Department of Energy
Washington, DC 20585

APR 9 1993

Mr. Joseph J. Holonich
Director, Repository Licensing & Quality
Assurance Project Directorate
Division of High-Level
Waste Management
Office of Nuclear Material
Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Holonich:

This is in response to a telephone request from Don Loosley of your staff for a copy of the FY 1994 Congressional budget request for the Office of Civilian Radioactive Waste Management. In return, we would ask that your office provide us with a copy of the FY 1994 Congressional budget request for the Nuclear Regulatory Commission, including those portions receiving funding from the Nuclear Waste Fund.

If you have any questions, please feel free to contact Linda Desell of my staff on (202)586-1462.

Sincerely,

J. L. P. Roberts for
Dwight E. Shelor
Associate Director
Office of Systems and Compliance
Office of Civilian Radioactive
Waste Management

Enclosure (2 copies of FY 94 Budget) On the Shelf
FILED ON STACKS
SAME ACC # CFY 1994 CONG. BUDGET REQ)

130042

102.2
WM-11
NH03

9304130363 930409
PDR WASTE
WM-11 PDR

cc: (w/encl.)

C. Gertz, YMPO
T. J. Hickey, Nevada Legislative Committee
R. Loux, State of Nevada
D. Bechtel, Las Vegas, NV
Eureka County, NV
Lander County, Battle Mountain, NV
P. Niedzielski-Eichner, Nye County, NV
W. Offutt, Nye County, NV
C. Schank, Churchill County, NV
F. Mariani, White Pine County, NV
V. Poe, Mineral County, NV
J. Pitts, Lincoln County, NV
J. Hayes, Esmeralda County, NV
B. Mettam, Inyo County, CA

rec'd with letter dtd
4/9/93
9304130363 930408

OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT

FY 1994 CONGRESSIONAL BUDGET REQUEST

- NUCLEAR WASTE FUND
- DEFENSE NUCLEAR WASTE DISPOSAL
- CIVILIAN RADIOACTIVE WASTE R&D

102.2

DEPARTMENT OF ENERGY

Proposed Appropriation Language

Nuclear Waste Disposal Fund

For nuclear waste disposal activities to carry out the purposes of Public Law 97-425, as amended, including the acquisition of real property or facility construction or expansion, [$275,071,000], $260,000,000 to remain available until expended, to be derived from the Nuclear Waste Fund. To the extent that balances in the fund are not sufficient to cover amounts available for obligation in the account, the Secretary shall exercise his authority pursuant to section 302(e)(5) of said Act to issue obligations to the Secretary of the Treasury: Provided, That of the amount herein appropriated, within available funds, not to exceed $5,000,000 may be provided to the State of Nevada, for the sole purpose in the conduct of its oversight responsibilities pursuant to the Nuclear Waste Policy Act of 1982, Public Law 97-425, as amended, of which not less than $1,000,000 is for distribution, as determined by the Department of Energy, to the University of Nevada - Las Vegas, University of Nevada - Reno, and the Desert Research Institute for the purpose of conducting independent performance assessment studies in support of the State of Nevada oversight responsibilities, and of which not less than $1,000,000 is for the Harry Reid Center for Environmental Studies for the planning and establishment of a national institute for waste management studies that will conduct independent evaluations of site performance, site suitability for waste disposal, and repository operations, and make recommendations for the protection of the health, safety and environment of citizens from waste disposal sites: Provided further, That of the amount herein appropriated, not more than $6,000,000 may be provided to affected local governments, as defined in the Act, to conduct appropriate activities pursuant to the Act: Provided further, That the distribution of the funds herein provided among the affected units of local government shall be determined by the Department of Energy (DOE) and made available to the State and affected units of local government by direct payment: Provided further, That within 90 days of the completion of each Federal fiscal year, each entity shall provide certification to the DOE, that all funds expended from such direct payment monies have been expended for activities as defined in Public Law 97-425, as amended. Failure to provide such certification shall cause such entity to be prohibited from any further funding provided for similar activities: Provided further, That none of the funds herein appropriated may be used directly or indirectly to influence legislative action on any matter pending before Congress or a State legislature or for any lobbying activity as provided in 18 U.S.C. 1913: Provided further, That none of the funds herein appropriated may be used for litigation expenses: Provided further, That grant funds are not to be used to support multistate efforts or other coalition building activities inconsistent with the restrictions contained in this Act: Provided further, That of the amount appropriated herein, up to $3,700,000 shall be available for infrastructure studies and other research and development work to be carried out by the [Universities of Nevada, Reno, Las Vegas, and] University of Nevada - Reno, University of Nevada - Las Vegas, the Desert Research Institute, [and at least $750,000 to continue funding for the Mobile Sampling Platform developed and operated by the Environmental Research Center at the University of Nevada, Las Vegas.] and the Community College of Southern Nevada, including $750,000 to be made available to the Harry Reid Center for Environmental Studies for these purposes. Funding to the universities will be administered by the DOE through a cooperative agreement.

DEPARTMENT OF ENERGY

Proposed Appropriation Language

Nuclear Waste Disposal Fund (continued)

In paying the amounts determined to be appropriate as a result of the decision in Consolidated Edison Company of New York v. Department of Energy 870 F.2d 694 (D.C. Cir. 1989), the Department of Energy shall pay interest at a rate to be determined by the Secretary of the Treasury and calculated from the date the amounts were deposited into the Nuclear Waste Fund. Such payments may be made by credits to future utility payments into the Fund. (Energy and Water Development Appropriations Act, 1993.)

Explanation of Change

Provides funding to University of Nevada System to increase involvement in Yucca Mountain site characterization oversight and to the Harry Reid Center for Environmental Studies to establish a national institute for waste managemen. studies relating to the Yucca Mountain site. The language also provides funding to the Community College of Southern Nevada and the Harry Reid Center for Environmental Studies for infrastructure studies and other research and development work.

DEPARTMENT OF ENERGY
FY 1994 CONGRESSIONAL REQUEST
NUCLEAR WASTE FUND

OVERVIEW

NUCLEAR WASTE FUND

The Nuclear Waste Policy Act of 1982 (NWPA), as amended, authorizes the Department of Energy (DOE) to site, construct, and operate a geologic repository for the disposal of spent nuclear fuel and high-level radioactive waste; to site, construct, and operate one Monitored Retrievable Storage (MRS) facility; and to provide for the safe transportation of spent nuclear fuel and high-level radioactive waste in casks certified by the Nuclear Regulatory Commission (NRC) and in accordance with regulations promulgated by the U.S. Department of Transportation. The NWPA, as amended, directs the DOE to characterize the Yucca Mountain candidate site in Nevada to assess whether it is suitable for a geologic repository. To ensure the safe management and disposal of waste, the program must execute all activities related to radiological safety and waste isolation in accordance with an NRC-accepted quality assurance program.

The Office of Civilian Radioactive Waste Management's (OCRWM) FY 1994 budget request seeks to balance continued progress and productivity enhancement against cost containment, while providing full compliance with all applicable environmental, safety, health, and quality assurance requirements. Within an overall framework of budgetary restraint, OCRWM's request focuses on the earliest possible suitability determination of the Yucca Mountain candidate repository site, emphasizing visible and consistent progress in underground exploration, while continuing ongoing surface-based investigations at the site. OCRWM is evaluating a multipurpose container system (MPC) which may have significant benefits for handling, storing, transporting, and disposing of spent nuclear fuel. Concurrently, OCRWM would continue any viable Monitored Retrievable Storage siting initiatives. Elements of the program, including schedules, are currently under review by the Secretary of Energy to assure DOE is meeting its responsibilities under the NWPA, as amended. OCRWM's budget request for activities mandated by the NWPA, as amended, totals $380 million, of which $260 million is requested from the Nuclear Waste Fund, and $120 million is requested in the Defense Nuclear Waste Disposal appropriation. Although a separate request has been submitted for the latter, the funding provided from that appropriation will be used entirely to support Yucca Mountain site characterization activities, as was done in FY 1993. Therefore, a complete description of Yucca Mountain activities is included in this Nuclear Waste Fund budget request.

The FY 1994 Congressional budget request for the Nuclear Waste Fund reflects the Program's new budget structure. Pursuant to guidance pertaining to programs under the jurisdiction of the Energy and Water Development Appropriation Committee, the FY 1994 budget request is prepared on a noncomparable basis.

OCRWM has made significant adjustments, both in the distribution of its enacted FY 1993 appropriation and in its FY 1994 budget request, to respond to the concerns expressed by the House-Senate Conferees in connection with the FY 1993 Nuclear Waste Disposal Fund appropriation. Thus, OCRWM has reduced its FY 1994 request for a number of Headquarters activities, including MRS, Transportation, and Systems Integration and Compliance, and External Relations, below the enacted FY 1992 funding level. Most other Headquarters activities have been kept in line with the FY 1993 appropriation. Savings resulting from Headquarters reductions were allocated to the Yucca Mountain Site Characterization Project which, in addition, shifted approximately $10 million from previously budgeted infrastructure activities to scientific investigations in the FY 1994 request.

YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT: OCRWM will continue site characterization activities at the Yucca Mountain candidate repository site. The major focus of the site characterization effort is on underground exploration, including the initiation of tunnel-boring machine operations for construction of the Exploratory Studies Facility and the start of underground testing. Emphasis will also be placed on the ongoing surface-based testing, including an active drilling program and scientific studies. Other activities include waste package and repository design, regulatory, institutional, quality assurance, environment, safety and health, and information management.

MONITORED RETRIEVABLE STORAGE: This activity supports the siting, design, construction, licensing through the NRC, and operation of a facility to perform spent nuclear fuel receipt, handling, and storage prior to permanent emplacement in a geologic repository. The focus of the current MRS program is on development of an MPC, which is being developed in close coordination with the nuclear utilities. Concurrently, OCRWM will continue viable MRS siting activities.

TRANSPORTATION SYSTEM: The purpose of this activity is to ensure that a safe, environmentally and institutionally acceptable, and cost-effective transportation system is in place to transport spent nuclear fuel and high-level nuclear waste to a waste management facility. This activity includes the design, development, certification, and testing of necessary transportation equipment and services; identification and resolution of institutional issues; and operational aspects of shipping spent fuel and high-level nuclear waste to storage and, finally, to disposal facilities.

WASTE ACCEPTANCE: The purpose of this activity is to ensure effective communication between OCRWM and the owners and generators of spent nuclear fuel and high-level radioactive waste, establish definitive procedures and protocols for the acceptance of such wastes by the Federal Government, manage the Standard Disposal Contract, establish and verify fees paid into the Nuclear Waste Fund, develop the Nuclear Waste Fund fee adequacy analysis, prepare Annual Capacity and Acceptance Priority Reports, and review and approve Delivery Commitment Schedules.

QUALITY ASSURANCE: The purpose of this activity is to maintain the OCRWM Quality Assurance Program, as required by the NRC, which ensures that all OCRWM activities are accomplished and documented in accordance with regulatory requirements and are conducted in a manner which protects worker and public health, safety, and the environment.

SYSTEMS INTEGRATION AND COMPLIANCE: The purpose of this activity is to ensure that waste management components are integrated into a single waste management system and that all OCRWM activities are conducted in accordance with regulatory guidance established by NRC, the Environmental Protection Agency, and other governing bodies.

PROGRAM MANAGEMENT: This activity includes Federal salaries, benefits, and travel; strategic planning; international program support; external relations; program control and administration; information management; contract business management; first repository support; and MRS Project support.

DEPARTMENT OF ENERGY
FY 1994 CONGRESSIONAL BUDGET REQUEST
NUCLEAR WASTE FUND
(dollars in thousands)

LEAD TABLE

Nuclear Waste Fund

Activity	FY 1992 Adjusted	FY 1993 Appropriation	FY 1993 Adjustment	FY 1994 Request	FY 1995 Request	FY 1996 Request
First Repository						
Operating Expenses	$ 163,133	$ 242,417		--	--	--
Capital Equipment	2,417	17,100		--	--	--
Subtotal, First Repository	$ 165,550	$ 259,517	$-259,517 a/	--	--	--
Yucca Mountain Site Characterization Project						
Operating Expenses	--	--		$ 244,796	$ 280,880	$ 289,208
Capital Equipment	--	--		17,100	12,300	22,200
Subtotal, Yucca Mountain Site Characterization Project	--	--	$+244,697 b/	$ 261,896	$ 293,180	$ 311,408
Monitored Retrievable Storage						
Operating Expenses	$ 16,225	$ 17,308		$ 15,650	$ 27,140	$ 24,750
Capital Equipment	0	0		0	0	0
Subtotal, Monitored Retrievable Storage	$ 16,225	$ 17,308	$- 1,000 c/	$ 15,650	$ 27,140	$ 24,750
Transportation, Systems Integration and Engineering Development						
Operating Expenses	$ 33,613	$ 24,135		--	--	--
Capital Equipment	70	0		--	--	--
Subtotal, Transportation, Systems Integration and Engineering Development	$ 33,683	$ 24,135	$- 24,135 d/	--	--	--
Transportation System						
Operating Expenses	--	--		$ 16,160	$ 16,100	$ 18,000
Capital Equipment	--	--		0	0	0
Subtotal, Transportation System	--	--	$+ 19,662 e/	$ 16,160	$ 16,100	$ 18,000
Waste Acceptance						
Operating Expenses	--	--		$ 3,515	$ 3,680	$ 4,050
Capital Equipment	--	--		0	0	0
Subtotal, Waste Acceptance	--	--	$+ 3,660 f/	$ 3,515	$ 3,680	$ 4,050

LEAD TABLE - Nuclear Waste Fund (con't)

Activity	FY 1992 Adjusted	FY 1993 Appropriation	FY 1993 Adjustment	FY 1994 Request	FY 1995 Request	FY 1996 Request
Systems and Compliance						
Operating Expenses	--	$ 18,900		--	--	
Capital Equipment	--	0		--	--	
Subtotal, Systems and Compliance	--	$ 18,900	$- 18,900 g/	--	--	--
Systems Integration and Compliance						
Operating Expenses	--	--		$ 15,145	$ 11,960	$ 9,900
Capital Equipment	--	--		0	0	0
Subtotal, Systems Integration and Compliance	--	--	$+ 18,900 h/	$ 15,145	$ 11,960	$ 9,900
Program Management and Technical Support						
Operating Expenses	$ 59,293	$ 54,711		--	--	--
Capital Equipment	320	500		--	--	--
Subtotal, Program Management and Technical Support	$ 59,613	$ 55,211	$- 55,211 i/	--	--	--
Quality Assurance						
Operating Expenses	--	--		$ 9,539	$ 8,776	$ 8,585
Capital Equipment	--	--		0	0	0
Subtotal, Quality Assurance	--	--	$+ 9,539 j/	$ 9,539	$ 8,776	$ 8,585
Program Management						
Operating Expenses	--	--		$ 57,595	$ 54,478	$ 53,849
Capital Equipment	--	--		500	500	500
Subtotal, Program Management	--	--	$+ 62,305 k/	$ 58,095	$ 54,978	$ 54,349
Total	$275,071	$375,071	$ 0	$380,000	$415,814	$431,042
Less, Defense Nuclear Waste Disposal	--	-100,000		-120,000	-130,000	-140,000
Total, Nuclear Waste Fund	$275,071	$275,071		$260,000	$285,814	$291,042
Summary						
Operating Expenses	$272,264	$357,471		$362,400	$403,014	$408,342
Capital Equipment	2,807	17,600		17,600	12,800	22,700
Total Program	$275,071	$375,071		$380,000	$415,814	$431,042
Staffing (FTEs)	242	248		245	245	245

Authorizations:
P.L. 97-425, "Nuclear Waste Policy Act of 1982"
P.L. 100-203, "Nuclear Waste Policy Amendments Act of 1987"

a/ Comparability adjustments of $244,697 to Yucca Mountain Site Characterization Project, $8,020 to Program Management, and $6,800 to Quality Assurance.
b/ Comparability adjustment from First Repository.
c/ Comparability adjustment to MRS Project Support.
d/ Comparability adjustments of $19,622 to Transportation, $3,660 to Waste Acceptance, and $813 to MRS Project Support.

LEAD TABLE - Nuclear Waste Fund (con't)

e/ Comparability adjustment from the Transportation element of Transportation, Systems Integration and Engineering Development.
f/ Comparability adjustment from the Waste Acceptance element of Transportation, Systems Integration and Engineering Development.
g/ Comparability adjustment to Systems Integration and Compliance.
h/ Comparability adjustment from Systems and Compliance.
i/ Comparability adjustment of $52,472 to Program Management and $2,739 to Quality Assurance.
j/ Comparability adjustment of $6,800 from First Repository, and $2,739 from Program Management.
k/ Comparability adjustment of $52,472 from Program Management and Technical Support, $8,020 from First Repository, $1,000 from Monitored Retrievable Storage, and $813 from the Transportation element of Transportation, Systems Integration and Engineering Development.

DEPARTMENT OF ENERGY
FY 1994 CONGRESSIONAL BUDGET REQUEST
OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT

NUCLEAR WASTE FUND

PROJECTED RECEIPTS BY FISCAL YEAR

(Dollars in Thousands)

	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998
One mill/kWh Fee 1/.....	582,479	570,800	576,500	570,500	577,100	585,900	594,700
Fee Credits 2/.....	(29,288)	(160,000)	(190,000)	(30,000)	--	--	--
One-time Fee.....	6,000	6,000	4,500	0	0	0	0
Defense Waste Fee 3/....	7,500	--	--	--	--	--	--
Subtotal.....	566,691	416,800	391,000	540,500	577,100	585,900	594,700
Interest Income 4/.....	268,222	248,000	279,000	321,000	277,400	264,600	247,700
Total Income.....	834,913	664,800	670,000	861,500	854,500	850,500	842,400

1/ Based on 1992 EIA forecast.
2/ Result of Consolidated Edison v. DOE, decided March 17, 1989.
3/ Does not include the Defense Nuclear Waste Disposal appropriation, which, beginning in FY 1993, is the Federal contribution towards carrying out the activities of the Nuclear Waste Policy Act of 1982, as amended.
4/ Represents net earnings on investments available for appropriation.

DEPARTMENT OF ENERGY
FY 1994 CONGRESSIONAL BUDGET REQUEST
NUCLEAR WASTE FUND
(dollars in thousands)

SUMMARY OF CHANGES

FY 1993 Appropriation	$ 375,071 1/
Adjustments	0
FY 1994 Base	$ 375,071

YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT

Comparability adjustment for First Repository Support	-866
Comparability adjustment for International Waste Management Technology	-7,154
Comparability adjustment for Quality Assurance	-6,800
Increase reflects construction of Exploratory Studies Facility (ESF) support facilities, completion of the Nevada Test Site electrical system upgrades, initiation of tunnel boring operations for the north ramp of the ESF, and initiation of underground testing in the ramp. Increase surface-based testing activities, including active drilling and trenching efforts. Increase design activities for the development of the advanced conceptual design for the repository and waste package	+17,199

MONITORED RETRIEVABLE STORAGE

Comparability adjustment for MRS Project Support	-1,000
Net reduction due to a reduction in available financial assistance	-658

TRANSPORTATION SYSTEM

Comparability adjustment for MRS Project Support	-813
Reduction reflects delay of Phase 1 rail/barge cask design, completion of Cask Maintenance Facility preconceptual design studies and a reduced level of effort for study of burn-up credit issues.	-3,502

WASTE ACCEPTANCE

Reduction reflects decreased number of planned audits of utilities to verify fees paid into the Nuclear Waste Fund	-145

QUALITY ASSURANCE

Comparability adjustment for Quality Assurance	+9,539

1/ Includes $100 million from the Defense Nuclear Waste Disposal Appropriation.

DEPARTMENT OF ENERGY
FY 1994 CONGRESSIONAL BUDGET REQUEST
NUCLEAR WASTE FUND
(dollars in thousands)

SUMMARY OF CHANGES

SYSTEMS INTEGRATION AND COMPLIANCE

Reduction reflects decrease in overall systems, engineering, systems studies, and configuration management activities	-3,755

PROGRAM MANAGEMENT

Comparability adjustment for Quality Assurance	-2,739
Comparability adjustment for International Waste Management Technology	+7,154
Comparability adjustment for First Repository Support	+866
Comparability adjustment for MRS Project Support	+1,813
Program Management reduction reflects decrease of 3 full-time equivalents (FTEs); decrease in external relations and education activities and a decrease in program control and administration	-4,210
FY 1994 CONGRESSIONAL BUDGET REQUEST	$ 380,000 2/

2/ Includes $120 million from the Defense Nuclear Waste Disposal Appropriation.

