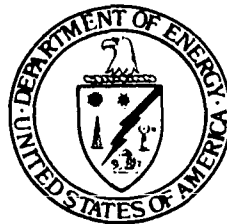


Program Priorities and Budget Allocations

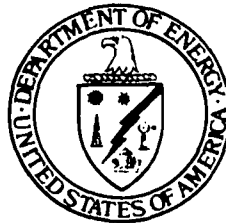
**John W. Bartlett, Director
Office of Civilian Radioactive Waste Management**



**Presented to
Nuclear Waste Technical Review Board
January 7-8, 1992**

Program Priorities and Budget Allocations

**John W. Bartlett, Director
Office of Civilian Radioactive Waste Management**



**Presented to
Nuclear Waste Technical Review Board
January 7-8, 1992**

Topics Addressed

- **Program priorities and their basis**
- **Factors that affect progress and budget allocations**
- **Budget allocation case study: ESF schedule delay**
- **Basic policy for budget allocations**
- **Contingency planning**

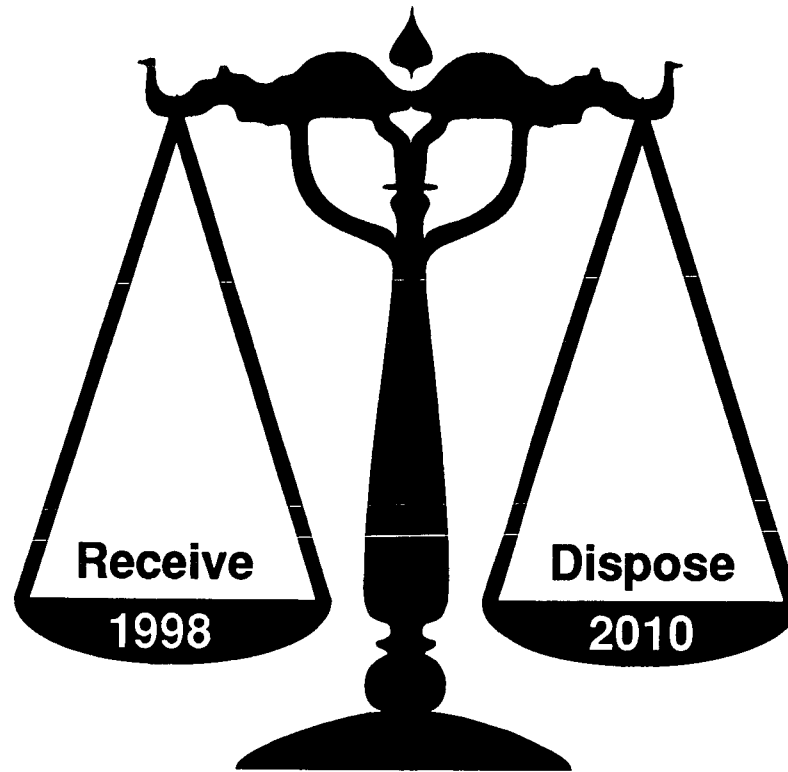
Program Priorities and Their Basis

- **Program goals**
- **Progress milestones**
- **Management actions to meet goals and milestones**
- **Important constituency milestones**

Program Goals and Their Basis

- **Program goals:**
 - **Begin spent fuel receipt from reactors in 1998**
 - **Begin disposal in 2010**
- **Basis for the goals:**
 - **Nuclear Waste Policy Act, as amended**
 - **Secretary's plan of November 1989**
 - **Contracts with the utilities**

Program Goals Have Equal Rank



Major Progress Milestones for Spent Fuel Receipt in 1998

- **Site MRS facility by the end of 1992**
- **Start transport cask procurement in 1992**
- **Establish spent fuel receipt protocols end of 1992**
- **Complete MRS design in 1994**
- **Complete transport system design in 1994**
- **Complete MRS licensing and start construction in 1995**

Major Progress Milestones for Start of Disposal in 2010

- **Renew surface-based data acquisition in 1991**
- **Begin ESF construction in November 1992
(now November 1993)**
- **Evaluate site suitability or unsuitability ASAP**
- **If found suitable, submit license application in 2001**
- **Begin repository construction in 2004**
- **Begin disposal in 2010**

