YMP), \$10.1 million for technical support/repository technology program activities, \$3.2 million for the basalt project (BWIP) closeout, and \$0.5 million for the salt project (SRP) closeout.
- Through the second quarter of FY90, cumulative actual cost (from FY83) for the first repository projects totaled \$1,885 million of which 40 percent (or \$760 million) was accounted for by YMP, 27 percent (or \$513 million) by SRP, 25 percent (or \$479 million) by BWIP, and 8 percent (or \$133 million) by technical support/RTP activities.

COST PROFILE FOR TOTAL FIRST REPOSITORY

COST PROFILE FOR YMP

HISTORICAL

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

COST PROFILES BWIP

SALT

COST PROFILE FOR TECHNICAL SUPPORT/RTP

HISTORICAL

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

SECTION 4. TRANSPORTATION

COST PROFILE

- FY90 actual costs through the second quarter were \$10.8 million. The breakdown is as follows: Idaho Field Office - \$7.6 million and Chicago Field Office - \$3.2 million.
- Through the second quarter of FY90, the cumulative costs since 1983 were \$72.7 million.

COST PROFILE FOR TRANSPORTATION

HISTORICAL

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

SECTION 5. MONITORED RETRIEVABLE STORAGE

COST PROFILE

- Work on the MRS project is administered through the Richland Field Office.
- FY90 actual costs for the MRS project through second quarter were \$0.7 million.
- Through the second quarter of FY90, the cumulative costs since 1983 were \$40.4 million.

COST PROFILE FOR MRS

SECTION 6. SYSTEMS INTEGRATION

COST PROFILE

- Systems integration includes work performed by Pacific Northwest Laboratory (PNL) and Oak Ridge National Laboratory (ORNL).
- FY90 actual costs for combined systems integration activities through the second quarter were \$3.0 million.
- Through the second quarter of FY90, the cumulative costs since 1985 were \$33.1 million.

COST PROFILE FOR SYSTEMS INTEGRATION

SECTION 7. ENGINEERING DEVELOPMENT

COST PROFILE

- Work on engineering development is administered through the Idaho Operations Office.
- FY90 actual costs through the second quarter for the engineering development activities were \$3.0 million.
- Through the second quarter of FY90, the cumulative costs since 1986 were \$30.2 million.

COST PROFILE FOR ENGINEERING DEVELOPMENT

HISTORICAL

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

SECTION 8. 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).
- FY90 actual costs through the second quarter for the program management/technical support activities were \$24.2 million.
- Through the second quarter of FY90, the cumulative costs since 1983 were \$368.7 million.

COST PROFILE FOR PROGRAM MANAGEMENT/TECHNICAL SUPPORT