DEPARTMENT OF ENERGY
FY 1994 CONGRESSIONAL BUDGET REQUEST
NUCLEAR WASTE FUND
(dollars in thousands)

KEY ACTIVITY SUMMARY

NUCLEAR WASTE FUND

I. Preface: First Repository

With the passage of the Nuclear Waste Policy Amendments Act (NWPAA) in December 1987, the tuff candidate repository site at Yucca Mountain, Nevada, was selected for detailed investigation to evaluate site suitability. The scientific investigation of the Yucca Mountain candidate site involves a program of surface-based tests, including the collection and analysis of geologic, hydrologic, geochemical, and climatological data; environmental and socioeconomic evaluation; construction of an underground test facility and conduct of the in-situ test program within the facility; design of a repository, institutional interactions with the State of Nevada and affected local governments; payments-equal-to-taxes to the State of Nevada and appropriate local jurisdictions; financial assistance for investigation, mitigation, and oversight by the State of Nevada; implementation of the Benefits Agreements program as required; extensive interactions with the NRC and the Presidentially-appointed Nuclear Waste Technical Review Board (NWTRB); and project management activities, including a rigorous quality assurance program to ensure that all aspects of the work are conducted effectively and efficiently. If the Yucca Mountain candidate site is found suitable and is designated as a repository site, the site investigation program will culminate in submission of a license application to the NRC to construct a high-level nuclear waste repository. In addition to the site-specific work to be implemented, geoscientific analysis, risk assessments, material characterization tasks related to spent fuel and high-level waste forms, development and analysis of performance assessment models, and defense high-level waste design and performance studies will be conducted.

II. A. Summary Table: First Repository

Program Activity	FY 1992 Enacted	FY 1993 Enacted	FY 1994 Request	% Change	FY 1995 Request	FY 1996 Request
Systems	$ 4,896	$ 5,481	$ 0	-100	$ 0	$ 0
Waste Package	5,000	8,775	0	-100	0	0
Site	46,746	48,334	0	-100	0	0
Repository	9,729	11,547	0	-100	0	0
Regulatory/Institutional	23,593	28,614	0	-100	0	0
Exploratory Shaft	6,488	48,790	0	-100	0	0
Test Facilities	6,273	9,535	0	-100	0	0
Project Management	47,146	80,841	0	-100	0	0
Financial and Technical Assistance	15,629	17,600	0	-100	0	0
Total, First Repository	$ 165,500	$ 259,517	$ 0	-100	$ 0	$ 0

NOTE: FY 1994 - FY 1996 FIRST REPOSITORY ACTIVITIES TRANSFERRED TO THE YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT DECISION UNIT.

II. B. Major Laboratory and Facility Funding

	FY 1992 Enacted	FY 1993 Enacted	FY 1994 Request	% Change	FY 1995 Request	FY 1996 Request
ARGONNE NATIONAL LABORATORY (EAST)	$ 690	$ 0	$ 0	0	$ 0	$ 0
BROOKHAVEN NATIONAL LABORATORY	$ 110	$ 0	$ 0	0	$ 0	$ 0
LAWRENCE BERKELEY LABORATORY	$ 2,393	$ 1,391	$ 0	-100	$ 0	$ 0
LAWRENCE LIVERMORE NATIONAL LABORATORY	$ 7,107	$ 11,136	$ 0	-100	$ 0	$ 0
LOS ALAMOS NATIONAL LABORATORY	$ 12,534	$ 14,806	$ 0	-100	$ 0	$ 0
NEVADA FIELD OFFICE	$ 111,489	$ 204,404	$ 0	-100	$ 0	$ 0
OAK RIDGE NATIONAL LABORATORY	$ 74	$ 25	$ 0	-100	$ 0	$ 0
PACIFIC NORTHWEST LABORATORY	$ 2,201	$ 450	$ 0	-100	$ 0	$ 0
SANDIA NATIONAL LABORATORIES	$ 14,148	$ 12,485	$ 0	-100	$ 0	$ 0

III. Activity Descriptions: (New BA in thousands of dollars)

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
First Repository					
Systems	Continued maintenance of Systems Engineering Management Plan (SEMP), Configuration Management Plan (CMP), and implementing procedures. Continued systems engineering activities to support surface-based testing (SBT) activities and design of Exploratory Studies Facility (ESF). Updated, as necessary, the Quality (Q) List, Quality Activities List, and Project Requirements List to support ESF design and field activities. Continued field configuration management to support SBT. Initiated systems engineering activities to support ESF construction. Continued	Continue update and maintenance of the SEMP, CMP, repository specification documents, value engineering documentation, and other systems engineering documents, plans and procedures as required to achieve design control and integration of ESF elements. Initiate systems engineering activities in support of design packages to include waste package and repository. Expand configuration management tasks for configured items, as well as for technical, schedule, and cost baselines. Support and participate in interface working	Beginning in FY 1994, this activity has been transferred to the Systems Engineering element of the Yucca Mountain Site Characterization decision unit.		

III. First Repository (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Systems (Cont'd)	to identify and define Yucca Mountain Site Characterization Project (YMP) interfaces for SBT activities and ESF design. Continued implementation of Management System Improvement Strategy (MSIS). These activities utilized $767 of prior-year unobligated funds.	groups. Continue to update, as necessary, the Q-list, Quality Activities list, and Project Requirements list to support ESF design and waste package and repository advanced conceptual designs. Perform repository systems analysis and trade studies as required in support of baselined design tasks. Continue project engineering tasks for repository and waste package to ensure an integrated technical and schedule baseline for surface and subsurface design elements.			
	$ 4,896	$ 5,481	$ 0	$ 0	$ 0
Waste Package	Continued focus of waste package (WP) activities on newly-acquired site characterization data. Prepared for October 1, 1992 start of Advanced Conceptual Design (ACD). Issued the preliminary Near-Field Environment and Waste Forms Characterization Reports. Continued to revise and update Site Characterization Plan (SCP) study plans and activity plans.	Perform WP and EBS near-field environment characteristics analyses in support of site suitability evaluations. Initiate ESF field test planning for EBS. Perform WP containment and EBS radionuclide release analyses. Continue long-term spent fuel oxidation testing at Pacific Northwest Laboratories (PNL) and high-level waste (HLW) glass alteration	Beginning in FY 1994, this activity has been transferred to the Waste Package element of the Yucca Mountain Site Characterization decision unit.		

III. First Repository (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Waste Package (Cont'd)	Maintained near-field laboratory and modeling capabilities. Continued evaluation and initiated selection of WP/engineered barrier system (EBS) concepts for ACD. Maintained Integrated Management Control System, ensuring that appropriate quality assurance (QA) controls were applied to WP activities. Continued to apply QA control procedures to all testing and provide QA staff participation in reviews of all documentation associated with WP. These activities utilized $638 of prior-year unobligated funds.	testing in an air-stream environment at Argonne National Laboratory (ANL). Maintain the spent fuel approved test materials (ATMs) at PNL. Start WP ACD. Perform preliminary design evaluations of ACD options. Initiate large block heater test to validate thermal-hydrological models and determine method of heat transfer to understand flow of water near field of rock surrounding WP.			
	$ 5,000	$ 8,775	$ 0	$ 0	$ 0
Site	Initiated trenching in Midway Valley and at Trench-14. Continued operation of Sample Management Facility (SMF). Continued geotechnical support to ESF Title-II design, including limited drilling along ramp alignments. Maintained capability to conduct dry drilling/coring for the unsaturated zone	Integrate SBT activities with ESF activities and planning (cost, technical and schedule). Integrate ongoing studies to derive data and analyses to support a site suitability determination. Initiate planning for testing in the ESF, including planning for test layout and	Beginning in FY 1994, this activity has been transferred to the Site Investigations element of the Yucca Mountain Site Characterization Project decision unit.		

III. First Repository (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Site (Cont'd)	(UZ) program. Completed prerequisites for dry drilling/coring for FY 1993 UZ program. Drilled prototype UZ borehole using LM-300 drill rig on location south of potential repository block. Completed geochronology investigation of Lathrop Wells and Sleeping Butte volcanic centers. Studied hydrology of Amargosa Desert and prepared report. Continued laboratory testing and analysis of existing core. Continued instrumentation and methods development for laboratory studies. Began preliminary UZ geochemistry experiments. Continued code and model development for site geology, hydrology, and geochemistry. Continued geochemistry laboratory tests and experiments. Continued hydrologic, meteorologic, and climatologic tests and analyses. Continued studies of hydrogenic deposits. Continued climate modeling work. Continued to design field investigations for geochemical, geophysical and resource potential investigations. These activities utilized	equipment requirements. Continue seismicity studies, especially maintenance of seismic monitoring capability. Continue study plan development to support planned activities. Prepare topical reports on erosion, volcanism, and seasonal hazards. Drill boreholes to obtain information to characterize soil and rock conditions that will influence and be influenced by construction of ESF subsurface access facilities. Conduct analysis of core, soil and rock properties obtained from ramp boreholes. Drill one borehole utilizing LM-300 drill rig. SHF will provide curatorial support. Maintain basic geochemistry capability. Continue trenching studies of Quaternary faults. Conduct planning in preparation for underground mapping of ESF. Conduct water table testing in support of site saturated zone groundwater flow system.			

III. First Repository (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Site (Cont'd)	$633 of prior-year unobligated funds.				
	$ 46,746	$ 48,334	$ 0	$ 0	$ 0
Repository	Maintained technical baseline. Completed repository conceptual design. Initiated design features tests and planning for prototypic system tests. Continued technical and management support for cooperative international activities applicable to the Office of Civilian Radioactive Waste Management. Reviewed foreign waste management activities. These activities utilized $1,252 of prior-year unobligated funds.	Develop repository ACD sufficient to support ESF interfaces and system studies. Write engineering plans and update and revise other requirements documents. Initiate engineering studies for various concept evaluations. Support ESF design effort. Continue rock and seal testing development plans. Update and review the Reference Information Base (RIB) and Technical Data Base (TDB). Continue to maintain current knowledge of developments in foreign high-level waste management programs and disseminate within the U.S. program. Participate in concensus development and information exchange activities sponsored by international organizations through bilateral agreements with other countries.	Beginning in FY 1994, this activity has been transferred to the Repository element of the Yucca Mountain Site Characterization decision unit.		

III. First Repository (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Repository (Cont'd)	$ 9,729	$ 11,547	$ 0	$ 0	$ 0
Regulatory/Institutional	Continued to respond to and track commitments resulting from external comments on Site Characterization Plan (SCP) and related documents. Supported interactions with Nuclear Regulatory Commission (NRC), Nuclear Waste Technical Review Board (NWTRB), Advisory Committee on Nuclear Waste (ACNW), and similar organizations. Continued support of study plan preparation, review, and approval. Supported regulatory issue resolution process. Continued support for development of annotated outline for license application (LA). Provided technical and regulatory reviews of Department of Energy (DOE), NRC, Environmental Protection Agency (EPA), and other documents relative to licensing and regulatory needs. Developed regulatory strategies and supported their implementation. Provided regulatory review support to ESF	Continue to respond to and track comments on SCP and related documents. Coordinate and participate in technical/peer reviews. Support interactions with NRC, NWTRB, ACNW and similar organizations. Continue support of study plan preparation, review and approval. Continue preparation of selected LA annotated outline sections. Complete issue resolution report on extreme erosion and technical report on origin of calcite-silica deposits. Initiate issue resolution for substantially complete containment, ground water travel time, volcanism and seismic hazards. Develop regulatory strategies and supported their implementation. Revise the Regulatory Compliance Plan (RCP). Provide required regulatory review support to ESF design and testing program development. Support change control for site characterization activities. Develop technical data	Beginning in FY 1994, regulatory activities have been transferred to the Regulatory element and institutional activities have been transferred to the Institutional element of the Yucca Mountain Site Characterization Project decision unit.		

III. First Repository (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Regulatory/Institutional (Cont'd)	design and testing program development and conduct. Continued preparation of Semi-Annual Site Characterization progress reports. Supported change control for site investigation activities, including updates and revisions of regulatory baseline documents. Continued to review and update the technical data base (TDB) and reference information base (RIB), input data to TDB, and maintained Automated Technical Data Tracking (ATDT) system; produced quarterly project data catalogs. Continued work on the groundwater travel time (GWTT) model and developed performance assessment codes. Restarted model development work on preclosure source term and scenario classes. Updated EQ3/6 geochemical code and data base. Continued integration of performance assessment (PA), SBT, and EBS design activities. Continued integration of performance assessment with Early Site Suitability Evaluation (ESSE) process. Prepared to support WP and	management system for coordinating technical data requirements with acquiring and using organizations. Develop the Technical Data Parameter Dictionary for use in organizing data requirements. Utilize and maintain ATDT system for reporting acquisition and development of site characterization and design and development data in quarterly technical data catalog. Provide controlled narrative RIB to serve as common source of best available technical data. Update Geologic and Engineering Materials Bibliography of Chemical Species (GEMBOCHS) for use in geochemical modeling. Update Geologic and Environmental Nodal Information Study and Evaluation System (GENISES) with Site and Engineering Properties Data Base (SEPDB). Provide spatial data analyses and products in support of site characterization and design activities. Update PA calculations supporting site suitability evaluations. Provide PA input to LA annotated outline. Continue			

III. First Repository (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Regulatory/Institutional (Cont'd)	repository design with performance analyses. Supported ESF Title II design re-start. Continued to develop scenario event trees and preliminary scenario models suitable for mathematical analyses. Documented the 1991 total system PA capability demonstration and prepared for an expanded iteration in FY 1993. Continued monitoring of laboratory and field experiments of fluid flow and contaminant transport in support of model validation. Evaluated, documented, and integrated new site data from SBT. Continued entry of PA computer codes into quality assurance (QA) software configuration management system. Reviewed participant requests for site access. Maintained files of land access approvals and associated supporting documentation. Continued coordination with Bureau of Land Management (BLM) and Department of the Interior (DOI). Continued coordination of right-of-way reservations. Continued	analyses of ESF Title II design packages. Continue evaluations of potential impacts on site of surface-based and ESF tests. Initiate development and analyses of sealing concepts and associated performance models. Continue mathematical model and computer code development, improvement, verification, and documentation for WP and total system PA. Continue documentation of scenario event trees. Continue detailed-process modeling for justifying assumptions of total system PA codes. Continue laboratory and field experiments of fluid flow and contaminant transport. Continue input to and evaluations of natural analog studies. Continue benchmarking and validation by participation in international cooperative efforts. Continue review of participant requests for site access. Maintain files of land access approvals with associated supporting documentation. Continue coordination with BLM/DOI. Continue coordination of			

III. First Repository (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Regulatory/Institutional (Cont'd)	operation of information offices in Beatty and Las Vegas. Opened a Pahrump Information Office. Supported six YMP public update meetings. Continued speaker's bureau activities, Yucca Mountain tours, and exhibit showings. Provided support to YMP interactions with State of Nevada, public interest groups, Nevada business community, and government agencies. Implemented rural outreach program to expand interactions with affected counties. Continued support for OCRWM interactions and developed educational materials and programs. Developed and/or updated various publications, models, and exhibits as needed. These activities utilized $2,206 of prior-year unobligated funds.	right-of-way reservations. Continue operation of information offices in Beatty, Las Vegas, and Pahrump. Support six YMP public update meetings. Continue speaker's bureau activities and exhibit showings. Add contractor staff to support speaker's bureau. Continue YMP tours. Support YMP interactions with State of Nevada, public interest groups, Nevada business community, and local government agencies. Increase contractor staff levels to support expanded interactions. Continue interactions with affected counties through rural outreach program. Support OCRWM/YMP media relations, including ongoing information clipping service. Support OCRWM interactions and develop/update various publications, models and exhibits. Continue to develop/implement educational programs. Develop/implement systematic advertising campaign for YMP outreach programs.			

III. First Repository (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Regulatory/Institutional (Cont'd)	$ 23,593	$ 28,614	$ 0	$ 0	$ 0
Exploratory Shaft	Completed Title-II design for site preparation activities for the north ramp portal, including access roads, construction pads, topsoil pad, drainage systems, surface utilities, and communication systems. Initiated Title-II design for ramp portal, at the north ramp. These activities utilized $880 of prior-year unobligated funds.	Construct north portal pad and tunnel boring machine (TBM) launching facility. Procure, receive and assemble one large diameter TBM. Procure associated conveyors and ventilation equipment. Provide temporary power to the north portal. Perform Title II design for the north ramp. Perform design for selected north portal surface facilities. Perform Title I and II design of Nevada Test Site (NTS) electrical system upgrades. Begin test planning and coordination for FY 1994 north ramp test activities. Begin early design activities for the integrated data system (IDS).	Beginning in FY 1994, this activity has been transferred to the Exploratory Studies Facility element of the Yucca Mountain Site Characterization Project decision unit.		
	$ 6,488	$ 48,790	$ 0	$ 0	$ 0

III. First Repository (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Test Facilities	Continued master planning. Completed procurement of communications network. Produced conceptual design report of power system upgrades to support Area 25 requirements and Provided contractor staff for YMP Field Operations Center for ramp-up in surface-based testing (SBT). Provided administrative services, including health and safety support, in preparation for site characterization activities. Provided operations and maintenance services for Area 25 (90 square miles and 10 buildings). Continued interface with Nevada Test Site (NTS) relative to shared facilities. Continued support of YMP public outreach tours.	Start and complete consolidated conceptual design of Area 25 infrastructure facilities. Start and complete Title-I and II design of access road to Well J-13 area, receiving warehouse/ storage and office space for site investigations. Continue support to site manager, administrative/clerical services to participants, operation and maintenance, motor pool, logistical support, hygiene, safety, fire protection, telephone and communications, calibration services, YMP tours, bus service, janitorial services, and NTS interface. Repair facilities damaged in 1992 earthquakes.	Beginning in FY 1994, this activity has been transferred to the Test Facilities element of the Yucca Mountain Site Characterization decision unit.		
	$ 6,273	$ 9,535	$ 0	$ 0	$ 0

III. First Repository (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Project Management	Continued to perform overall project management and control functions, including project planning, budgeting, financial analysis, and cost and schedule control; prepared and issued progress reports. Developed and issued project planning guidance. Provided technical guidance to each (YMP) participant. Continued support for plans and procedures and change control documentation. Performed change control board (CCB) activities. Conducted management assessments, attended meetings, and made presentations. Maintained operation of project-level Planning and Control System (PACS) with participant data. Continued limited development and operation of participants' internal cost/schedule control systems. Conducted cost/schedule performance measurement reviews and analyses. Maintained support for interaction with Energy Systems Acquisition Advisory Board (ESAAB), Edison Electrical Institute (EEI), and Independent Cost	Manage and control YMP work, including Technical Project Office (TPO) management, ESF design and construction, engineering, SBT and WP development, liaison with the State of Nevada and local governments, interaction with the NRC on licensing issues, near-field environment and modeling in support of site characterization (SC). Complete transition of the PACS to management and operating contractor. Initiate participant cost/schedule system evaluation analysis. Implement project-wide cost effectiveness program. Provide management support in areas of budgeting, cost and schedule planning, and control. Continue development and implementation of Integrated Project Management System (IPMS). Continue performance measurement and support change control system. Continue to collect project management planning and control data for development, implementation and maintenance of	Beginning in FY 1994, project management activities have been transferred to the Project Management, Quality Assurance, Information Management, Environment Safety and Health, and Support Services elements of the Yucca Mountain Site Characterization decision unit.		