Principal Management Actions to Meet Goals and to Establish Major Progress Milestones

Disposal

- **Focus and prioritize site interrogation activities to enable site evaluation as soon as possible**
- **Establish site suitability evaluation baseline**
- **Establish baseline performance assessment**

Principal Management Actions to Meet Goals and to Establish Major Progress Milestones

Storage

- **Support Negotiator's efforts to obtain MRS host**
- **Reorganize transportation program for timely availability of casks and operations system**
- **Prioritize non-site specific MRS design, environmental, and licensing work**
- **Prioritize work with utilities on spent fuel receipt protocols**

Principal Management Actions to Meet Goals and to Establish Major Progress Milestones

Programmatic

- **Prepare Mission Plan Amendment**
- **Establish strategy for DOE/NRC pre-licensing actions**
- **Bring on M&O contractor for efficient technical and regulatory program integration and management**
- **Complete ESAAB review of Yucca Mountain project plans**

Major Progress Milestones for Various Program Constituencies

- **Start of new site interrogation activities at Yucca Mountain**
- **Start of underground excavation at Yucca Mountain**
- **Siting of the MRS facility**
- **Start of MRS construction**
- **Evaluation of Yucca Mountain suitability or unsuitability**

Major Progress Milestones for Various Program Constituencies (con't.)

- **Start of waste acceptance at MRS**
- **Submittal of repository license application**

Underground Excavation is a Uniquely Significant Milestone

- **NWTRB, DOE, and NRC agree the ESF provides access to geologic features critical to site evaluation**
- **Start of underground excavation is highly symbolic of progress for all constituencies**
- **Extensive DOE/NRC interaction on ESF design and use is required because of interface with potential repository**
- **Comprehensive funding package is needed to maintain ESF schedule**

Apparent Key Factors in Yucca Mountain Site Evaluation

Factor

Data Source

Potential fast-paths to environment

ESF, drilling

Steep hydraulic gradient

Drilling

Volcanism

Sample analysis

Seismic/tectonic activity

ESF, trenching,
seismicity, mapping

Thermal source impacts

ESF, analysis

**Underground excavation is one means to
address key factors**

Factors That Affect Progress and Budget Allocations

Factors That Could Aid Progress and Goal Achievement

- **Sufficient funding**
- **Clear evidence of suitability or unsuitability**
- **Expeditious institutional proceedings**
- **Minimization of licensing review issues through effectiveness in DOE/NRC pre-licensing interactions**

Factors That Could Delay Progress of Goal Achievement

- **Change in national policy**
- **Delay in MRS siting**
- **Political or legal obstruction**
- **Difficulty in clearly resolving site suitability issues**
- **Finding that the Yucca Mountain candidate site is not suitable**

Factors That Could Delay Progress of Goal Achievement (con't.)

- **Difficulty in resolving licensing issues**
- **Continuing evolution of regulatory requirements**
- **Insufficient program funding levels**

Factors That Affect Budget Strategies and Allocations

Factors That Affect Budget Strategies and Allocations

- **National policy, the Secretary's goals, and contracts with utilities**
- **Need to comply with regulatory requirements**
- **Need to comply with Federal government acquisition requirements**
- **Need to service interests of oversight functions and affected and interested parties**

Factors That Affect Budget Strategies and Allocations (con't.)

- **Need to respond to sometimes-conflicting constituent pressures**
- **Principles of prudent management**
- **Levels of funding provided**
- **Competition of waste fund mission with general revenue missions**

**Budget Allocation Factors in Action:
Why Start of ESF Construction Was Delayed**

Budget Allocation Factors in Action: Why Start Of ESF Construction Was Delayed

- **Initiating factor:**

Budget appropriation for fiscal year 1992 was \$30 million less than requested (\$275M vs. \$305M)

Budget Allocation Case Study: ESF Schedule Delay

- **Factors considered**
 - **Start of ESF construction is important progress milestone for constituencies**
 - **Excavation in Calico Hills formation can provide critical information for site evaluation**
 - **Siting of MRS and start of spent fuel receipt in 1998 are also critical milestones for some constituencies**

Budget Allocation Case Study: ESF Schedule Delay (con't.)

- **Through Negotiator's efforts, progress in MRS siting is reaching critical stage**
- **Drilling and trenching activities can be maintained at low cost rates and contribute significantly to progress toward site evaluation**
- **Work on data acquisition to meet regulatory requirements must be maintained**

Budget Allocation Case Study: ESF Schedule Delay (con't.)

- **Effort on other program activities such as waste package must be maintained at least at minimum-critical-mass levels**
- **ESF design and design-support activities need large block of funds for coherence and continuity**
- **M&O contractor is in process of ramping up to bring technical and regulatory integration and management to program**

Work and Budget Requirements for ESF (\$M)

	Proposed FY92	Current FY92 Allocation
ESF Design	\$20.0	\$ 5.0
Repository (interface control drawings, ESF soil/rock drilling and analysis, systems engineering/PA)	7.5	4.5
Management and control (configuration management, QA, cost/schedule controls)	7.0	4.0
Environmental background monitoring	1.0	1.0
	<hr/>	<hr/>
	\$35.5M	\$14.5M

Work and Budget Requirements for ESF (\$M)

(con't.)

Additional equipment requirements: (not in Congressionally proposed FY 92 budget)

Design/procurement of ESF support systems

- | | |
|--------------------------------------|------|
| - Electrical power upgrades | \$10 |
| - Aggregate plant | 2 |
| - Field operations center facilities | 4 |

Procurement of excavation capability

- | | |
|---------------------------|-----------|
| - 2 large-diameter TBMs | 33 |
| - 2 smaller-diameter TBMs | <u>18</u> |
| | \$67M |

Options for Absorbing \$30M Shortfall

- **Defer cask procurement**
- **Slow down ESF design**
- **Distribute among activities with discretionary budgets**
 - **Reduce MRS siting support**
 - **Slow MRS design**
 - **Slow or stop surface-based site evaluation activities**
 - **Slow waste package**
 - **Slow regulatory framework development**
 - **Slow M&O ramp up**

Decisions Taken

- **Retain minimal funding needed for storage and transportation activities progress toward 1998 waste acceptance goal**
- **Defer ESF-related procurements but retain site preparation design activities in order to hold schedule delay to one year, assuming future appropriations meet needs**
- **Take small cuts in activities with discretionary budgets but do not lose minimum sustaining level of effort needed**

Rationale for Decisions

- **Must maintain 1998 goal for start of receipt**
- **Any cuts in storage and transportation would have irreparable effects**
 - **Impossible to meet goal to begin spent fuel receipt in 1998**
 - **Loss of faith in DOE on part of prospective MRS hosts**
 - **High potential for lawsuits from utilities for anticipatory breach of contract**

Rationale for Decisions

(con't.)

- **Potential that delay of schedule for start of ESF construction can be made up in terms of overall site suitability evaluation by highly-definitive findings after excavation is begun**

Potential Offsets for Delay in Start of ESF Portal

- **ESF design and basis for data acquisition strategy have improved since original schedule was set**
 - **Ramp rather than shaft will get data sooner and with broader range**
 - **Excavation strategy now on critical target of potential for fast paths for flow to the environment**

Potential Offsets for Delay in Start of ESF Portal (con't.)

- **Data needed to support decisions may be less than previously expected**
 - **Now focused on critical issues, with extensive performance assessment of uncertainties and sensitivities**
 - **Strategy to close individual issues ASAP and to use annotated outline to define issues and data needs can improve progress efficiency**