III. First Repository (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Project Management (Cont'd)	Estimating (ICE) team. Continued configuration management of Mined Geologic Disposal System (MGDS) baseline. Continued implementation of change control system. Continued to support PACS and QA-related training. These activities utilized $10,039 of prior-year unobligated funds. $16,451 Continued maintenance and implementation of QA program to satisfy Office of Civilian Radioactive Waste Management (OCRWM) and Nuclear Regulatory Commission (NRC) QA requirements. Developed, revised, and maintained QA plans and procedures as necessary. Performed QA audits and surveillances to ensure technical programs are being conducted in compliance with OCRWM requirements and NRC regulations. Continued review of plans, procedures, drawings, specifications, and other documents to ensure QA requirements are satisfied. Continued development of required quality concerns program.	automated PACS. Continue to develop technical milestone data bases. Continue to provide support to project management control processes including ESAAB, EEI, ICE, General Accounting Office (GAO), and DOE Inspector General (IG). Continue to support Program change control process. Continue to provide controls required to process project plans and procedures. $15,986 Continue development and maintenance of project QA program consisting of all planned and systematic actions necessary to provide adequate confidence that data used in siting, design, and construction of a geologic repository are demonstrable and meet Federal regulatory requirements. Continue efforts required to assist with development of QA program and implementing procedures, review of project documentation for compliance with approved QA program and maintaining a requirements tracking matrix. Continue to			

III. First Repository (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Project Management (Cont'd)	These activities utilized $2,235 of prior-year unobligated funds. $3,011 Continued information management activities involving computer hardware and software systems, telecommunications, data management, and records management. Continued software development and wide area network communication link between YMP and Office of Civilian Radioactive Waste Management (OCRWM). Expanded records management functions to support new field activities. Initiated plans to implement local records and document control center at Yucca Mountain Site Office (YMSO). These activities utilized $1,735 of prior-year unobligated funds. $6,996 Continued activities supporting permit application preparation and submittal. Conducted environmental regulatory compliance activities in accordance with	provide QA guidance and direction to affected organizations. Continue implementation and maintenance of indoctrination, training, qualification and certification requirements for personnel performing quality-affecting work. Continue to implement corrective actions and establish a QA program deficiency tracking system. Code deficiency causes and generate project trend report. Continue to interact with Program participants, NRC, State of Nevada and local governments. $17,864 Continue to provide installation, operation and maintenance of the Vax cluster and peripheral equipment to service YMP computing needs. Continue to maintain, execute and update disaster recovery and contingency plans. Continue to assist in update of the Computer Protection Plan and provide inputs for long- and short-range plans. Continue to provide user support to YMP personnel. Continue to provide			

III. First Repository (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Project Management (Cont'd)	Environmental Regulatory Compliance Plan (ERCP). Began preplanning for Hazardous Materials Management and Handling Program (HMMHP). Reviewed internal requests for SC activities for compliance with Environmental Monitoring and Mitigation Plan (EMMP). Prepared semiannual EMMP progress reports. Monitored compliance with reclamation requirements and conducted on-site audits of reclamation compliance. Continued implementation of field activities in air quality, meteorology, archaeology, radiological studies, terrestrial ecosystems, reclamation, and water resources. Conducted archaeological, terrestrial ecosystem, and radiological preactivity surveys. Continued water level and spring flow monitoring activities. Prepared data reports, implemented water monitoring plans, and developed conceptual models to meet commitments under National Park Service Water Monitoring Plan and U.S. Fish and	management and disposition of computer hardware. Continue to provide maintenance of software management program compliant with DOE Order 1330.1C. Continue to provide support for InfoStreams. Ensure compliance with Government Open System Interconnect Protocol (GOSIP) and other DOE-mandated standards. Continue to operate, manage, and process all project records in support of OCRWM records management program. Continue to operate field records center, participant local records centers, and central records facility. Continue to operate and manage YMP document control system. Continue operation of facilities and subsystems for YMP to provide information necessary to support submittal of LA. $14,014 Conduct environmental studies for ESF and SBT preactivity surveys. Continue environmental monitoring and mitigation efforts for air quality, meteorology, archaeology,			

III. First Repository (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Project Management (Cont'd)	Wildlife Service biological opinion. Implemented monitoring requirements to address commitments relative to desert tortoise study/ research, protection, and impact mitigation. Continued interactions with Native American groups. Provided support, as required, for presentations to NWTRB, site tours, and other external interactions. Processed and entered data collected into RIB and other YMP databases. Implemented YMP socioeconomic program. Developed, maintained, and implemented a socioeconomic plan. Developed and maintained socioeconomic profiles. Supported formal and informal interactions with all levels of government, external groups, and officials concerning socio-economic program. Supported radiological monitoring program. $8,379 Provided essential administrative support services, including training, legal services, procurement, subcontract administration,	radiological studies, terrestrial ecosystems, reclamation, and water resources. Continue desert tortoise studies and monitoring. Assess impacts of SC on environment. Produce required annual reports such as Advisory Council on Historic Preservation (ACHP), Annual Site Environmental Report (ASER), EMMP, Biotic Resource Monitoring Report, update of environmental plans and procedures, and Environmental Field Activity Plans (EFAP). Conduct radiological health and safety program to maintain dose monitoring, tracking and evaluations to ensure as low as reasonably achievable (ALARA) policies are implemented. Review regulation changes for potential project impact. Conduct environmental compliance reviews and surveillances for new activities. Acquire and maintain permits. Continue consultation and interactions with Native American tribes per American Indian Religious Freedom Act (AIRFA). Continue socioeconomic			

III. First Repository (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Project Management (Cont'd)	security, publications, graphics, facilities and equipment operations and maintenance. These activities utilized $1,989 of prior-year unobligated funds. $8,022	monitoring, Payments-Equal-to-Taxes (PETT), socioeconomic profiles and radiological monitoring support programs. Provide management and administrative, compliance surveys, program development, training, engineering and design review, emergency preparedness, medical, fire protection, safety assessment and reporting, and industrial hygiene services. Manage conduct of all project work, activities, and site design of structures, ESF, and equipment to assure compliance with applicable standards. Perform inspections, surveillances, surveys, and appraisals to meet this requirement. Develop and administer safety and health, programs, provide material for training on safety and health, and conduct design reviews. Continue development of appraisal system. Provide emergency preparedness, medical services, fire protection, safety assessment, injury and illness reporting and			

III. First Repository (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Project Management (Cont'd)		recordkeeping, and industrial hygiene monitoring, surveying and corrective action plans for deficiencies detected. Continue general employee training (GET), general employee radiological training (GERT), first aid/cardio-pulmonary resussitation (CPR), defensive driving, general underground training, specific underground training for miners, and other required safety and health courses. Coordinate safety and health programs with Nevada Test Site (NTS), federal Occupational Safety and Health Administration (OSHA), Nevada Department of Safety and Health (DOSH), and other agencies, as needed. Continue the functioning safety and health Advisory Committee work, and Roads and Traffic Enhancement Committee, and perform various safety analyses for all hazardous tasks identified. $13,947 Provide enhanced administrative support, including procurement, contract management,			

III. First Repository (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Project Management (Cont'd)		legal services, personnel, and clerical for YMP, mail distribution, and logistical support for offsite participants. Continue to provide facility/equipment management support, such as YMP technical library operations, Nevada Field Office visitors centers, facility management, property management, rent and telephone services at YMPO, security services, office equipment rental and lease, and motor pool operations. Continue to provide publication/graphics services, Continue to develop and maintain the YMP bibiography and publish the semi-annual Site Characterization Progress Report, as required by the NWPA. Provide overall management of the training program. Develop systematic approaches to training to satisfy NRC and OCRWM requirements. Conduct training for instructor qualification, orientation, indoctrination. Maintain personnel training records. Develop and maintain training baseline and			

III. First Repository (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Project Management (Cont'd)		project-related procedures.			
		$19,030			
	$ 47,146	$ 80,841	$ 0	$ 0	$ 0
Financial and Technical Assistance	Provided funding to State of Nevada for its oversight activities pursuant to NWPA, as amended. Provided funds by direct payments to affected local governments to conduct appropriate activities pursuant to the Act. Provided funding through cooperative agreements to University of Nevada, Las Vegas and Reno to conduct infrastructure studies and other research and development work as directed. Provided Payments-Equal-To-Taxes (PETT) in accordance with NWPA, as amended, and guidance provided by Congress in FY 1992 Appropriations Act. These activities utilized $2,878 of prior-year unobligated funds.	Provide direct payment to State of Nevada, for its oversight activities pursuant to NWPA, as amended. Provide for direct payments to affected local governments to conduct appropriate activities pursuant to the Act. Provide funding through cooperative agreements to University of Nevada, Las Vegas, and Reno, and Desert Research Institute to conduct infrastructure studies and other research and development work as directed. Provide PETT in accordance with NWPA, as amended. Funding levels are determined by Congress and are contingent upon level of technical activity.	Beginning in FY 1994, financial and technical assistance has been transferred to the Financial Assistance element of the Yucca Mountain Site Characterization decision unit.		
	$ 15,629	$ 17,600	$ 0	$ 0	$ 0

III. First Repository (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
First Repository	$ 165,500	$ 259,517	$ 0	$ 0	$ 0

DEPARTMENT OF ENERGY
FY 1994 CONGRESSIONAL BUDGET REQUEST
NUCLEAR WASTE FUND
(dollars in thousands)

KEY ACTIVITY SUMMARY

NUCLEAR WASTE FUND

I. Preface: Yucca Mountain Site Characterization Project

With the passage of the Nuclear Waste Policy Amendments Act (NWPAA) in December 1987, the tuff candidate repository site at Yucca Mountain, Nevada, was selected for detailed investigation to evaluate site suitability. Elements of the Yucca Mountain Site Characterization Project, including project milestones, are currently under review.

The scientific investigation of the Yucca Mountain candidate site involves a program of surface-based tests, including the collection and analysis of geologic, hydrologic, geochemical, and climatological data; environmental and socioeconomic evaluation; the construction of an underground Exploratory Studies Facility (ESF) and the conduct of the in-situ test program within the facility; the design of a repository, institutional interactions with the State of Nevada and affected local governments; payments-equal-to-taxes to the State of Nevada and appropriate local jurisdictions; financial assistance for investigation, mitigation, and oversight by the State of Nevada; implementation of the Benefits Agreements program as required; extensive interactions with the Nuclear Regulatory Commission (NRC) and the Presidentially-appointed Nuclear Waste Technical Review Board (NWTRB); and project management activities, including a rigorous quality assurance program to ensure that all aspects of the work are conducted effectively and efficiently. If the Yucca Mountain candidate site is found suitable and is designated as a repository site, the site investigation program will culminate in submission of a license application to the NRC to construct a high-level nuclear waste repository. In addition to the site-specific work to be implemented, geoscientific analysis, risk assessments, material characterization tasks related to spent fuel and high-level waste forms, and development and analysis of performance assessment models will be conducted.

In FY 1993, the ESF north portal pad and the tunnel boring machine (TBM) launching facility are being constructed; one large-diameter TBM and associated support equipment is being procured; surface-based testing activities are being integrated with ESF activities; studies to assess the seismic hazard to the site will be continued; and advanced conceptual design activities for the repository and waste package have begun. Concurrently, during FY 1993, OCRWM is pursuing early issue closure and is putting the necessary performance assessment tools in place to focus on ESF activities.

In FY 1994, OCRWM plans to conduct the following major activities at the Yucca Mountain candidate site: commence tunnel boring operations for the north ramp of the ESF; continue construction of ESF support facilities; initiate underground testing in the ramp; integrate studies to derive data and perform analysis to emphasize site suitability; continue the surface-based testing, drilling and trenching studies; continue the scientific investigation of the site to analyze geologic, hydrologic, geochemical, and climatological data; perform environmental and socioeconomic evaluations; prepare and issue topical reports on volcanism and ground water migration; continue advanced conceptual design activities for the repository and waste package; continue to operate the project-level planning and control system, and ensure that all work is conducted under the approved quality assurance (QA) program.

II. A. Summary Table: Yucca Mountain Site Characterization Project

Program Activity	FY 1992 Enacted	FY 1993 Enacted	FY 1994 Request	% Change	FY 1995 Request	FY 1996 Request
System Engineering	$ 0	$ 0	$ 5,000	>999	$ 5,000	$ 5,500
Waste Package	0	0	11,364	>999	12,500	14,000
Site Investigations	0	0	57,300	>999	63,964	67,000
Repository	0	0	5,000	>999	8,000	11,000
Regulatory	0	0	22,200	>999	23,200	25,000
Exploratory Studies Facility	0	0	55,500	>999	69,500	68,000
Test Facilities	0	0	10,500	>999	13,500	15,000
Project Management	0	0	16,800	>999	17,300	18,000
Financial Assistance	0	0	17,600	>999	19,000	21,000
Quality Assurance	0	0	12,000	>999	12,000	13,000
Information Management	0	0	13,432	>999	13,432	13,932
Environment, Safety, and Health	0	0	13,000	>999	13,500	16,000
Institutional	0	0	3,200	>999	3,200	4,000
Support Services	0	0	19,000	>999	19,084	19,976
Total, Yucca Mountain Site Characterization Project	$ 0	$ 0	$ 261,896	>999	$ 293,180	$ 311,408

II. B. Major Laboratory and Facility Funding

LAWRENCE BERKELEY LABORATORY	$ 0	$ 0	$ 1,030	>999	$ 720	$ 773
LAWRENCE LIVERMORE NATIONAL LABORATORY	$ 0	$ 0	$ 7,793	>999	$ 5,323	$ 5,541
LOS ALAMOS NATIONAL LABORATORY	$ 0	$ 0	$ 10,479	>999	$ 6,883	$ 7,484
NEVADA FIELD OFFICE	$ 0	$ 0	$ 232,978	>999	$ 264,352	$ 279,229
PACIFIC NORTHWEST LABORATORY	$ 0	$ 0	$ 216	>999	$ 0	$ 0
SANDIA NATIONAL LABORATORIES	$ 0	$ 0	$ 9,400	>999	$ 6,902	$ 7,381

NOTE: FY 1992 - FY 1993 YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT ACTIVITIES INCLUDED IN THE FIRST REPOSITORY DECISION UNIT.

III. Activity Descriptions: (New BA in thousands of dollars)

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Yucca Mountain Site Characterization Project					
System Engineering	Funding requirements for FY 1992 and FY 1993 are included in the First Repository decision unit.		Continue update and maintenance of the Mined Geologic Disposal System (MGDS) specification documents, total system life cycle cost (TSLCC) documentation, value engineering (VE) documentation and other systems engineering documents, plans and procedures as required to maintain design control and integration of MGDS elements. Continue systems engineering activities in support of in-process design packages to include the Exploratory Studies Facility (ESF), waste package and repository. Continue configuration management tasks for configured items as well as, for technical, schedule and cost baselines. Provide continued input for updating the Quality (Q) List, Quality Activities List, and requirements for ESF design, waste package (WP) and repository advanced conceptual designs (ACD). Perform only critical MGDS systems analysis and	Continue update and maintenance of the MGDS specification documents, TSLCC documentation, VE documentation and other systems engineering documents, plans and procedures as required to maintain design and implementation control of integrated MGDS elements. Continue systems engineering activities in support of in-process design packages to include the ESF, waste package and repository. Continue configuration management tasks for configured items, as well as, for technical, schedule and cost baselines. Provide continued input for updating the Q-List, Quality Activities List, and requirements for ESF design, WP and repository ACD. Perform MGDS systems analysis and trade studies as required in support of baselined design tasks. Continue PE tasks for repository and waste package to ensure an integrated technical and schedule baseline for surface and	Continue update and maintenance of the MGDS specification documents, TSLCC documentation, VE documentation and other systems engineering documents, plans and procedures as required to maintain design and implementation control of integrated MGDS elements. Continue systems engineering activities in support of in-process design packages for waste package and repository. Continue configuration management tasks for configured items, as well, as for technical, schedule and cost baselines. Provide continued input for updating the Q-List, Quality Activities List, and requirements for ESF construction, WP and repository ACD. Perform MGDS systems analysis and trade studies as required in support of baselined design tasks. Continue PE tasks for repository and waste package to ensure an integrated technical and schedule baseline for surface and subsurface design

III. Yucca Mountain Site Characterization Project (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
System Engineering (Cont'd)			trade studies as required in support of baselined design tasks. Continue project engineering (PE) tasks for repository to ensure an integrated technical and schedule baseline for surface and subsurface design elements.	subsurface design elements.	elements.
	$ 0	$ 0	$ 5,000	$ 5,000	$ 5,500
Waste Package	Funding requirements for FY 1992 and FY 1993 are included in the First Repository decision unit.		Continue geochemical modeling and testing effort in support of site suitability evaluations. Continue geomechanical testing effort to allow prediction of rock spalling behavior. Continue ESF field test planning for the engineered barrier system. Initiate testing of man-made materials interactions with groundwater to establish effects on groundwater chemistry. Continue waste package containment and engineered barrier system radionuclide release analyses in support of site suitability evaluations. Continue spent fuel dissolution tests and long-term spent fuel oxidation	Continue geochemical modeling and testing effort to include the effects of man-made materials on the anticipated groundwater chemistry in the waste package environment. Continue hydrologic flow and transport behavior modeling and testing effort. Continue the geomechanical testing effort. Continue the engineered barrier system (EBS) large block heater test effort and planning for EBS/ESF heater tests. Initiate thermogravimetric analysis (TGA) testing to define spent fuel oxidation kinetics in the 190C to 250C temperature range. Continue spent fuel dissolution testing and	Continue geochemical and man-made material effects modeling and testing effort. Continue the hydrologic flow and transport behavior modeling and testing effort. Apply the hydrologic model to study changes in EBS releases that occur in the first few meters of host rock. Continue the geomechanical testing effort. Complete the EBS large block heater test and complete planning for the EBS/ESF heater tests. Continue TGA testing to define spent fuel oxidation kinetics. Initiate long-term dry bath spent fuel oxidation tests. Continue spent fuel modeling and continue dissolution testing effort. Continue

III. Yucca Mountain Site Characterization Project (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Waste Package (Cont'd)			testing at Pacific Northwest Laboratories (PNL) and High Level Waste (HLW) glass alteration testing in an air-steam environment at Argonne National Laboratory (ANL). Maintain the spent fuel approved test materials (ATMs) at PNL. Complete iron-base degradation mode survey. Initiate air-steam corrosion tests on candidate container materials to establish aqueous film formation behavior in support of thermal loading decision. Restart container material and waste form modeling efforts. Continue large block heater test to validate thermal-hydrological models and determine method of heat transfer to understand flow of water near field of rock surrounding the WP. Continue integrated radionuclide release testing to determine the interactions of actinide-bearing solution with rocks under flowing conditions. Continue preliminary design evaluations. Support multi-purpose canister design development from MGDS requirements	HLW glass alteration testing. Continue the container materials air-steam corrosion tests and initiate metal barriers long-term service condition testing. Continue degradation model development for metal barriers. Continue integrated radionuclide release testing to determine the interactions of actinide-bearing solution with rocks under flowing conditions. Re-initiate the determination of formation and solution constants needed to support validation of the EQ3/6 code. The waste package design activities will include detailed design and some fabrication evaluations of the waste package.	long-term HLW glass alteration testing. Continue the metal barriers long-term service condition corrosion testing. Continue degradation model development for metal barriers. Continue integrated radionuclide release testing. Continue determination of formation and solution constants needed to support validation of the EQ3/6 code. Waste package design activities will include detailed design and some fabrication evaluations of the waste package and engineered barrier system design options. Initiate studies to evaluate remote handling and repair methods.

III. Yucca Mountain Site Characterization Project (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Waste Package (Cont'd)			perspective.		
	$ 0	$ 0	$ 11,364	$ 12,500	$ 14,000
Site Investigations	Funding requirements for FY 1992 and FY 1993 are included in the First Repository decision unit.		Prepare annual plan and continue integration of surface-based testing activities with ESF activities and planning (cost, technical and schedule). Integrate ongoing studies to derive data and analyses to support emphasis on site suitability. Prepare preliminary site evaluation reports. Continue planning for testing in the ESF, including planning for test layout and equipment requirements. Initiate early ESF tests, including mapping, perched water collection and testing of fault zones. Continue collection of otherwise irretrievable data. Continue seismicity studies, especially maintenance of seismic monitoring capability. Continue study plan development to support planned activities. Drill boreholes to obtain information to characterize soil and	Prepare annual plan and continue integration of surface-based testing activities with ESF activities and planning (cost, technical and schedule). Integrate ongoing studies to derive data and analyses to support emphasis on site suitability. Continue planning for testing in the ESF, including planning for test layout and equipment requirements. Continue collection of otherwise irretrievable data. Initiate seismic hazards study for repository license application design (LAD). Continue study plan development to support planned activities. Utilize the LM-300 drill rig on a 24-hour shift to complete in-progress borehole and drill two additional boreholes. Use the Stratmaster drill rig to complete two geologic boreholes. SHF will provide curatorial support. Continue long-term	Prepare annual plan and continue integration of surface-based testing activities with ESF activities and planning (cost, technical and schedule). Integrate ongoing studies to derive data and analyses to support emphasis on site suitability. Prepare interim site evaluation reports, including assessment of suitability issues. Continue planning for testing in the ESF, including planning for test layout and equipment requirements. Continue collection of otherwise irretrievable data. Continue seismic monitoring, as well as seismic hazards studies. Continue study plan development to support planned activities. Initate mineralogy and petrology studies which provide site suitability information. Initiate chloride and chlorine 36 measurements of percolation in the ESF.

III. Yucca Mountain Site Characterization Project (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Site Investigations (Cont'd)			rock conditions that will be influenced by the construction of ESF subsurface access facilities. Conduct analysis of core, soil and rock properties obtained from ramp boreholes. Utilizing the LM-300 drill rig on a 24-hour shift, drill two boreholes and start the third deep borehole. Operate the Stratmaster drill rig on multiple shifts to complete two additional deep boreholes of the systematic drilling program. Sample Management Facility (SMF) will provide curatorial support. Maintain basic geochemistry capability. Continue water table testing in support of the site saturated zone groundwater flow system.	geochemistry program. Continue underground mapping of ESF as tunnel boring proceeds. Continue monitoring hydrology infiltration. Continue unsaturated zone (UZ) studies in the three existing site characterization UZ boreholes. Complete initial water table testing in support of site saturated zone groundwater flow system.	Utilize the LM-300 on a 24-hour shift to drill two boreholes and begin a third borehole. Use the Stratmaster drill rig to complete the geologic borehole begun in FY 1995 and begin an additional deep borehole. The SMF will provide curatorial and logging support for ESF samples. Continue long-term geochemistry program. Continue underground mapping of ESF as tunnel boring proceeds. Continue monitoring hydrology infiltration. Continue UZ studies in the three existing site characterization UZ boreholes.
	$ 0	$ 0	$ 57,300	$ 63,964	$ 67,000

III. Yucca Mountain Site Characterization Project (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Repository	Funding requirements for FY 1992 and FY 1993 are included in the First Repository decision unit.		Continue management and integration of repository ACD. Continue interface support for ESF design. Perform construction monitoring tests in starter tunnel. Initiate rock mechanics testing in north ramp. Continue preparation for seal testing and ESF sealing requirements. Prepare study plans for in situ mechanical and thermomechanical tests.	Continue management and integration of repository ACD. Continue technical support to ESF design. Conduct access convergence tests in north ramp. Initiate study plans for thermal tests in ESF. Continue preparation of sealing tests and complete sealing requirements for ESF. Complete study plans for in situ mechanical and thermomechanical tests in ESF. Continue development of computer codes for ESF design verification.	Continue management and integration of repository ACD. Continue in situ mechanical tests in ESF. Conduct thermo-structural analyses to support. Continue development of computer codes for ESF design verification. Continue preparation of study plans for ESF seal testing.
	$ 0	$ 0	$ 5,000	$ 8,000	$ 11,000
Regulatory	Funding requirements for FY 1992 and FY 1993 are included in the First Repository decision unit.		Continue to respond to and track comments on Site Characterization Plan (SCP) and related documents. Coordinate and participate in technical/peer reviews. Support interactions with Nuclear Regulatory Commission (NRC), Nuclear Waste Technical Review Borad (NWTRB), Advisory Council on Nuclear Waste (ACNW), and similar organizations. Continue support of study plan preparation, review and approval. Prepare Semi-Annual Site	Continue to respond to and track comments on the SCP and related documents. Coordinate and participate in technical/peer reviews. Support interactions with NRC, NWTRB, ACNW, and similar organizations. Continue support of study plan preparation, review and approval. Support regulatory issue resolution. Continue preparation of selected LA annotated outline sections. Refine regulatory strategies and support	Coordinate and participate in technical/peer reviews. Support interactions with NRC, NWTRB, ACNW, and similar organizations. Continue support of study plan revision, review and approval. Continue regulatory issue resolution to support repository LA. Continue preparation of selected LA annotated outline sections. Provide technical and regulatory reviews of DOE, NRC, Environmental Protection Agency

III. Yucca Mountain Site Characterization Project (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Regulatory (Cont'd)			Characterization Progress Reports. Continue preparation of selected LA annotated outline sections. Continue issue resolution activity for selected issues. Provide limited updates and maintain the Technical Data Management System (TDMS). Update and maintain the Technical Data Parameter Dictionary. Utilize and maintain the Automated Technical Data Tracking (ADTD) system. Update and maintain the controlled narrative Reference Information Base (RIB) Update the Geologic and Engineering Materials Bibliography of Chemical Species (GEMBOCHS) component of the Technical Data Base (TDB). Provide spatial data analyses and map products in support of site characterization and design activities. Evaluate and integrate new data from surface-based testing, ESF Title II design, waste package and repository ACD into performance assessment (PA) models. Place highest priority on continued PA support to ESF testing and design, and repository ACD.	their implementation per the Regulatory Compliance Plan. Continue preparation of Semiannual Site Characterization Progress Reports. Update and maintain the TDMS. Update and maintain the Technical Data Parameter Dictionary. Utilize and maintain the ATDT system. Update and maintain the controlled narrative RIB. Update the GEMBOCHS component of the TDB. Provide spatial data analyses and map products in support of site characterization and design activities. Continue integration of PA with site characterization. Evaluate and integrate new site data from surface-based testing, ESF construction and testing, and repository ACD. Focus PA on critical site suitability uncertainties. Provide input to LA annotated outline. Continue evaluations of planned surface-based and ESF tests. Continue PA of sealing concepts and of associated performance models. Continue documentation of scenario event trees and scenario models.	(EPA), and other documents relative to licensing and regulatory needs. Continue preparation of Semiannual Site Characterization Progress Reports. Update and maintain the TDMS. Update and maintain the Technical Data Parameter Dictionary. Utilize and maintain the ATDT system. Update and maintain the controlled narrative RIB. Update the GEMBOCHS component of the TDB. Provide spatial data analyses and map products in support of site characterization and design activities. Conduct pre- and postclosure performance analyses for ACD. Continue PA development of sealing concepts. Initiate performance evaluations of waste retrieval. Continue documentation of scenario event trees and scenario models. Continue detailed process modeling for justifying the assumptions of total-system PA codes. Continue basic research and laboratory and field experiments of fluid flow and contaminant transport. Continue benchmarking

III. Yucca Mountain Site Characterization Project (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Regulatory (Cont'd)			Provide calculations to support Q-List development. Continue mathematical model and computer code improvement and verification for natural system and total system PA. Continue WP and EBS PA activities commensurate with ACD work scope. Continue documentation of scenario event trees and of preliminary scenario models. Continue basic laboratory and field experiments of fluid flow and contaminant transport. Continue work in benchmarking and validation of PA codes and models, through participation in international cooperative efforts.	Continue limited detailed-process modeling for justifying assumptions of total system PA codes. Continue limited laboratory and field experiments of fluid flow and contaminant transport. Begin preparing PA computer codes for entry into QA software configuration system. Continue benchmarking and validation of PA codes and models through participation in international cooperative efforts.	and validation of PA codes and models, including continued participation in international cooperative efforts. Continue integration of PA with site characterization and design activities. Evaluate and integrate new site data from surface-based testing, ESF construction and testing. Provide PA input to LA annotated outline. Continue input to testing prioritization. Initiate input to and evaluations of natural analog studies. Initiate PA input to performance confirmation planning. Continue entry of PA computer codes into the QA software configuration system.
	$ 0	$ 0	$ 22,200	$ 23,200	$ 25,000

III. Yucca Mountain Site Characterization Project (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Exploratory Studies Facility	Funding requirements for FY 1992 and FY 1993 are included in the First Repository decision unit.		Commence tunnel boring operations for north ramp. Begin procurement and construction of water storage tanks, booster pump station, water lines, sewer and mine waste water systems, including associated sitework. Procure and construct portal control/change house building. Perform design of Topapah Spring level (TSL) main drift and main test area (MTA). Complete procurement and construct the 69kV electrical system. Continue Integrated Data System (IDS) design and begin procurement. Initiate underground testing in the north ramp access and continue test planning and coordination. Provide construction test support.	Continue tunnel boring operations along TSL main drift, proceeding toward south portal. Design TSL cross drifts. Design south portal pad, highwall and required surface facilities. Complete south portal and pad. Procure underground mining equipment (drill jumbo and LHD). Continue IDS design and procurement and begin constructing IDS system. Continue test planning, coordination and construction test support. Operate and maintain ESF construction equipment.	Complete construction of south portal ventilation system and electrical system. Start construction of MTA. Procure, receive and assemble small diameter tunnel boring machine (TBM). Design Calico Hills north ramp. Continue mining test alcoves. Continue IDS design and construction. Continue test planning, coordination and construction test support. Operate and maintain ESF construction equipment.
	$ 0	$ 0	$ 55,500	$ 69,500	$ 68,000

III. Yucca Mountain Site Characterization Project (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Test Facilities	Funding requirements for FY 1992 and FY 1993 are included in the First Repository decision unit.		Continue Title I and II design activities for the general administrative support facilities. Begin design of the central warehouse. Start and complete construction on the J-13 water tank. Begin implementation of the operations and maintenance (O&M) management program. Provide direct support to the Site Manager for design coordination and review, fiscal year planning, management system improvement, Nevada Test Site (NTS) liaison, public outreach support, visitor control, photographic and Geographic Information System (GIS) support. Provide support for busing, janitorial services, operation and maintenance of facilities in support of site suitability. Provide NTS allocation.	Complete Title II design of the central warehouse. Provide Title I and II design of Phase I and II Guard Gate 510, visitors center/badging facility, and new access road. Provide direct support to the Site Manager for design coordination and review, fiscal year planning, management system improvement, NTS liaison, public outreach support, visitor control, photographic and GIS support. Provide support for busing, janitorial services, operation and maintenance of facilities in support of site suitability. Complete implementation of O & M management program. Provide NTS allocation.	Begin construction on Field Support Area (FSA) site preparation. Provide direct support to the Site Manager for design coordination and review, fiscal year planning, management system improvement, NTS liaison, public outreach support, visitor control, photographic and GIS support. Provide support for busing, janitorial services, and operation and maintenance of facilities in support of site suitability. Continue O & M management program. Provide NTS allocation.
	$ 0	$ 0	$ 10,500	$ 13,500	$ 15,000

III. Yucca Mountain Site Characterization Project (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Project Management	Funding requirements for FY 1992 and FY 1993 are included in the First Repository decision unit.		Manage and control the Yucca Mountain Site Characterization Project (YMP) work, including technical project office (TPO) management, ESF design and construction, engineering, surface based testing (SBT), and WP development, liaison with the State of Nevada and local governments, interaction with the NRC on licensing issues, near-field environment and modeling in support of site characterization (SC). Provide management support in the areas of budgeting, cost and schedule planning, and control. Continue the development and implementation of the Integrated Project Management System (IPMS). Continue performance measurement and support the change control system. Continue to collect project management planning and control data for the development, implementation and maintenance of the automated Planning and Control System (PACS). Continue to develop technical milestone	Manage and control the YMP work, including TPO management, ESF design and construction, engineering, SBT, and WP development, liaison with the State of Nevada and local governments, interaction with the NRC on licensing issues, near-field environment and modeling in support of SC. Provide management support in the areas of budgeting, cost and schedule planning, and control. Continue the development and implementation of the IPMS. Continue performance measurement and support the change control system. Continue to collect project management planning and control data for the development, implementation and maintenance of the automated PACS. Continue to develop technical milestone data bases. Continue to provide support to project management control processes and interaction with ESAAB, EEI, ICE, GAO, and the DOE IG. Continue to provide the controls required to process project plans and	Manage and control the YMP work, including TPO management, ESF design and construction, engineering, SBT, and WP development, liaison with the State of Nevada and local governments, interaction with the NRC on licensing issues, near-field environment and modeling in support of SC. Provide management support in the areas of budgeting, cost and schedule planning, and control. Continue the development and implementation of the IPMS. Continue performance measurement and support the change control system. Continue to collect project management planning and control data for the development, implementation and maintenance of the automated PACS. Continue to develop technical milestone data bases. Continue to provide support to project management control processes and interaction with ESAAB, EEI, ICE, GAO, and the DOE IG. Continue to provide the controls required to process project plans and

III. Yucca Mountain Site Characterization Project (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Project Management (Cont'd)			data bases. Continue to provide support to project management control processes and interaction with Energy Systems Acquisition Advisory Board (ESAAB), Edison Electric Institute (EEI), Independent Cost Estimate (ICE) team, General Accounting Office (GAO), and the DOE Inspector General (IG). Continue to provide the controls required to process project plans and procedures.	procedures.	procedures.
	$ 0	$ 0	$ 16,800	$ 17,300	$ 18,000
Financial Assistance	Funding requirements for FY 1992 and FY 1993 are included in the First Repository decision unit.		Provide direct payment to the State of Nevada, for the conduct of its oversight activities pursuant to the Nuclear Waste Policy Act (NWPA) of 1982, as amended. Provide for direct payments to affected local governments to conduct appropriate activities pursuant to the Act. Provide funding through cooperative agreements to the Universities of Nevada, Las Vegas, Reno and the Desert Research Institute to conduct infrastructure studies and other research and	Provide direct payment to the State of Nevada, for the conduct of its oversight activities pursuant to the NWPA of 1982, as amended. Provide for direct payments to affected local governments to conduct appropriate activities pursuant to the Act. Provide funding through cooperative agreements to the Universities of Nevada, Las Vegas, Reno, and the Desert Research Institute to conduct infrastructure studies and other research and	Provide direct payment to the State of Nevada, for the conduct of its oversight activities pursuant to the NWPA of 1982, as amended. Provide for direct payments to affected local governments to conduct appropriate activities pursuant to the Act. Provide funding through cooperative agreements to the Universities of Nevada, Las Vegas, Reno, and the Desert Research Institute to conduct infrastructure studies and other research and

III. Yucca Mountain Site Characterization Project (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Financial Assistance (Cont'd)			development work as directed. Provide Payments-Equal-to-Taxes (PETT) in accordance with NWPA, as amended. Funding levels are determined by Congress and are contingent upon the level of technical activity.	development work as directed. Provide PETT in accordance with the NWPA, as amended. Funding levels are determined by Congress and are contingent upon the level of technical activity.	development work as directed. Provide PETT in accordance with the NWPA, as amended. Funding levels are determined by Congress and are contingent upon the level of technical activity.
	$ 0	$ 0	$ 17,600	$ 19,000	$ 21,000
Quality Assurance	Funding requirements for FY 1992 and FY 1993 are included in the First Repository decision unit.		Continue development and maintenance of project QA programs. Continue efforts required to assist with development of QA program and implementing procedures, review of project documentation for compliance with approved QA program and maintaining a requirements tracking matrix. Continue to provide quality assurance guidance and direction to affected organizations. Continue implementation and maintenance of indoctrination, training, qualification and certification requirements for personnel performing quality-affecting work. Continue to implement corrective actions and QA program deficiency	Continue development and maintenance of project QA programs. Continue efforts required to assist with development of QA program and implementing procedures, review of project documentation for compliance with approved QA program and maintaining a requirements tracking matrix. Continue to provide quality assurance guidance and direction to affected organizations. Continue implementation and maintenance of the indoctrination, training, qualification and certification requirements for personnel performing quality-affecting work. Continue to implement corrective actions, and QA program deficiency	Continue development and maintenance of project QA programs. Continue efforts required to assist with development of QA program and implementing procedures, review of project documentation for compliance with approved QA program and maintaining a requirements tracking matrix. Continue to provide quality assurance guidance and direction to affected organizations. Continue implementation and maintenance of the indoctrination, training, qualification and certification requirements for personnel performing quality-affecting work. Continue to implement corrective actions, and QA program deficiency

III. Yucca Mountain Site Characterization Project (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Quality Assurance (Cont'd)			tracking system. Continue to interact with Program participants, NRC, State of Nevada and local governments. Continue to support the Quality Concerns Program.	tracking system. Continue to interact with Program participants, NRC, State of Nevada and local governments. Continue support to Quality Concerns Program.	tracking system. Continue to interact with Program participants, NRC, State of Nevada and local governments. Continue support to Quality Concerns Program.
	$ 0	$ 0	$ 12,000	$ 12,000	$ 13,000
Information Management	Funding requirements for FY 1992 and FY 1993 are included in the First Repository decision unit.		Continue to provide computer services and support. Continue to maintain, execute and update disaster recovery and contingency plans. Continue to assist in update of Computer Protection Plan, and to provide inputs for long- and short-range plans. Continue to provide user support to YMP personnel. Continue to provide support for Info-Streams. Ensure compliance with Government Open System Interconnect Protocol (GOSIP) and other DOE-mandated standards. Continue to operate, manage and process all project records in support of OCRWM records management program. Continue to operate field records center, participant	Continue to provide computer services and support. Continue to maintain, execute and update disaster recovery and contingency plans. Continue to assist in update of the Computer Protection Plan, and to provide inputs for long- and short-range plans. Continue to provide user support to YMP personnel. Continue to provide support for Info-Streams. Continue to operate, manage and process all project records in support of OCRWM records management program. Continue to operate field records center, participant local records centers, and the central records facility. Continue to operate and manage YMP document control	Continue to provide computer services and support. Installation, operation and maintenance of Vax cluster and peripheral equipment to service YMP computing needs. Continue to maintain, execute and update disaster recovery and contingency plans. Continue to assist in update of Computer Protection Plan, and to provide inputs for long- and short-range plans. Continue to provide user support to YMP personnel. Continue to provide support for Info-Streams. Continue to operate, manage and process all project records in support of OCRWM records management program. Continue to operate field records center, participant local

III. Yucca Mountain Site Characterization Project (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Information Management (Cont'd)			local records centers, and the central records facility. Continue to operate and manage YMP document control system. Continue operation of facilities and subsystems for YMP to provide information necessary to support submittal of LA.	system. Continue operation of facilities and subsystems for YMP to provide information necessary to support submittal of LA.	records centers, and central records facility. Continue to operate and manage YMP document control system. Continue to provide for operation of facilities and subsystems for YMP to provide information necessary to support submittal of LA.
	$ 0	$ 0	$ 13,432	$ 13,432	$ 13,932
Environment, Safety, and Health	Funding requirements for FY 1992 and FY 1993 are included in the First Repository decision unit.		Acquire requisite ESF permits. Conduct some pre-activity surveys. Conduct environmental monitoring and mitigation efforts to extent possible for air quality, meteorology, archaeology, radiological studies, terrestrial ecosystems, and water resources. Conduct environmental and mission essential monitoring, environmental regulatory compliance, audits and surveillances. Continue desert tortoise studies and monitoring. Prepare Advisory Council on Historical Preservation (ACHP) Report, Annual Site Environmental Report (ASER), and Environmental	Acquire requisite ESF permits. Conduct some pre-activity surveys. Conduct environmental monitoring and mitigation efforts to the extent possible for air quality, meteorology, archaeology, radiological studies, terrestrial ecosystems, and water resources. Conduct environmental regulatory compliance, audits and surveillances. Continue desert tortoise studies and monitoring. Produce some annual reports: ACHP, ASER, EMMP. Manage existing archaeological artifacts/records, and outside agency coordination. Continue	Acquire requisite ESF permits. Conduct some pre-activity surveys. Conduct environmental monitoring and mitigation efforts to the extent possible for air quality, meteorology, archaeology, radiological studies, terrestrial ecosystems, and water resources. Conduct environmental regulatory compliance, audits and surveillances. Continue desert tortoise studies and monitoring. Produce some annual reports: ACHP, ASER, EMMP. Manage existing archaeological artifacts/records, and outside agency coordination. Continue more limited