Basic Policy for Budget Allocations

Basic Policy for Budget Allocations

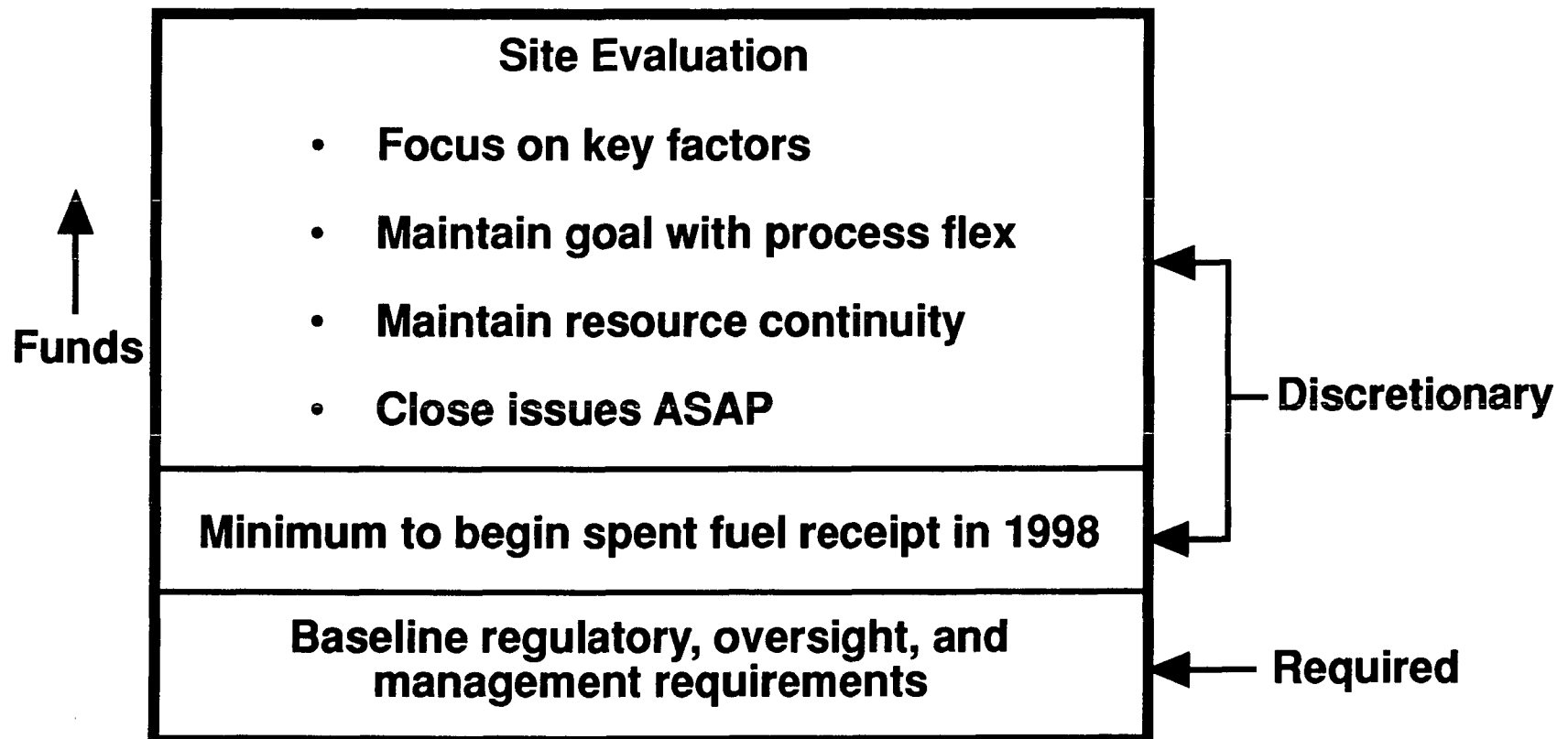
- **Maximize potential to meet program goals**
- **Fund all effort which must be sustained to meet regulatory requirements**
- **When faced with shortfalls in appropriations needed to maintain schedules for progress milestones and program goals:**

Basic Policy for Budget Allocations

(con't.)