III. Yucca Mountain Site Characterization Project (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Environment, Safety, and Health (Cont'd)			Monitoring and Mitigation Plan (EMMP). Manage existing archaeological artifacts/records and outside agency coordination. Continue limited socioeconomic monitoring, and PETT support. Continue limited consultation and interactions with Native Americans per the American Indian Religious Freedom Act (AIRFA). Perform measuring and testing equipment (M&TE) and QA liaison interface functions. Provide safety and health management and administration, compliance, program development, training, engineering and design reviews, emergency preparedness, medical, fire protection, safety assessment and reporting, and industrial hygiene services. Review conduct of all project work, activities, and site design of structures, ESF, and equipment to assure compliance with applicable standards. Perform, inspections, surveillances, surveys, and appraisals to meet this requirement. Develop and administer safety and health,	more limited socio-economic monitoring, and PETT support. Continue limited consultation and interactions with Native Americans per the AIRFA. Perform measuring and testing equipment (M&TE) and QA liaison interface functions. Provide safety and health management and administration, compliance, program development, training, engineering and design reviews, emergency preparedness, medical, fire protection, safety assessment and reporting, and industrial hygiene services. Review the conduct of all Project work, activities, and site design of structures, ESF, and equipment to assure compliance with applicable standards. Perform inspections, surveillances, surveys, and appraisals to meet this requirement. Develop and administer safety and health programs, provide material for training on safety and health, and conduct design reviews. Continue development of appraisal system. Provide emergency	socioeconomic monitoring, and PETT support. Continue limited consultation and interactions with Native Americans per the AIRFA. Perform measuring and testing equipment (M&TE) and QA liaison interface functions. Provide safety and health management and administration, compliance, program development, training, engineering and design reviews, emergency preparedness, medical, fire protection, safety assessment and reporting, and industrial hygiene services. Review the conduct of all Project work, activities, and site design of structures, ESF, and equipment to assure compliance with applicable standards. Perform, inspections, surveillances, surveys, and appraisals to meet this requirement. Develop and administer safety and health, programs, provide material for training on safety and health, and conduct design reviews. Continue development of appraisal system. Provide emergency preparedness, medical

III. Yucca Mountain Site Characterization Project (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Environment, Safety, and Health (Cont'd)			programs, provide material for training on safety and health, and conduct design reviews. Continue development of appraisal system. Provide emergency preparedness, medical services, fire protection, safety assessment, injury and illness reporting and recordkeeping, and industrial hygiene monitoring, surveying and corrective action plans for deficiencies detected. Continue general employee radiological training (GERT), first aid/cardio-pulmonary resussitation (CPR), defensive driving, general underground training, specific underground training for miners, and other required safety and health courses. Maintain OCRWM 5-year safety and health plan. Expand functions of safety and health program to support increased site construction and other activities.	preparedness, medical services, fire protection, safety assessment, injury and illness reporting and recordkeeping, and industrial hygiene monitoring, surveying and corrective action plans for deficiencies detected. Continue GERT, first aid/CPR, defensive driving, general under- ground training, specific underground training for miners, and other required safety and health courses. Maintain OCRWM 5-year safety and health plan. Expand functions of safety and health program to support increased site construction and other activities.	services, fire protection, safety assessment, injury and illness reporting and recordkeeping, and industrial hygiene monitoring, surveying and corrective action plans for deficiencies detected. Continue GERT, first aid/CPR, defensive driving, general underground training, specific underground training for miners, and other required safety and health courses. Maintain OCRWM 5-year safety and health plan. Expand functions of safety and health program to support increased site construction and other activities.
	$ 0	$ 0	$ 13,000	$ 13,500	$ 16,000

III. Yucca Mountain Site Characterization Project (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Institutional	Funding requirements for FY 1992 and FY 1993 are included in the First Repository decision unit.		Continue operation of information offices in Nevada. Support six YMP public update meetings. Continue speaker's bureau activities and exhibit showings. Support Yucca Mountain Site Characterization Project Office (YMPO) interactions with State of Nevada, public interest groups, Nevada business community, and local government agencies. Continue rural outreach program and interactions with affected counties, including transportation activities. Support DOE/YMP media relations, including an ongoing information clipping service. Develop and update various publications, models and exhibits. Continue development and implementation of educational programs. Continue advertising program to further YMP public education and match needs of outreach programs in all affected counties.	Continue operation of information offices in Nevada. Support six YMP public update meetings. Continue speaker's bureau activities and exhibit showings. Continue YMP site tours and very important person (VIP) tours to various nuclear facilities. Support YMP interactions with State of Nevada, public interest groups, Nevada business community, and local government agencies. Continue rural outreach program and interactions with affected counties, including transportation activities. Support DOE/YMP media relations, including an ongoing information clipping service. Develop and update various publications, models and exhibits. Continue development and implementation of educational programs. Continue advertising program to further YMP public education and match needs of outreach programs in all affected counties.	Continue operation of the information offices in Nevada. Support six YMP public update meetings. Continue speaker's bureau activities and exhibit showings. Continue YMP site tours and VIP tours to various nuclear facilities. Support YMPO interactions with State of Nevada, public interest groups, Nevada business community, and local government agencies. Continue rural outreach program and interactions with affected counties, including transporation activities. Support DOE/YMP media relations, including an ongoing information clipping service. Develop and update various publications, models and exhibits. Continue development and implementation of educational programs. Continue advertising program to further YMP public education and match needs of outreach programs in all affected counties.
	$ 0	$ 0	$ 3,200	$ 3,200	$ 4,000

III. Yucca Mountain Site Characterization Project (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Support Services	Funding requirements for FY 1992 and FY 1993 are included in the First Repository decision unit.		Continue to provide administrative support, including procurement, contract management, legal services, personnel, and clerical for YMP, mail distribution, and logistical support for offsite participants. Continue to provide facility/ equipment management support such as YMP technical library operations, Nevada Field Office visitors centers, facility management, property management, rent and telephone services at YMPO, security services, office equipment rental and lease, and motor pool operations. Continue to provide publication/graphics services such as printing, graphics, reproduction, publication services, word processing, editing, technical writing, photo and video tape services. Provide overall management of training program. Develop systematic approaches to training to satisfy NRC and DOE requirements. Conduct training for instructor qualification, orientation,	Continue to provide administrative support, including procurement, contract management, legal services, personnel, and clerical for YMP, mail distribution, and logistical support for offsite participants. Continue to provide facility/equipment management support such as YMP technical library operations, Nevada Field Office visitors centers, facility management, property management, rent and telephone services at YMPO, security services, office equipment rental and lease, and motor pool operations. Continue to provide publication/graphics services such as printing, graphics, reproduction, publication services, word processing, editing, technical writing, photo and video tape services. Provide overall management of training program. Develop systematic approaches to training to satisfy NRC and DOE requirements. Conduct training for instructor qualification, orientation,	Continue to provide administrative support, including procurement, contract management, legal services, personnel, and clerical for YMP, mail distribution, and logistical support for offsite participants. Continue to provide facility/equipment management support such as YMP technical library operations, Nevada Field Office visitors centers, facility management, property management, rent and telephone services at YMPO, security services, office equipment rental and lease, and motor pool operations. Continue to provide publication/graphics services such as printing, graphics, reproduction, publication services, word processing, editing, technical writing, photo and video tape services. Provide overall management of training program. Develop systematic approaches to training to satisfy NRC and DOE requirements. Conduct training for instructor qualification, orientation,

III. Yucca Mountain Site Characterization Project (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Support Services (Cont'd)			indoctrination. Maintain personnel training records. Develop and maintain training baseline and project-related procedures.	indoctrination. Maintain personnel training records. Develop and maintain training baseline and project-related procedures.	indoctrination. Maintain personnel training records. Develop and maintain training baseline and project-related procedures.
	$ 0	$ 0	$ 19,000	$ 19,084	$ 19,976
Yucca Mountain Site Characterization Project	$ 0	$ 0	$ 261,896	$ 293,180	$ 311,408

DEPARTMENT OF ENERGY
FY 1994 CONGRESSIONAL BUDGET REQUEST
NUCLEAR WASTE FUND
(dollars in thousands)

KEY ACTIVITY SUMMARY

NUCLEAR WASTE FUND

I. Preface: Monitored Retrievable Storage

This decision unit supports the siting, design, preparation of environmental documents, licensing through the Nuclear Regulatory Commission (NRC), construction and operation of a facility to perform receipt, handling and temporary storage of spent nuclear fuel, as necessary, prior to emplacement in a geologic repository. To ensure that all aspects of the work are conducted effectively and efficiently and the NRC regulatory requirements for licensing are met, a comprehensive quality assurance program will be implemented and maintained.

The Monitored Retrievable Storage (MRS) facility is an integral part of the Federal waste management system which will provide system flexibility and reliability and result in overall cost savings to the rate payers. It will provide the Federal waste management system with the capability of early acceptance of spent nuclear fuel. As currently envisioned, it is a store-only facility. Elements of the MRS Project, including schedule, are currently under review.

The FY 1994 Congressional budget request for the MRS focuses on development of multipurpose container system (MPC) technology. The MPC will meet the requirements for storage, transportation and, eventually, disposal, utilizing overpacks suitable for each function. Concurrently, OCRWM will continue any viable siting initiatives. Specific FY 1994 MRS-related activities include completion of the conceptual design and initiation of detailed design for the MPC and storage overpack; collection/analysis of Federal site evaluation data, and issuance of a site selection proposal.

II. A. Summary Table: Monitored Retrievable Storage

Program Activity	FY 1992 Actual	FY 1993 Estimate	FY 1994 Request	% Change	FY 1995 Request	FY 1996 Request
Project Management	$ 2,000	$ 3,245	$ 0	-100	$ 0	$ 0
Licensing	700	200	0	-100	0	0
Systems Support	0	5,000	0	-100	0	0
Environmental	1,700	2,000	0	-100	0	0
Design and Engineering Studies	10,525	2,400	0	-100	0	0
Siting	1,000	1,500	0	-100	0	0
Regulatory	300	400	0	-100	0	0
Engineering Development						
Prototypic Consolidation Development Program	0	353	0	-100	0	0
Dry Rod Consolidation Technology	0	880	0	-100	0	0
Spent Fuel Transportation and Storage	0	1,330	0	-100	0	0
Subtotal, Engineering Development	$ 0	$ 2,563	$ 0	-100	$ 0	$ 0
Systems Engineering	$ 0	$ 0	$ 380	>999	$ 690	$ 670
Site Investigations	0	0	380	>999	690	670
MRS Facility	0	0	700	>999	920	900
Regulatory	0	0	580	>999	1,190	1,360
Engineering Development	0	0	8,030	>999	17,430	15,480
Project Management	0	0	1,330	>999	2,570	2,520
Financial Assistance	0	0	2,690	>999	930	0
Quality Assurance	0	0	290	>999	370	450
Information Management	0	0	90	>999	230	270
Environment, Safety, and Health	0	0	960	>999	1,610	1,800
Institutional	0	0	120	>999	370	450
Support Services	0	0	100	>999	140	180
Total, Monitored Retrievable Storage	$ 16,225	$ 17,308	$ 15,650	- 10	$ 27,140	$ 24,750

II. B. Major Laboratory and Facility Funding

IDAHO FIELD OFFICE	$ 0	$ 0	$ 2,490	>999	$ 2,800	$ 2,800

III. Activity Descriptions: (New BA in thousands of dollars)

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Monitored Retrievable Storage					
Project Management	Prepared project-level documents and procedures such as the Project Plan and project-level change control procedures. Implemented and revised project-level work breakdown structure (WBS) and dictionary. Revised baseline schedule as required for the MRS Project in accordance with the new WBS. Prepared project budget validation for Independent Cost Estimate (ICE) and required documents for Energy Systems Acquisition Advisory Board (ESAAB) Key Decision (KD)-1 review. Maintained quality assurance program, plans and procedures, including personnel training and qualification audits. Identified information reporting needs, hardware and software requirements. Continued development and support of InforSTREAMS. These activities utilized $1,400 of prior-year funds.	Update MRS strategy paper. Maintain and update project-level documents and procedures such as the Project Plan, Project Management Plan and project-level change control procedures. Continue to prepare for ESAAB KD-1 review. Continue to conduct administrative, contractual, and personnel activities to maintain project development. Establish project control system for MRS Project major systems acquisition (MSA). Maintain quality assurance program, plans and procedures, including personnel training and qualification audits. Continue identification of information reporting needs, hardware and software requirements as needed. Provide support for the development of InfoSTREAMS.	Funding requirements for FY 1994 and beyond are included in the Quality Assurance, Information Management, Support Services, and Project Management elements.		

III. Monitored Retrievable Storage (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Project Management (Cont'd)	$ 2,000	$ 3,245	$ 0	$ 0	$ 0
Licensing	Began preparation of license application (LA) annotated outline. Continue Nuclear Regulatory Commission pre-licensing interactions. Identified and initiated development of sections of the Safety Analysis Report (SAR). These activities utilized $2,200 of prior-year funds.	Begin preparation of topical SAR for canister and storage overpack. Conduct pre-licensing issues on multipurpose containers (MPCs) and overpacks. Continue NRC pre-licensing interactions and preparation of an annotated outline of the LA based on design activities and NRC guidance.	Funding requirements for FY 1994 and beyond are included in the Regulatory element.		
	$ 700	$ 200	$ 0	$ 0	$ 0
Systems Support	Funded and administered feasibility assessment grants to States, Indian tribes and local governments. This activity utilized $1,097 of prior-year funds.	Fund and administer Phase II grants.	Funding requirements for FY 1994 and beyond are included in the Financial Assistance element.		
	$ 0	$ 5,000	$ 0	$ 0	$ 0

III. Monitored Retrievable Storage (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Environmental	Initiated development of the Environmental Assessment (EA) annotated outline. Initiated five year planning for safety and health. This activity utilized $1,000 of prior-year funds.	Initiate preparation of environmental documentation for potential sites. Plan for the Environmental Impact Statement (EIS) effort. Develop EIS Notice of Intent. Update safety and health plans in support of the start of SAR design.	Funding requirements for FY 1994 and beyond are included in the Environment, Safety and Health element.		
	$ 1,700	$ 2,000	$ 0	$ 0	$ 0
Design and Engineering Studies	Completed Conceptual Design Report (CDR). Performed design reviews and technical support studies. Continued to maintain technical baseline. These activities utilized $1,184 of prior-year funds.	Develop MPC design concept to the level of the MRS CDR. Initiate design of cask-to-cask transfer device. Prepare and perform design and readiness reviews for KD-1 and technical support studies. Evaluate revisions to the technical baseline. Support ICE and ESAAB reviews. Develop additional detail in reference case design. Develop inputs needed to conduct design-bases accident dose assessments for the SAR.	Funding requirements for FY 1994 and beyond are included in the MRS Facility element.		
	$ 10,525	$ 2,400	$ 0	$ 0	$ 0

III. Monitored Retrievable Storage (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Siting	Developed preliminary site requirements documents. Initiated socioeconomic program and provided support for LA annotated outline preparation. Continued to provide communication and liaison support, including providing information for potential host communities. Continued to work with potential host communities to develop data sharing responsibilities and baseline studies. These activities utilized $3,400 of prior-year funds.	Perform data collection, analyses and integration in support of environmental documentation for potential sites. Continue development of the socioeconomic program and provide support for SAR preparation. Continue to provide communication and liaison support, including planning for and conducting public hearings on the EA.	Funding requirements for FY 1994 and beyond are included in the Site Investigations, Institutional, and Environment, Safety and Health elements.		
	$ 1,000	$ 1,500	$ 0	$ 0	$ 0
Regulatory	Updated the MRS Regulatory Compliance Plan. These activities utilized $300 of prior-year funds.	Continue regulatory reviews, requirements analysis, and interactions with regulatory agencies. Develop and maintain regulatory planning documents.	Funding requirements for FY 1994 and beyond are included in the Regulatory element.		
	$ 300	$ 400	$ 0	$ 0	$ 0

III. Monitored Retrievable Storage (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Engineering Development					
Prototypic Consolidation Development Program	Funding requirements for FY 1992 are included in the Transportation, Systems Integration and Engineering Development decision unit.	Complete evaluation and approval of NUS Corporation Phase III final technical report. Dispose Cold Test Facility equipment.	Funding requirements for FY 1994 and beyond are included in the Engineering Development element of the Monitored Retrievable Storage decision unit.		
	$ 0	$ 353	$ 0	$ 0	$ 0
Dry Rod Consolidation Technology	Funding requirements for FY 1992 are included in the Transporation, Systems Integration and Engineering Development decision unit.	Remove 48 non-fuel-bearing components (spent fuel skeletons) placed in Idaho National Engineering Laboratory (INEL), Test Area North (TAN) Hot Shop Pool in 1987 as a result of OCRWM consolidation technology project. Storage costs, currently $150,000 annually, will increase to $1,675,000 annually in mid-1990s if OCRWM is the only remaining customer of pool. Begin procurement of high-integrity containers (HIC) for storing spent fuel skeletons. Prepare operating procedures for Hot Shop operations and begin on-site fabrication.	Funding requirements for FY 1994 and beyond are included in the Engineering Development element of the Monitored Retrievable Storage decision unit.		
	$ 0	$ 880	$ 0	$ 0	$ 0

III. Monitored Retrievable Storage (Cont'd):
Engineering Development (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Spent Fuel Transportation and Storage	Funding requirements for FY 1992 are included in the Transportation, Systems Integration and Engineering Development decision unit.	Continue fuel storage and monitoring in pool. Complete National Environmental Policy Act (NEPA) documentation for management of the West Valley spent fuel.	Funding requirements for FY 1994 and beyond are included in the Engineering Development element of the Monitored Retrievable Storage decision unit.		
	$ 0	$ 1,330	$ 0	$ 0	$ 0
Subtotal, Engineering Development	$ 0	$ 2,563	$ 0	$ 0	$ 0
Systems Engineering	Funding requirements for FY 1992 and FY 1993 are included in the Project Management element.		Perform system studies to integrate multipurpose containers (MPCs) with Monitored Retrievable Storage (MRS). Perform system studies related to facility organization. Update MRS systems requirements documents as needed. Continue to implement MRS systems engineering management plan. Develop plans for test and evaluation, specialty engineering, maintenance, etc. Develop simulation models and conduct performance analysis. Develop and perform life cycle cost analyses. Continue configuration management activities. Initiate MRS design	Complete system studies to integrated MPCs with MRS and MRS facility optimization. Refine simulation models and performance analysis and continue/update life cycle cost analysis. Continue configuration management activities. Complete DR document.	Refine simulation models and performance analysis and continue/update life cycle cost analysis. Continue configuration management activities.

III. Monitored Retrievable Storage (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Systems Engineering (Cont'd)			requirements (DR) document.		
	$ 0	$ 0	$ 380	$ 690	$ 670
Site Investigations	Funding requirements for FY 1992 and FY 1993 are included in the Siting element.		Complete site evaluation data collection and analysis. Issue site selection proposal/report. Perform data collection, analysis, and integration in support of environmental impact statement (EIS) and safety analysis report (SAR).	Continue meteorological data collection and evaluation and provide site data and analyses in support of EIS and SAR.	Continue meteorological data collection and evaluation and provide site data and analyses in support of EIS and SAR.
	$ 0	$ 0	$ 380	$ 690	$ 670
MRS Facility	Funding requirements for FY 1992 and FY 1993 are inc'uded in the Design and Engineering Studies element.		If identified site does not have existing facilities, start the Safety Analysis Report (SAR) design and integrate the MPC design into the MRS SAR design as appropriate. If identified site has existing facilities, design will focus on upgrade of facilities.	Continue detailed design of new MRS facility based on MPC or complete design for upgrade of existing facilities as appropriate. Identify long-lead procurement items.	Continue MRS SAR design for new MRS facility. Revise/update facility design in response to NRC comments. Provide support to independent cost estimate (ICE) team and Energy Systems Acquisition Advisory Board (ESAAB) reviews.
	$ 0	$ 0	$ 700	$ 920	$ 900

III. Monitored Retrievable Storage (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Regulatory	Funding requirements for FY 1992 and FY 1993 are included in the Regulatory element.		Provide licensing input for detailed design development of MPC and storage overpack. Continue development of topical SAR for MPC and storage overpack. Continue NRC pre-licensing interactions and preparation of an annotated outline of the License Application (LA). Once MRS site has been selected, develop initial drafts of the MRS facility SAR and other LA documents. Identify permitting requirements. Maintain regulatory planning documents.	Complete development of topical SAR for MPC and storage overpack and submit to NRC for review. Continue interactions with NRC. Maintain and update LA documents as necessary. Continue regulatory reviews, requirements analysis, and interactions with other regulatory agencies.	Continue interactions with NRC on topical SAR for MPC and storage overpack to obtain NRC approval. Continue interactions with NRC. Maintain and update LA documents as necessary. Continue regulatory reviews, requirements analysis, and interactions with other regulatory agencies.
	$ 0	$ 0	$ 580	$ 1,190	$ 1,360
Engineering Development	Funding requirements for FY 1992 and FY 1993 are included in the Transportation, Systems Integration and Engineering Development decision unit.		For Prototypic Consolidation Development Program (PCDP), no activity. For Dry Rod Consolidation Technology Development (DRCTD) Project, complete on-site fabrication and high-integrity container (HIC) procurement. Perform dry run and readiness review. Begin loading HICs for transfer to	For DRCTD project, complete hot operations. Decontaminate and decommission facility and issue final report. For Behavior of Spent Fuel in Storage Project, prepare engineering evaluation of the gas samples, fuel inspection readiness review, complete Quarterly Gas Samples, and annual project report.	Continue to prepare Quarterly Gas Samples and analysis, and the Annual Project Report for Behavior of Spent Fuel in Storage Project. For WVDP, continue monitoring fuel in pool storage. Continue implementation of storage option and penalty payment to New York State. For canister welding, initiate and complete preliminary and final

III. Monitored Retrievable Storage (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Engineering Development (Cont'd)			storage area. For West Valley Demonstration Project (WVDP), complete environmental assessment studies on storage options, select storage option. Continue monitoring fuel in pool storage. Prepare sampling plan, safety and environmental documents for Spent Fuel Behavior in Storage Project. Collect initial gas samples for analysis. For multipurpose container (MPC) design, complete conceptual design and initiate detailed design for the MPC and storage overpack. Complete design of a dry cask-to-cask transfer device. Provide design input to necessary regulatory documents such as the environmental impact statement (EIS) and safety analysis report (SAR) and the topical SAR for the MPC and storage overpack. Initiate design of MPC transfer casks for at-reactor use. Explore cooperative agreement with utilities/industry for development of	For WVDP, continue monitoring fuel in pool storage. Pay penalty to New York State. Begin implementation of storage option. For canister welding, conduct preliminary planning and initiate preparation of requirements definitions. Issue project management and QA plans. Establish requirements and issue the final Canister Welding and Examination Design Requirements Report. Prepare and issue Request for Proposals for canister welding and nondestructive examination equipment. For MPC design, complete detailed design for MPC and storage overpack. Update detailed design based on NRC comments. Continue to provide design input to necessary regulatory documents such as the EIS and SAR and the topical SAR for the MPC and storage overpack. Continue design effort based upon NRC feedback for the cask-to-cask transfer device and MPC transfer cask.	designs of canister welding equipment. Evaluate methods selected and procedures developed by the subcontractors for Non-Destructive Examination (NDE) and weld qualification. Procure mock-up canisters for cold demonstration. Update MPC and storage overpack design based on NRC comments on topical SAR. Initiate procurement of long-lead items for the MPC transfer cask, the cask-to-cask transfer device and the MPCs. Fabricate and test prototype for cask-to-cask transfer device and MPC transfer cask.

III. Monitored Retrievable Storage (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Engineering Development (Cont'd)			cask-to-cask transfer device and transfer cask development.		
	$ 0	$ 0	$ 8,030	$ 17,430	$ 15,480
Project Management	Funding requirements for FY 1992 and FY 1993 are included in the Project Management element.		Obtain MRS Project KD-1 approval. Develop necessary planning to establish project office in the vicinity of the selected site. Maintain and update the cost and schedule baselines and other project-level documents. Continue to maintain administrative, contractual, and personnel activities. Initiate MRS Project MSA reporting per DOE 4700.1. Maintain project control system for MRS Project MSA. Support ESAAB review process.	Maintain and update the cost and schedule baselines and other project-level documents. Continue to maintain administrative, contractual, and personnel activities. Continue MRS Project MSA reporting per DOE 4700.1. Maintain project control system for MRS Project MSA. Support ESAAB review process.	Maintain and update the cost and schedule baselines and other project-level documents. Continue to maintain administrative, contractual, and personnel activities. Continue MRS Project MSA reporting per DOE 4700.1. Maintain project control system for MRS Project MSA.
	$ 0	$ 0	$ 1,330	$ 2,570	$ 2,520
Financial Assistance	Funding requirements for FY 1992 and FY 1993 are included in the Systems Support element.		Fund and administer financial assistance as appropriate.	Fund and administer financial assistance as appropriate.	No activity.
	$ 0	$ 0	$ 2,690	$ 930	$ 0

III. Monitored Retrievable Storage (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Quality Assurance	Funding requirements for FY 1992 and FY 1993 are included in the Project Management element.		Support QA activities for design of MPC and storage overpack, and start of SAR design. Maintain QA program, plans and procedures, including personnel training and qualification audits.	Continue to provide QA activities for the design of MPC and storage overpack and MRS SAR design. Maintain QA program, plans and procedures, including personnel training and qualification audits.	Continue to provide QA activities for the design of MPC and storage overpack and MRS SAR design. Maintain QA program, plans and procedures, including personnel training and qualification audits.
	$ 0	$ 0	$ 290	$ 370	$ 450
Information Management	Funding requirements for FY 1992 and FY 1993 are included in the Project Management element.		Complete development and implementation of InfoSTREAMS systems, to support storage and retrieval of planning documents, licensing, regulatory and technical information needs.	Maintain InfoSTREAMS systems. Continue to provide information management at a level consistent with SAR design.	Maintain InfoSTREAMS systems. Provide information management at a level consistent with SAR design.
	$ 0	$ 0	$ 90	$ 230	$ 270
Environment, Safety, and Health	Funding requirements for FY 1992 and FY 1993 are included in the Environmental and Siting elements.		Complete environmental documentation for potential sites. Issue EIS Notice of Intent. Initiate draft EIS. Initiate environmental monitoring and reporting. Perform self-assessment activities.	Continue draft EIS. Continue environmental monitoring and reporting at the site for the MRS facility. Continue update of safety and health plans. Perform self-assessment activities.	Complete draft EIS and issue for public comment. Provide draft EIS to NRC. Initiate preparation of final EIS. Continue environmental monitoring and reporting at the site for the MRS facility. Provide support for licensing. Perform self-assessment activities.
	$ 0	$ 0	$ 960	$ 1,610	$ 1,800

III. Monitored Retrievable Storage (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Institutional	Funding requirements for FY 1992 and FY 1993 are included in the Siting element.		Provide socioeconomic, communication and outreach programs. Provide liaison support, including planning for and conducting public hearings on draft EIS. Plan for establishing information centers.	Continue to provide communication and liaison support for EIS process.	Continue to provide communication and liaison support with host community.
	$ 0	$ 0	$ 120	$ 370	$ 450
Support Services	Funding requirements for FY 1992 and FY 1993 are included in the Project Management element.		Provide administrative, and contractual support for the start of SAR design.	Continue to provide administrative and contractual activities at a level consistent with design activities.	Continue to provide administrative and contractual activities at a level consistent with design activities.
	$ 0	$ 0	$ 100	$ 140	$ 180
Monitored Retrievable Storage	$ 16,225	$ 17,308	$ 15,650	$ 27,140	$ 24,750

DEPARTMENT OF ENERGY
FY 1994 CONGRESSIONAL BUDGET REQUEST
NUCLEAR WASTE FUND
(dollars in thousands)

KEY ACTIVITY SUMMARY

NUCLEAR WASTE FUND

I. Preface: Transportation, Systems Integration, and Engineering Development

Transportation

The purpose of this element is to develop a safe, environmentally acceptable, and cost-effective system for the transport of spent nuclear fuel in time to support the start of operation at an MRS facility, utilizing the private sector to the fullest extent possible; provide for the design, development, certification, and testing of necessary transportation equipment and services required for operation; identify and resolve institutional issues; develop analytical processes and transportation information databases to support overall program requirements (e.g., Environmental Assessment and Environmental Impact Statement support, risk assessment, interface information, cost information, etc.); and provide for the operational aspects of the shipment of spent fuel and high-level wastes to storage and/or final disposal facilities.

Waste Acceptance

This element consists of: 1)primary technical interface with nuclear utilities to ensure communication with the owners and generators of spent nuclear fuel and high-level radioactive waste; 2) necessary support to manage the Standard Disposal Contract, including fees and terms of payment; 3) verification of on-going and one-time fees paid into the Nuclear Waste Fund (NWF); 4) management of the NWF fee adequacy analysis; 5) development and management of the contract/MOU fee structures and methodologies for West Valley and Defense Waste; 6) management of spent fuel data collection, validation and dissemination, management of the spent fuel acceptance process with owners and generators of spent fuel; 7) preparation of the Annual Capacity Report and the Annual Acceptance Priority Ranking Report; and 8) processing of Delivery Commitment Schedules (DCS) and DCS exchanges.

Systems Integration

The objective of the Systems Integration element is to ensure that the various components of the waste management system are integrated into a single system that is safe, efficient, reliable, cost-effective, and on schedule. The approach to accomplishing this objective is to: identify and baseline technical requirements of the total system; maintain current descriptions of the system, its components, and interfaces that meet requirements; enhance communication among parties responsible for individual system components and functions; develop and maintain a capability to fully assess alternative concepts; conduct system studies and recommend improvements; and support development of equipment and processes having the potential to improve the system.

Engineering Development

The Engineering Development activity develops and demonstrates crosscutting technologies required by the Office of Civilian Radioactive Waste Management (OCRWM), such as a process to consolidate spent nuclear fuel assemblies on a production line basis, adequate to meet the annual throughput requirements and facility development schedules of an MRS facility or a geologic repository and the development of alternative dry storage technologies for spent nuclear fuel. This includes demonstration of the equipment through the consolidation of actual spent fuel assemblies. Technologies to implement automated remote handling techniques in the OCRWM Program, technologies and processes required to allow OCRWM to comply with international nuclear material safeguards requirements, and processes and equipment to be used in the decontamination and decommissioning of OCRWM facilities and equipment will be developed as part of this activity.

II. A. Summary Table: Transportation, Systems Integration, and Engineering Development

Program Activity	FY 1992 Actual	FY 1993 Estimate	FY 1994 Request	% Change	FY 1995 Request	FY 1996 Request
Transportation						
Cask Systems Development	$ 13,000	$ 10,349	$ 0	-100	$ 0	$ 0
Institutional Program	1,750	3,000	0	-100	0	0
Systems Analysis	1,600	2,000	0	-100	0	0
Program Management	400	1,826	0	-100	0	0
Support Systems Development	1,605	3,300	0	-100	0	0
Subtotal, Transportation	$ 18,355	$ 20,475	$ 0	-100	$ 0	$ 0
Waste Acceptance						
Acceptance Criteria	$ 0	$ 1,100	$ 0	-100	$ 0	$ 0
Fee Adequacy	0	650	0	-100	0	0
Data Analysis	0	1,660	0	-100	0	0
Technical Support	0	250	0	-100	0	0
Subtotal, Waste Acceptance	$ 0	$ 3,660	$ 0	-100	$ 0	$ 0
Systems Integration						
Systems Requirements & Description	$ 2,870	$ 0	$ 0	0	$ 0	$ 0
Systems Analysis Capabilities	2,060	0	0	0	0	0
Systems Engineering Studies	2,645	0	0	0	0	0
Special Studies	2,160	0	0	0	0	0
Program Management	3,325	0	0	0	0	0
Subtotal, Systems Integration	$ 13,060	$ 0	$ 0	0	$ 0	$ 0
Engineering Development						
Prototypic Consolidation Development Program	$ 320	$ 0	$ 0	0	$ 0	$ 0
Dry Rod Consolidation Technology	0	0	0	0	0	0
Nuclear Fuel Services (NFS)	1,948	0	0	0	0	0
Subtotal, Engineering Development	$ 2,268	$ 0	$ 0	0	$ 0	$ 0
Total, Transportation, Systems Integration, and Engineering Development	$ 33,683	$ 24,135	$ 0	-100	$ 0	$ 0

NOTE: FY 1994 - FY 1996 TRANSPORTATION ACTIVITIES TRANSFERRED TO THE NEW TRANSPORTATION SYSTEM DECISION UNIT; WASTE ACCEPTANCE ACTIVITIES TRANSFERRED TO THE NEW WASTE ACCEPTANCE DECISION UNIT; SYSTEMS INTEGRATION ACTIVITIES TRANSFERRED TO THE NEW SYSTEMS INTEGRATION AND COMPLIANCE DECISION UNIT; AND ENGINEERING DEVELOPMENT ACTIVITIES TRANSFERRED TO THE MONITORED RETRIEVABLE STORAGE DECISION UNIT.

III. Activity Descriptions: (New BA in thousands of dollars)

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Transportation, Systems Integration, and Engineering Development					
Transportation					
Cask Systems Development	Initiated development of request for proposal for acquisition of complementary (Phase 1) casks for private industry for early shipping capability. Developed final design reports on high-efficiency (Phase 2) Legal-Weight Truck Cask and Rail/Barge Cask. Completed independent review of Phase 2 cask program and initiated design modifications to Phase 2 cask to improve operability, comparability with utility sites and spent fuel variations. Participated in cask-related codes and standards activities. Conducted specific studies and activities to resolve issues associated with cask weeping, burnup credit and containment technology (containment source term and seals).	Continue preparation for Phase 1 cask procurement to acquire current technology transportation casks. Continue redesign to improve Phase 2 cask capabilities and prepare for the Nuclear Regulatory Commission certification process for the Phase 2 high-capacity casks. Plan for design verification tests on the half-scale model of the truck cask. Continue to address technical issues and to develop material and component technology to support cask design and certification activities. Monitor design activities of the high-level radioactive waste cask system. Participate in cask-related codes and standards activities. Conduct specific studies and activities to resolve issues associated with cask weeping, burnup credit and containment technology (containment source term and seals).	Funding requirements for FY 1994 and beyond are included in the Transportation decision unit.		

III. Transportation, Systems Integration, and Engineering Development (Cont'd):
Transportation (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Cask Systems Development (Cont'd)		Continue independent assessment of cask development.			
	$ 13,000	$ 10,349	$ 0	$ 0	$ 0
Institutional Program	Initiated implementation of Section 180(c), NWPA, strategy. Coordinated with Department of Transportation (Hazardous Materials Uniform Safety Act of 1990, Section 117(A)) to develop inspection and emergency response technical assistance programs for States & Indian Tribes. Continued cooperative agreements with national, regional, & technical groups. Continued institutional planning and issue resolution activities with State, Tribal and industry transportation representatives. Continued vehicle inspection pilot study. Continued to develop materials and display transportation exhibits at major public meetings.	Develop Section 180(c), NWPA, policy options for program implementation. Continue cooperative agreements with various national, regional and technical groups. Initiate procurement with Northeastern regional group. Continue tracking of legal & institutional policies regarding radioactive shipments. Initiate determination of rail routing criteria. Continue vehicle inspection pilot study. Continue to support Transportation Coordination Group (TCG) meetings and technical workshops. Continue to provide public information for transportation activities.	Funding requirements for FY 1994 and beyond are included in the Transportation decision unit.		
	$ 1,750	$ 3,000	$ 0	$ 0	$ 0

III. Transportation, Systems Integration, and Engineering Development (Cont'd):
Transportation (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Systems Analysis	Continued updating codes and support databases necessary for performing cost/risk analyses, system tradeoff studies, and transportation logistics constraint analyses. Maintained reference transportation system to provide baseline tradeoff assumptions. Continued specified transportation systems support analyses to support identified program decisions. Conducted operational analyses to determine cask fleet size and logistical constraints of transportation system. Continued analyses and planning applicable to Program environmental requirements.	Continue updating codes and support databases necessary for performing cost/risk analyses, system tradeoff studies, and transportation logistics constraint analyses. Maintain reference transportation system to provide baseline tradeoff assumptions. Continue specified transportation systems support analyses to support identified program decisions, and MRS and other OCRWM systems studies. Continue operational analyses to determine cask fleet size and logistical constraints of transportation system. Continue analyses and planning applicable to Program environmental requirements. Complete enhancements to RADTRAN analysis and continue accident study.	Funding requirements for FY 1994 and beyond are included in the Transportation decision unit.		
	$ 1,600	$ 2,000	$ 0	$ 0	$ 0

III. Transportation, Systems Integration, and Engineering Development (Cont'd):
Transportation (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Program Management	Continued to support requirements for QA program. Maintained and updated records. Updated project-level requirements and management documents. Continued QA audits. Maintained cost and schedule reports and project-level network schedules.	Continue to support requirements for QA program. Maintain and update records. Maintain project-level requirements and management documents. Continue QA audits. Continue to maintain cost and schedule reports and project-level network schedules.	Funding requirements for FY 1994 and beyond are included in the Transportation decision unit.		
	$ 400	$ 1,826	$ 0	$ 0	$ 0
Support Systems Development	Continued site-specific analyses. Continued operational assessments for reactor sites. Continued monitoring and reporting of ongoing shipments and foreign technology. Continued monitoring of existing casks, maintenance, and tractor issues.	Continue initial utility site evaluation assessments. Continue highway and rail service studies. Continue startup, interim maintenance and existing cask fleet assessments. Continue requirements analyses and establish service and maintenance and field operations input to cask designs. Continue to monitor ongoing spent fuel shipments and related activities. Initiate development of criteria to establish total system software, personnel and equipment requirements. Continue to provide operations input and equipment support to cask design activities. Complete Cask Maintenance	Funding requirements for FY 1994 and beyond are included in the Transportation decision unit.		

III. Transportation, Systems Integration, and Engineering Development (Cont'd):
Transportation (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Support Systems Development (Cont'd)		Facility preconceptual design studies.			
	$ 1,605	$ 3,300	$ 0	$ 0	$ 0
Subtotal, Transportation	$ 18,355	$ 20,475	$ 0	$ 0	$ 0
Waste Acceptance					
Acceptance Criteria	Funding requirements for FY 1992 are included in the Program Management and Technical Support decision unit.	Continue to meet contractual deadlines for the Annual Capacity Report (ACR) issue resolution process and Acceptance Priority Ranking (APR) publication. Continue Delivery Commitment Schedule Exchange (DCSE) processing.	Funding requirements for FY 1994 and beyond are included in the Waste Acceptance decision unit.		
	$ 0	$ 1,100	$ 0	$ 0	$ 0
Fee Adequacy	Funding requirements for FY 1992 are included in the Program Management and Technical Support decision unit.	Continue quarterly fee verification. Continue annual review of fee adequacy. Continue fee estimation and electricity generation estimates and verification.	Funding requirements for FY 1994 and beyond are included in the Waste Acceptance decision unit.		
	$ 0	$ 650	$ 0	$ 0	$ 0

III. Transportation, Systems Integration, and Engineering Development (Cont'd):
Waste Acceptance (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Data Analysis	Funding requirements for FY 1992 are included in the Program Management and Technical Support decision unit.	Review annual spent fuel data and disseminate to users.	Funding requirements for FY 1994 and beyond are included in the Waste Acceptance decision unit.		
	$ 0	$ 1,660	$ 0	$ 0	$ 0
Technical Support	Funding requirements for FY 1992 are included in the Program Management and Technical Support decision unit.	Maintain essential support for fee and acceptance criteria activities.	Funding requirements for FY 1994 and beyond are included in the Waste Acceptance decision unit.		
	$ 0	$ 250	$ 0	$ 0	$ 0
Subtotal, Waste Acceptance	$ 0	$ 3,660	$ 0	$ 0	$ 0
Systems Integration					
Systems Requirements & Description	Updated requirements documents and developed system description documents. Updated program baseline documents according to results of systems studies or special studies. Maintained and supported the configuration management system. Updated system database to include waste inventories, reactor capabilities, and waste characteristics. Participated in the waste acceptance issue	Beginning in FY 1993, Systems Requirements & Description element included in Systems and Compliance decision unit.			

III. Transportation, Systems Integration, and Engineering Development (Cont'd):
Systems Integration (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Systems Requirements & Description (Cont'd)	resolution process. Provided program-wide configuration management and change control board secretariat functions. Evaluated current state of technology and estimate technology risk.				
	$ 2,870	$ 0	$ 0	$ 0	$ 0
Systems Analysis Capabilities	Updated analysis capabilities for waste stream, operations/logistics, cost, reliability/ availability/ maintainability (RAM) and dose. Updated waste inventory prediction capabilities for use in all system elements. Modified capabilities, as needed, to support specific applications to systems studies or special studies.	Beginning in FY 1993, Systems Analysis Capabilities element included in Systems and Compliance Decision unit.			
	$ 2,060	$ 0	$ 0	$ 0	$ 0

III. Transportation, Systems Integration, and Engineering Development (Cont'd):
Systems Integration (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Systems Engineering Studies	Performed detailed and refined systems engineering studies and system tradeoffs in support of system design, modifications in systems operation and optimization of various subsystem options that will impact system costs, reliability tradeoffs, waste acceptance procedures, storage options, and process costs. Conducted analyses according to priorities established by the systems study planning process in order to support program decisions about configuration and function allocation.	Beginning in FY 1993, Systems Engineering Studies element included in Systems and Compliance decision unit.			
	$ 2,645	$ 0	$ 0	$ 0	$ 0
Special Studies	Performed special studies affecting all waste management system participants, including the utilities, the Nuclear Waste Technical Review Board, State and Tribes. Conducted special studies that are appropriate to the development of the waste management system. Participated in technical reviews and workshops, as required.	Beginning in FY 1993, Special Studies element included in Systems and Compliance decision unit.			