- **Avoid loss of continuity of activities and resources**
- **Reduce funding of activities for which there is potential for schedule recovery in the future**
- **Match M&O ramp up and activity levels to program status resulting from budget levels.**

Budget Allocation Policy Focuses on Meeting Goals and Requirements as Effectively as Possible

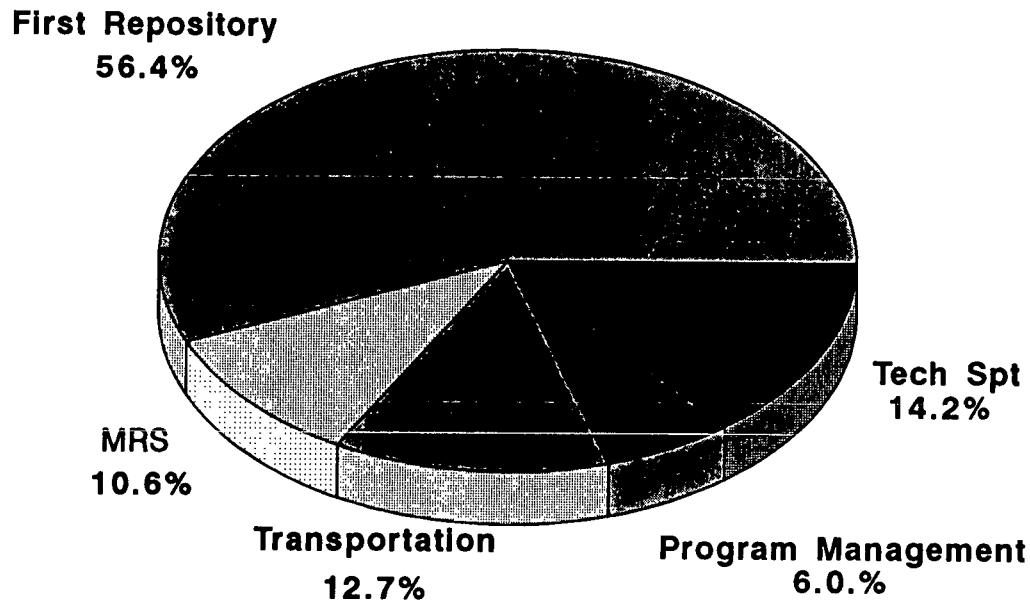


Contingency Planning

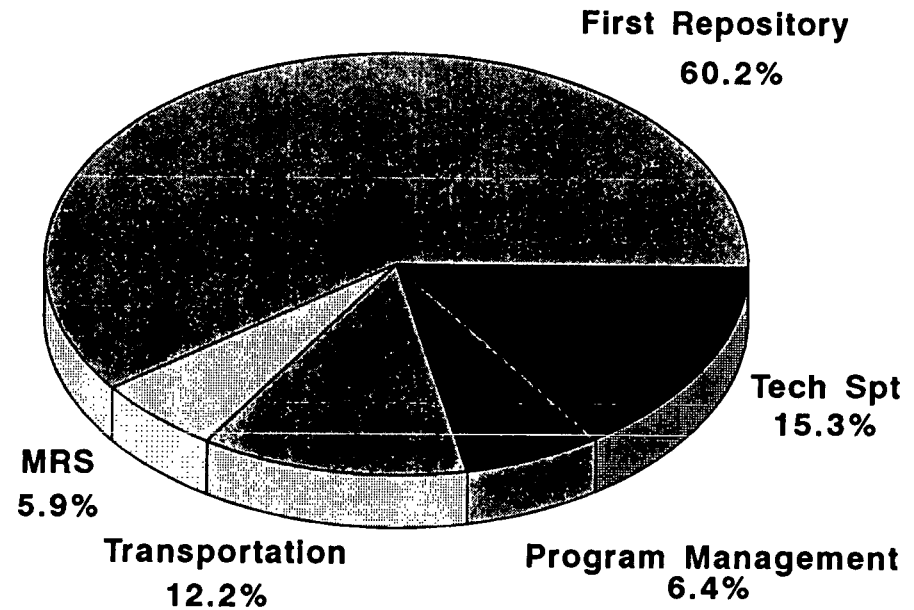
Contingency Planning

- **Continuing process at strategic and tactical levels**
- **Not a public process**
- **Major strategic topics addressed:**
 - **Delayed Yucca Mountain access (now budget-delayed progress)**
 - **Delayed MRS siting**
 - **Unsuitability of Yucca Mountain candidate site**
- **Interactive with Department's strategic planning requirements**

Civilian Radioactive Waste Management Nuclear Waste Fund



FY 1992 Request
\$305.1M



FY 1992 Enacted
\$275.1M