III. Transportation, Systems Integration, and Engineering Development (Cont'd):
Systems Integration (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Special Studies (Cont'd)	$ 2,160	$ 0	$ 0	$ 0	$ 0
Program Management	Provided Program management support, based on responsibility for the overall performance of Systems Integration activities. Provided periodic reports and management of and direct participation in appropriate Systems Integration activities. Maintained QA procedures and provided contractor QA compliance.	Beginning in FY 1993, Program Management element included in Systems and Compliance decision unit.			
	$ 3,325	$ 0	$ 0	$ 0	$ 0
Subtotal, Systems Integration	$ 13,060	$ 0	$ 0	$ 0	$ 0

III. Transportation, Systems Integration, and Engineering Development (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Engineering Development					
Prototypic Consolidation Development Program	Completed Phase III cold testing. Prepared final technical report. Began equipment dismantling. Continued QA oversight. These activities utilized $300K of prior year funds.	Funding requirements for FY 1993 and beyond are included in the Monitored Retrievable Storage decision unit.			
	$ 320	$ 0	$ 0	$ 0	$ 0
Dry Rod Consolidation Technology		Funding requirements for FY 1993 and beyond are included in the Monitored Retrievable Storage decision unit.			
	$ 0	$ 0	$ 0	$ 0	$ 0
Nuclear Fuel Services (NFS)	Completed hardware procurement. Completed storage pool filtration modifications. Initiated study and environmental assessment on options for long-term spent fuel storage at West Valley. These activities utilized $345K of prior-year funds.	Funding requirements for FY 1993 and beyond are included in the Monitored Retrievable Storage decision unit.			
	$ 1,948	$ 0	$ 0	$ 0	$ 0

III. Transportation, Systems Integration, and Engineering Development (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Subtotal, Engineering Development	$ 2,268	$ 0	$ 0	$ 0	$ 0
Transportation, Systems Integration, and Engineering Development	$ 33,683	$ 24,135	$ 0	$ 0	$ 0

DEPARTMENT OF ENERGY
FY 1994 CONGRESSIONAL BUDGET REQUEST
NUCLEAR WASTE FUND
(dollars in thousands)

KEY ACTIVITY SUMMARY

NUCLEAR WASTE FUND

I. Preface: Transportation System

The purpose of this decision unit is to ensure that a safe, environmentally acceptable, and cost-effective, transportation capability is available and that an institutional environment is in place that will permit operation of the Federal high-level radioactive waste management transportation system in time to support the start of operation at a Federal receipt facility. Activities supported by this decision unit include providing for the design, development, certification, and testing of necessary transportation equipment and services utilizing the private sector to the fullest extent possible; identification and resolution of institutional issues; development of analytical processes and transportation information data bases to support overall program requirements (e.g., Environmental Assessment and Environmental Impact Statement support, interface information, cost information, etc.); and providing for the operational aspects of the shipment of spent fuel and high-level waste to storage and/or final disposal facilities.

II. A. Summary Table: Transportation System

Program Activity	FY 1992 Enacted	FY 1993 Enacted	FY 1994 Request	% Change	FY 1995 Request	FY 1996 Request
Systems Engineering	$ 0	$ 0	$ 1,060	>999	$ 970	$ 950
Casks	0	0	8,920	>999	9,350	11,130
Support Systems	0	0	2,300	>999	2,110	2,070
Regulatory	0	0	190	>999	180	180
Project Management	0	0	960	>999	880	900
Financial Assistance	0	0	0	0	0	0
Quality Assurance	0	0	190	>999	170	170
Information Management	0	0	50	>999	50	50
Environment, Safety, and Health	0	0	540	>999	500	500
Institutional	0	0	1,900	>999	1,840	2,000
Support Services	0	0	50	>999	50	50
Total, Transportation System	$ 0	$ 0	$ 16,160	>999	$ 16,100	$ 18,000

II. B. Major Laboratory and Facility Funding

IDAHO FIELD OFFICE	$ 0	$ 0	$ 4,600	>999	$ 4,600	$ 4,600
NEVADA FIELD OFFICE	$ 0	$ 0	$ 0	0	$ 0	$ 0
PACIFIC NORTHWEST LABORATORY	$ 0	$ 0	$ 0	0	$ 0	$ 0
SANDIA NATIONAL LABORATORIES	$ 0	$ 0	$ 900	>999	$ 900	$ 900

NOTE: FY 1992 - FY 1993 TRANSPORTATION SYSTEM ACTIVITIES INCLUDED IN THE TRANSPORTATION, SYSTEMS INTEGRATION AND ENGINEERING DEVELOPMENT DECISION UNIT.

III. Activity Descriptions: (New BA in thousands of dollars)

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Transportation System					
Systems Engineering	Funding requirements for FY 1992 and FY 1993 are included in the Transportation, Systems Integration and Engineering Development decision unit.		Maintain transportation system baseline documents through configuration management system. Continue to identify needs for transportation system models. Develop plans for model development, acquisition, validation and verification. Conduct specified analyses and trade-off studies to determine impacts of various system parameters on transportation system cost, schedule and efficiency. Continue to perform logistics and waste acceptance criteria studies to support the Disposal Contract waste acceptance process.	Maintain transportation system baseline documents. Continue to identify needs for transportation system models. Initiate appropriate model development, acquisition, validation and verification. Conduct specified analyses and trade-off studies. Continue to perform logistics and waste acceptance criteria studies to support the Disposal Contract waste acceptance process.	Maintain transportation system baseline documents. Continue appropriate model development, acquisition, validation and verification. Conduct specified analyses and trade-off studies. Continue to perform logistics and waste acceptance criteria studies to support the Disposal Contract waste acceptance process.
	$ 0	$ 0	$ 1,060	$ 970	$ 950

III. Transportation System (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Casks	Funding requirements for FY 1992 and FY 1993 are included in the Transportation, Systems Integration and Engineering Development decision unit.		Initiate multipurpose container (MPC) transport package design. Continue Phase 1 cask procurement to acquire current technology transportation casks. Continue designs, initiate preparation of Safety Analysis Report (SAR) for Phase 1 cask. Continue preparation for Nuclear Regulatory Commission (NRC) certification process for Phase 2 high-capacity casks, including design verification tests on the half-scale model of the truck cask. Continue to address technical issues and to develop material and component technology to support cask design and certification activities. Monitor and provide support and technical expertise for design of high-level waste cask system. Participate in cask-related codes and standards activities. Conduct specific studies and activities to resolve issues associated with cask weeping, burnup credit and containment technology (containment source term and seals). Continue independent	Complete final design of MPC transport package. Initiate and plan design verification tests for MPC transport package. Continue Phase 1 cask procurement to acquire current technology transportation casks to ensure availability of transport capability when needed. Continue NRC certification process for Phase 2 high-capacity casks, including design verification tests. Continue to address technical issues and to develop material and component technology to support cask design and certification activities. Monitor and support design activities of high-level waste cask system. Participate in cask-related codes and standards activities. Conduct specific studies and activities to resolve issues associated with cask weeping, burnup credit and containment technology (containment source term and seals). Continue independent assessment of cask development.	Perform design verification tests for MPC transport package. Submit Safety Analysis Report (SAR) to NRC for MPC transport package. Continue Phase 1 cask procurement to acquire current technology transportation casks to ensure availability of transport capability when needed. Continue NRC certification process for Phase 2 high-capacity casks, and initiate prototype cask procurements. Continue to address technical issues and to develop material and component technology to support cask design and certification activities. Monitor and support design activities of the high-level waste cask system. Participate in cask-related codes and standards activities. Conduct specific studies and activities to resolve issues associated with cask weeping, burnup credit and containment technology (containment source term and seals). Continue independent assessment of cask development.

III. Transportation System (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Casks (Cont'd)			assessment of cask development. Provide support and technical expertise for efficient utilization of the DOE owned TN-RPG and TN-BRP casks.		
	$ 0	$ 0	$ 8,920	$ 9,350	$ 11,130
Support Systems	Funding requirements for FY 1992 and FY 1993 are included in the Transportation, Systems Integration and Engineering Development decision unit.		Continue development of reactor site assessments and maintain completed site evaluations. Initiate operational assessments for reactor sites working with utilities to identify and resolve site-specific issues. Assess and refine alternatives for composition of transportation support system. Continue to develop system operational concepts, including definition of equipment, facility, and staff. Continue assessment of overall cask fleet composition requirements and unique needs at individual reactors. Initiate highway, waterway and rail service procurement studies. Develop strategy for utilization of private carriers for highway, waterway and railway. Finalize requirements	Continue development of reactor site assessments and maintain completed site evaluations. Continue operational assessments for reactor sites working with utilities to identify and resolve site-specific issues. Assess and continue to refine alternatives for composition of transportation support system. Continue to develop system operational concepts, including definition of equipment, facility, and staff. Continue assessment of overall cask fleet composition requirements and unique needs at individual reactors. Initiate highway, waterway and rail service procurement studies. Continue development of draft maintenance procedures to be used at utilities and at Cask Maintenance	Maintain completed site evaluations and update as required. Continue operational assessments for reactor sites working with utilities to identify and resolve site-specific issues. Identify composition of transportation support system. Continue to develop system operational concepts, including definition of equipment, facility, and staff. Continue assessment of overall cask fleet composition requirements and unique needs at individual reactors. Develop procurement packages for private carriers for highway, waterway and rail service. Continue development of draft maintenance procedures to be used at utilities and at the Cask Maintenance Facility. Continue to provide operations input to cask design

III. Transportation System (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Support Systems (Cont'd)			for cask maintenance and initiate development of draft maintenance procedures to be used at utilities and at Cask Maintenance Facility. Continue to provide operations input to cask design activities. Continue to monitor and report on fuel shipments and shipment planning activities throughout the industry, as well as other industry activities related to carriage, intermodal transfer equipment and cask maintenance.	Facility. Continue to provide operations input to cask design activities. Continue to monitor and report on fuel shipments and shipment planning activities throughout the industry, as well as other industry activities related to carriage, intermodal transfer equipment and cask maintenance.	activities. Continue to monitor and report on fuel shipments and shipment planning activities throughout the industry, as well as other industry activities related to carriage, intermodal transfer equipment and cask maintenance.
	$ 0	$ 0	$ 2,300	$ 2,110	$ 2,070
Regulatory	Funding requirements for FY 1992 and FY 1993 are included in the Transportation, Systems Integration and Engineering Development decision unit.		Monitor radioactive waste transportation regulatory developments and develop compliance strategies.	Monitor radioactive waste transportation regulatory developments and develop compliance strategies.	Monitor radioactive waste transportation regulatory developments and develop compliance strategies.
	$ 0	$ 0	$ 190	$ 180	$ 180

III. Transportation System (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Project Management	Funding requirements for FY 1992 and FY 1993 are included in the Transportation, Systems Integration and Engineering Development decision unit.		Implement and maintain management systems. Maintain and update transportation system management documents. Provide general management liaison and coordination with related program elements. Monitor cost and schedule, prepare status and performance reports, and maintain project-level networks.	Implement and maintain management systems. Maintain and update transportation system management documents. Provide general management liaison and coordination with related program elements. Monitor cost and schedule, prepare status and performance reports, and maintain project-level networks.	Implement and maintain management systems. Maintain and update transportation system management documents. Provide general management liaison and coordination with related program elements. Monitor cost and schedule, prepare status and performance reports, and maintain project-level networks.
	$ 0	$ 0	$ 960	$ 880	$ 900
Financial Assistance			No activity in this element.	No activity in this element.	No activity in this element.
	$ 0	$ 0	$ 0	$ 0	$ 0
Quality Assurance	Funding requirements for FY 1992 and FY 1993 are included in the Transportation, Systems Integration and Engineering Development decision unit.		Continue to support requirements for QA program, maintain and update records.	Continue to support requirements for QA program, maintain and update records.	Continue to support requirements for QA program, maintain and update records.
	$ 0	$ 0	$ 190	$ 170	$ 170
Information Management	Funding requirements for FY 1992 and FY 1993 are included in the Transportation, Systems Integration and Engineering Development decision unit.		Complete planning activities related to project-based computer hardware/software and telecommunications equipment.	Initiate acquisition of project-based computer hardware/software and telecommunications equipment.	Continue procurement and installation of project-based computer hardware/software and telecommunications equipment.

III. Transportation System (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Information Management (Cont'd)	$ 0	$ 0	$ 50	$ 50	$ 50
Environment, Safety, and Health	Funding requirements for FY 1992 and FY1993 are included in the Transportation, Systems Integration and Engineering Development decision unit.		Continue preparation of transportation input to Monitored Retrievable Storage (MRS) environmental document. Develop plans to collect transportation-related data and to develop specific models for the conduct of transportation impact analyses for the MRS Environmental Impact Statement (EIS). Develop plans to provide technical support on other environmental topics associated with radioactive waste transportation, including preliminary analyses related to the repository environmental compliance-related activities. Continue Transportation System Risk Assessment. Continue activities required to implement Human Factors Plan for transportation program. Conduct coordination and liaison activities regarding human factors and system safety program aspects as related to the transportation system.	Provide transportation input to MRS environmental documents. Collect transportation-related data and to develop specific models for the conduct of transportation impact analyses for program environmental documents. Provide technical support on other environmental topics associated with radioactive waste transportation, including preliminary analyses related to repository environmental compliance-related activities. Continue Transportation System Risk Assessment. Continue activities required to implement Human Factors Plan for transportation program. Conduct coordination and liaison activities regarding human factors and system safety program aspects as related to the transportation system.	Provide transportation input to the MRS environmental documents. Continue to collect transportation-related data and to develop specific models for conduct of transportation impact analyses for program environmental documents. Continue to provide technical support on other environmental topics associated with radioactive waste transportation, including preliminary analyses related to repository environmental compliance-related activities. Continue Transportation System Risk Assessment. Continue activities required to implement Human Factors Plan for transportation program. Conduct coordination and liaison activities regarding human factors and system safety program aspects as related to the transportation system.

III. Transportation System (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Environment, Safety, and Health (Cont'd)	$ 0	$ 0	$ 540	$ 500	$ 500
Institutional	Funding requirements for FY 1992 and FY 1993 are included in the Transportation, Systems Integration and Engineering Development decision unit.		Continue interactions with State, Tribal, and local governments, other Federal agencies, industry; and utilities to promote understanding and build public confidence. Continue cooperative agreements with regional groups to address institutional and technical transportation operations issues. Initiate policy development on implementation plan for assistance and funding to States and Indian Tribes, as required by Section 180(c) of the Nuclear Waste Policy Act (NPWA). Continue to track resolution of institutional issues with State, Tribal and industry transportation representatives. Continue activities assessing barge, rail, truck and overweight truck transport institutional issues. Initiate activities to assess MPC transport institutional issues. Continue vehicle inspection pilot study and efforts for State adoption of uniform inspection procedures.	Continue interactions with State, Tribal, and local governments, other Federal agencies, industry; and utilities to promote understanding and build public confidence. Continue cooperative agreements with regional groups to address institutional and technical transportation operations issues. Continue policy development on implementation plan for assistance and funding to States and Indian Tribes, as required by Section 180(c) of the NWPA. Continue to track resolution of institutional issues with State, Tribal and industry transportation representatives. Continue activities assessing barge, rail, truck, overweight truck and MPC transport institutional issues. Continue to support Transportation Coordination Group meetings, technical workshops and public information activities.	Continue interactions with State, Tribal, and local governments, other Federal agencies, industry; and utilities to promote understanding and build public confidence. Continue cooperative agreements with regional groups to address institutional and technical transportation operations issues. Continue policy development on implementation plan for assistance and funding to States and Indian Tribes, as required by Section 180(c) of the NWPA. Continue to track resolution of institutional issues with State, Tribal and industry transportation representatives. Continue activities assessing barge, rail, truck, overweight truck and MPC transport institutional issues. Continue to support Transportation Coordination Group meetings, technical workshops and public information activities.

III. Transportation System (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Institutional (Cont'd)			Continue to establish rail and highway routing criteria. Continue to support Transportation Coordination Group meetings, technical workshops and public information activities.		
	$ 0	$ 0	$ 1,900	$ 1,840	$ 2,000
Support Services	Funding requirements for FY 1992 and FY 1993 are included in the Transportation, Systems Integration and Engineering Development decision unit.		Conduct general administrative and project support activities, including administration, training facility/equipment services and publication/graphic services.	Conduct general administrative and project support activities including administration, training facility/equipment services and publication/graphic services.	Conduct general administrative and project support activities including administration, training facility/equipment services and publication/graphic services.
	$ 0	$ 0	$ 50	$ 50	$ 50
Transportation System	$ 0	$ 0	$ 16,160	$ 16,100	$ 18,000

DEPARTMENT OF ENERGY
FY 1994 CONGRESSIONAL BUDGET REQUEST
NUCLEAR WASTE FUND
(dollars in thousands)

KEY ACTIVITY SUMMARY

NUCLEAR WASTE FUND

I. *Preface:* Waste Acceptance

This decision unit consists of: 1) primary technical interface with nuclear utilities to ensure communication with the owners and generators of spent nuclear fuel and high-level radioactive waste; 2) necessary support to manage the Standard Disposal Contract, including fees and terms of payment; 3) verification of ongoing and one-time fees paid into the Nuclear Waste Fund (NWF); 4) management of the NWF fee adequacy analysis; 5) development and management of the contract/MOU fee structures and methodologies for West Valley and defense waste; 6) management of spent fuel data collection, validation and dissemination, and management of the spent fuel acceptance process with owners and generators of spent fuel; 7) preparation of the Annual Capacity Report and the Annual Acceptance Priority Ranking Report; and 8) processing of Delivery Commitment Schedules (DCS) and DCS exchanges.

The FY 1994 funding request of $3.5 million supports continuation of ongoing waste acceptance activities. Funding is also provided for some on-site audits of utilities to verify fees paid into the NWF.

II. A. Summary Table: Waste Acceptance

Program Activity	FY 1992 Enacted	FY 1993 Enacted	FY 1994 Request	% Change	FY 1995 Request	FY 1996 Request
Waste Acceptance	$ 0	$ 0	$ 3,515	>999	$ 3,680	$ 4,050
Total, Waste Acceptance	$ 0	$ 0	$ 3,515	>999	$ 3,680	$ 4,050

NOTE: FY 1992 WASTE ACCEPTANCE ACTIVITIES INCLUDED IN THE PROGRAM MANAGEMENT AND TECHNICAL SUPPORT DECISION UNIT. FY 1993 ACTIVITIES INCLUDED IN THE TRANSPORTATION, SYSTEMS INTEGRATION AND ENGINEERING DEVELOPMENT DECISION UNIT.

III. Activity Descriptions: (New BA in thousands of dollars)

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Waste Acceptance					
Waste Acceptance	Funding requirements for FY 1992 are included in the Program Management and Technical Support decision unit.	Funding requirements for FY 1993 are included in the Transportation, Systems Integration and Engineering Development decision unit.	Continue to meet contractual deadlines for the Annual Capacity Report (ACR), the Acceptance Priority Ranking (APR), Delivery Commitment Schedule (DCS) processing, and DCS exchanges. Continue support of ACR issue resolution process, including rulemaking. Develop and negotiate fees and terms of acceptance for Federally-owned spent nuclear fuel, defense-related and commercially reprocessed high-level waste. Continue quarterly fee verification and annual review of fee adequacy. Continue fee estimation and electricity generation estimation and verification. Continue to collect, validate and disseminate detailed spent nuclear fuel data to users.	Continue to meet contractual deadlines for the ACR, the APR, DCS processing, and DCS exchanges. Continue support of ACR issue resolution process, including rulemaking. Develop and negotiate fees and terms of acceptance for Federally-owned spent nuclear fuel, defense-related and commercially reprocessed high-level waste. Continue quarterly fee verification and annual review of fee adequacy. Continue fee estimation and electricity generation estimation and verification. Continue to collect, validate and disseminate detailed spent nuclear fuel data to users.	Continue to meet contractual deadlines for the ACR, the APR, DCS processing, and DCS exchanges. Continue support of ACR issue resolution process, including rulemaking. Develop and negotiate fees and terms of acceptance for Federally-owned spent nuclear fuel, defense-related and commercially reprocessed high-level waste. Continue quarterly fee verification and annual review of fee adequacy. Continue fee estimation and electricity generation estimation and verification. Continue to collect, validate and disseminate detailed spent nuclear fuel data to users.
	$ 0	$ 0	$ 3,515	$ 3,680	$ 4,050
Waste Acceptance	$ 0	$ 0	$ 3,515	$ 3,680	$ 4,050

DEPARTMENT OF ENERGY
FY 1994 CONGRESSIONAL BUDGET REQUEST
NUCLEAR WASTE FUND
(dollars in thousands)

KEY ACTIVITY SUMMARY

NUCLEAR WASTE FUND

I. Preface: Systems and Compliance

This Key Activity Summary encompasses the former Systems Integration activity with the addition of regulatory compliance activities. Its objectives are to ensure that: 1) the various components of the waste management system are integrated into a single system that is safe, efficient, reliable, cost-effective, and in compliance with all applicable regulatory guidelines; and, 2) the activities leading to the final waste management system are conducted in accordance with the regulatory guidance provided by the governing authorities. The approach to accomplishing these objectives is to: identify and baseline technical requirements of the total system; maintain current descriptions of the system, its components, and interfaces that meet requirements; enhance communication among parties responsible for individual system components and functions; develop and maintain a capability to fully assess alternative concepts; conduct systems studies and recommend improvements; support development of equipment and processes having the potential to improve the system; conduct regulatory compliance reviews; support the Nuclear Waste Technical Review Board; and continue interactions with NRC concerning licensing issues. These activities are critical to the success of the overall program schedule as they directly impact the NRC licensing process for both the repository and the MRS.

II. A. Summary Table: Systems and Compliance

Program Activity	FY 1992 Actual	FY 1993 Estimate	FY 1994 Request	% Change	FY 1995 Request	FY 1996 Request
Systems Engineering	$ 0	$ 9,080	$ 0	-100	$ 0	$ 0
Systems Planning and Integration	0	2,270	0	-100	0	0
Configuration Management	0	2,310	0	-100	0	0
Regulatory Policy and Requirements	0	2,620	0	-100	0	0
Regulatory Integration	0	2,620	0	-100	0	0
Total, Systems and Compliance	$ 0	$ 18,900	$ 0	-100	$ 0	$ 0

II. B. Major Laboratory and Facility Funding

LAWRENCE LIVERMORE NATIONAL LABORATORY	$ 0	$ 20	$ 0	-100	$ 0	$ 0
OAK RIDGE NATIONAL LABORATORY	$ 0	$ 1,115	$ 0	-100	$ 0	$ 0
PACIFIC NORTHWEST LABORATORY	$ 0	$ 496	$ 0	-100	$ 0	$ 0
SANDIA NATIONAL LABORATORIES	$ 0	$ 20	$ 0	-100	$ 0	$ 0

NOTE: FY 1992 SYSTEMS AND COMPLIANCE ACTIVITIES INCLUDED IN THE TRANSPORTATION, SYSTEMS INTEGRATION AND ENGINEERING DEVELOPMENT DECISION UNIT. FY 1994 - FY 1996 ACTIVITIES INCLUDED IN THE SYSTEMS INTEGRATION AND COMPLIANCE DECISION UNIT.

III. Activity Descriptions: (New BA in thousands of dollars)

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Systems and Compliance					
Systems Engineering	Included in Transportation, Systems Integration, and Engineering Development decision unit for FY 1992.	Complete the development of the baseline system requirements documents. Revise technical baselines due to changes in regulations, requirements and Program policy. Resolve system design issues and provide systems support to projects; provide support for technical, management, design and peer reviews of system and system-element activities. Establish Interface Control Working Group (ICWG) to develop and maintain system interface requirements. Maintain the database management and requirements research process. Continue the management of interfaces within the waste management system. Initiate transition of waste characteristics databases to the M&O contractor. Initiate design of integrated technical data management system needed for design and licensing. Initiate survey on needs of system element organizations for other	Beginning in FY 1994, Systems Engineering is included in the Systems Integration element of Systems Integration and Compliance decision unit.		

III. Systems and Compliance (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Systems Engineering (Cont'd)		technical data. Implement newly developed QA controls within the M&O contractor for quality-affecting database maintenance activities in support of licensing and design needs. Finalize specifications for integration of system models into a computerized total system model for enhanced use. Implement newly developed procedures for software control, including verification and validation procedures. Continue interface with other program elements and utility industry regarding overall system planning. Continue to evaluate the implementation and operation of the selected computer models for evaluation of system and subsystem performance measures. Evaluate alternative designs and operational scenarios, and effects of different flows of waste.			
	$ 0	$ 9,080	$ 0	$ 0	$ 0

III. Systems and Compliance (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Systems Planning and Integration	Included in Transportation, Systems Integration, and Engineering Development decision unit for FY 1992.	Implement first phase of system safety and human factors engineering. Provide appropriate input to SEMP and TEMP update activities. Finalize revision of Program Management System Manual for program-wide distribution and control. Update SEMP to reflect current program-level technical baselines. Issue TEMP and update quarterly to reflect information acquired during field test and evaluation activities. Complete development and testing of ARMS and train all OCRWM users. Continue to verify OCRWM requirement changes. Continue providing integration support for DOE interactions with the NWTRB. Prepare interim Interface Controls Document. Begin operation of fully qualified system requirements database. Complete integration of OCRWM program functions using computer analysis techniques.	Beginning in FY 1994, Systems Planning and Integration is included in the Systems Integration element of Systems Integration and Compliance decision unit.		
	$ 0	$ 2,270	$ 0	$ 0	$ 0

III. Systems and Compliance (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Configuration Management	Included in Transportation, Systems Integration, and Engineering Development decision unit for FY 1992.	Update and maintain OCRWM & M&O Baseline Management Plans, and Baseline Management Standards and Procedures. Provide Secretariat support for the change control process. Support the M&O CCB activities. Implement applicable QA requirements for baseline management activities. Review and provide guidance to program elements to develop project configuration management plans and procedures. Upgrade Phase 2 of the CIS.	Beginning in FY 1994, Configuration Management is included in the Systems Integration element of Systems Integration and Compliance decision unit.		
	$ 0	$ 2,310	$ 0	$ 0	$ 0
Regulatory Policy and Requirements	Included in the Regulatory/ Institutional element of the First Repository decision unit for FY 1992.	Issue regulatory guidance documents for YMP, and update documents to facilitate meeting YMP milestones. Develop OCRWM input to proposed regulatory initiatives from NRC, EPA, DOT, and DOE to ensure implementation by YMP. Conduct ES&H coordination for OCRWM regulatory documents and manage issue resolution activities. Coordinate NEPA compliance activities for OCRWM. Review/approve all Field Office	Beginning in FY 1994, Regulatory Policy and Requirements is included in the Regulatory Compliance element of Systems Integration and Compliance decision unit.		

III. Systems and Compliance (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Regulatory Policy and Requirements (Cont'd)		NEPA-level determinations and OCRWM EA and EIS. Provide regulatory compliance reviews of MRS and transportation activities. Track YMP regulatory compliance. Conduct OCRWM self-assessment program regarding environmental protection, radiological and non-radiological public safety, and occupational safety and health.			
	$ 0	$ 2,620	$ 0	$ 0	$ 0
Regulatory Integration	Included in the Regulatory/ Institutional element of the First Repository decision unit for FY 1992.	Review NRC licensing process documents as they relate to MRS volunteer siting, EIS/license application (LA), and Yucca Mountain surface-based testing. Maintain interaction with NRC for resolution of issues concerning repository licensing. Develop and coordinate DOE petitions for licensing-related rulemaking, and manage development and negotiation of MOU's and procedural agreements to support YMP milestones. Begin preparation of annotated outlines for	Beginning in FY 1994, Regulatory Integration is included in the Regulatory Compliance element of Systems Integration and Compliance decision unit.		

III. Systems and Compliance (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Regulatory Integration (Cont'd)		LA under 10CFR60 (repository) and 10CFR72 (MRS). Develop nuclear safeguards/security program under 10CFR75.			
	$ 0	$ 2,620	$ 0	$ 0	$ 0
Systems and Compliance	$ 0	$ 18,900	$ 0	$ 0	$ 0

DEPARTMENT OF ENERGY
FY 1994 CONGRESSIONAL BUDGET REQUEST
NUCLEAR WASTE FUND
(dollars in thousands)

KEY ACTIVITY SUMMARY

NUCLEAR WASTE FUND

I. Preface: Systems Integration and Compliance

This decision unit encompasses the former Systems Integration decision unit with the addition of regulatory compliance activities. Its objectives are to ensure that: 1) the various components of the waste management system are integrated into a single system that is safe, efficient, reliable, cost-effective, and in compliance with all applicable regulatory guidelines; and, 2) the activities leading to the final waste management system are conducted in accordance with the regulatory guidance provided by the governing authorities. The approach to accomplishing these objectives is to identify, interpret, and baseline technical requirements of the total system; maintain current descriptions of the system, its components, and interfaces that meet requirements; enhance communication among parties responsible for individual system components and functions; develop and maintain a capability to fully assess alternative concepts; conduct systems studies and recommend improvements; support development of equipment and processes having the potential to improve the system; conduct regulatory compliance reviews; support the Nuclear Waste Technical Review Board; and continue to manage interactions with the Nuclear Regulatory Commission (NRC) to discuss technical and management issues and to resolve licensing issues. These activities are critical to the success of the overall program schedule as they directly impact the NRC licensing process for OCRWM activities and facilities. In FY 1994, Systems Integration and Compliance activities will focus on the Yucca Mountain Site Characterization Project, with emphasis on work necessary to support Yucca Mountain Exploratory Studies Facility construction and surface-based testing, multipurpose container system (MPC) requirements, early licensing issue resolution, and system analysis and integration.

II. A. Summary Table: Systems Integration and Compliance

Program Activity	FY 1992 Enacted	FY 1993 Enacted	FY 1994 Request	% Change	FY 1995 Request	FY 1996 Request
Systems Integration	$ 0	$ 0	$ 11,000	>999	$ 8,611	$ 7,069
Regulatory Compliance	0	0	4,145	>999	3,349	2,831
Total, Systems Integration and Compliance	$ 0	$ 0	$ 15,145	>999	$ 11,960	$ 9,900

II. B. Major Laboratory and Facility Funding

LAWRENCE LIVERMORE NATIONAL LABORATORY	$ 0	$ 0	$ 20	>999	$ 20	$ 20
OAK RIDGE NATIONAL LABORATORY	$ 0	$ 0	$ 1,100	>999	$ 900	$ 900
PACIFIC NORTHWEST LABORATORY	$ 0	$ 0	$ 500	>999	$ 500	$ 500
SANDIA NATIONAL LABORATORIES	$ 0	$ 0	$ 20	>999	$ 20	$ 20

NOTE: FY 1992 SYSTEMS INTEGRATION AND COMPLIANCE ACTIVITIES INCLUDED IN THE TRANSPORTATION, SYSTEMS INTEGRATION AND ENGINEERING DEVELOPMENT DECISION UNIT. FY 1993 ACTIVITIES INCLUDED IN THE SYSTEMS AND COMPLIANCE DECISION UNIT.

III. Activity Descriptions: (New BA in thousands of dollars)

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Systems Integration and Compliance					
Systems Integration	Included in Transportation, Systems Integration, and Engineering Development decision unit for FY 1992.	Included in Systems and Compliance decision unit for FY 1993.	Support necessary site characterization and repository design activities to obtain a license from the Nuclear Regulatory Commission (NRC). Maintain and update the baseline system requirements documents as required to support Program- and project-level design activities (e.g., Exploratory Studies Facility (ESF) design/site preparation and construction and repository design), and to incorporate changes in regulations, statutes, and Program policy. Continue Interface Control Working Group (ICWG's) and develop required interface specifications and the interface control documents. Update requirements data base to reflect current changes and additions to statutes and regulations. Complete incorporation of program and project implementing documents into Automated Requirements and Management System (ARMS). Enhance Waste	Provide Program-level systems engineering and integration support for ongoing site characterization, waste package, ESF and repository Advanced Conceptual Design (ACD) activities to obtain a license from the NRC. Update and maintain, through management and technical review, the family of baseline system requirements documents to support Program- and project-level design activities (e.g., ACD, ESF design/construction, repository design) and incorporate interpretations and changes in regulations, statutes, and Program policy. Continue using a performance requirements confirmation and oversite program for OCRWM. Continue Integration Working Group (IWG) workshops to resolve current system issues with all program participants. Update ARMS to reflect current changes to statutes and regulations. Upgrade system operation models	Provide Program-level systems engineering and integration support for ongoing site characterization, waste package, ESF and repository ACD activities to obtain a license from the NRC. Maintain, through management and technical review, the baseline system requirements documents as required to support Program- and project-level design activities (e.g., ACD, ESF construction, repository and cask design), and incorporate interpretations and changes in regulations, statutes, and Program policy. Continue using a performance requirements confirmation and oversite program for OCRWM. Continue to revise critical interface control documents. Continue to establish IWG workshops to resolve current system issues with all program participants. Maintain ARMS to reflect current changes to statutes and regulations. Conduct

III. Systems Integration and Compliance (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Systems Integration (Cont'd)			Stream Analysis Model, using utility Delivery Commitment Schedules. Continue detailed systems engineering studies that will provide guidance to repository Advanced Conceptual Design (ACD) planning, and impact system costs, reliability, tradeoffs, and waste acceptance procedures. Continue implementation of specialty engineering, including system safety and human factors engineering, and hazard analyses. Update, maintain, and implement OCRWM Baseline Management Plans, and Baseline Management Standards and Procedures. Execute Secretariat support functions for the OCRWM Baseline Change Control Board (BCCB). Prepare for audits and verification of OCRWM baseline management implementation. Implement applicable Quality Assurance (QA) requirements for baseline management activities. Review and provide guidance to Yucca Mountain Site Characterization Project (YMP) to develop project configuration management plans and	to provide radiological characteristics of waste packages needed for performance assessment of repository pre- and post-closure. Conduct evaluation of system implications of alternative waste generator/repository interfaces in the absence of an Monitored Retrievable Storage (MRS) which could serve (1) as an interim storage facility to reduce the impacts on the repository, and (2) to blend and sort spent fuel to support repository thermal loading needs. Focus system-level engineering studies that provide guidance and requirements to repository and surface facilities, and design of waste packages, to integrate remote handling requirements at the repository with requirements of canisters (including MPCs) and other components handled at waste generator sites. Assess system costs, tradeoffs, waste acceptance procedures, and storage options, as a function of waste package and MPC concepts. Continue implementation of	evaluation of system implications of alternative waste generator/repository interfaces in the absence of an MRS which could serve (1) as an interim storage facility to reduce the impacts on the repository, and (2) to blend and sort spent fuel to support repository thermal loading needs. Continue to focus system engineering studies that provide guidance and requirements to repository and surface facilities, and design of waste packages. Assess system costs, tradeoffs, waste acceptance procedures, and storage options, as a function of waste package and MCP concepts. Continue implementation of specialty engineering, including system safety and human factors engineering, and hazard analyses. Update, maintain, and implement OCRWM Baseline Management Plans, Baseline Management Standards and Configuration Management Procedures. Execute Secretariat support functions for the OCRWM BCCB. Prepare for audits and

III. Systems Integration and Compliance (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Systems Integration (Cont'd)			procedures. Maintain and enhance the ARMS database and the Configuration Information System (CIS). Upgrade ARMS and Phase 3 of the CIS for configuration item interface with InfoStreams. Establish, improve, and implement performance requirements compliance and verification, and systems managment controls and procedures. Integrate critical technical and programmatic requirements through establishment of interface controls through ARMS. Continue providing support for Department of Energy (DOE) interactions with the Nuclear Waste Technical Review Board (NWTRB) for issues such as early results from site studies and multipurpose containers (MPC) analyses.	specialty engineering, including system safety and human factors engineering, and hazard analyses. Update, maintain, and implement OCRWM Baseline Management Plans, Baseline Management Standards and Configuration Management Procedures. Execute Secretariat support functions for the OCRWM BCCB. Prepare for audits and verification of OCRWM baseline technical and management document implementation. Implement applicable QA requirements for baseline management activities. Review and provide guidance to YMP to maintain project configuration management plans and procedures. Maintain and integrate the ARMS database and the CIS to support project design, construction, and compliance activities. Upgrade the CIS for configuration item interface with InfoStreams. Start integration of technical and programmatic requirements through establishment of interface controls through ARMS. Support NWTRB to respond to	verification of OCRWM baseline technical and management document implementation. Implement applicable QA requirements for baseline management activities. Review and provide guidance to YMP to maintain project configuration management plans and procedures. Maintain the ARMS database and the CIS to support ESF construction. Continue to integrate all technical and programmatic requirements through establishment of interface controls through ARMS. Support NWTRB to respond to early results from Yucca Mountain site characterization.

III. Systems Integration and Compliance (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Systems Integration (Cont'd)				early results from Yucca Mountain site characterization.	
	$ 0	$ 0	$ 11,000	$ 8,611	$ 7,069
Regulatory Compliance	Included in the Regulatory/ Institutional element of the First Repository decision unit for FY 1992.	Included in Systems and Compliance decison unit for FY 1993.	Continue to issue and update regulatory guidance documents for YMP and MPC initiatives. Develop OCRWM input to proposed regulatory initiatives from NRC, Environmental Protection Agency (EPA), Department of Transportation (DOT), and DOE to ensure implementation by OCRWM. Continue environment, safety, and health (ES&H) coordination for OCRWM regulatory documents and manage issue resolution activities for OCRWM. Review/approve all Field Office National Environmental Policy Act (NEPA)-level determinations and OCRWM Environmental Assessments (EA) and Environmental Impact Statements (EIS). Continue to provide regulatory compliance reviews of transportation (MPC) activities, and track Yucca Mountain regulatory compliance.	Continue to issue and update regulatory guidance documents for YMP and MPC initiatives. Develop OCRWM input to proposed regulatory initiatives from NRC, EPA, DOT, and DOE to ensure implementation by OCRWM. Continue ES&H coordination for OCRWM regulatory doucments and manage issue resolution activities for OCRWM. Review/approve all Field Office NEPA-level determinations and OCRWM EA and EIS. Continue to provide regulatory compliance reviews of transportation (MPC) activities, and track Yucca Mountain regulatory compliance. Continue OCRWM self-assessment program regarding environmental protection, radiological and non-radiological public safety, and occupational safety and health. Conduct OCRWM QA management	Continue to issue and update regulatory guidance documents for YMP and MPC initiatives. Develop OCRWM input to proposed regulatory initiatives from NRC, EPA, DOT, and DOE to ensure implementation by OCRWM. Continue ES&H coordination for OCRWM regulatory documents and manage issue resolution activities for OCRWM. Review/approve all Field Office NEPA-level determinations and OCRWM EA and EIS. Continue to provide regulatory compliance reviews of transportation (MPC) activities, and track Yucca Mountain regulatory compliance. Continue OCRWM self-assessment program regarding environmental protection, radiological and non-radiological public safety, and occupational safety and health. Conduct OCRWM QA management

III. Systems Integration and Compliance (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Regulatory Compliance (Cont'd)			Continue OCRWM self-assessment program regarding environmental protection, radiological and non-radiological public safety, and occupational safety and health. Conduct OCRWM QA management assessments. Continue coordination of the annotated outline for the repository, MRS, and MPC license applications (LAs). Increase interaction with NRC for resolution of issues concerning repository licensing. Maintain review of NRC licensing process documents as they relate to Yucca Mountain surface-based testing, and development of MRS and MPCs. Develop DOE petitions for licensing-related rulemaking. Develop and negotiate memoranda of understanding (MOUs) and procedural agreements. Continue development of policy basis for nuclear safeguards/security program for OCRWM activities.	assessments. Continue coordination of the annotated outline for the repository, MRS, and MPC LAs. Continue interaction with NRC for resolution of issues concerning repository licensing. Maintain review of NRC licensing process documents as they relate to Yucca Mountain surface-based testing, and development of MRS and MPCs. Develop DOE petitions for licensing-related rulemaking. Develop and negotiate MOU's and procedural agreements. Continue development of policy basis for nuclear safeguards/security program for OCRWM activities.	assessments. Continue coordination of the annotated outline for the repository, MRS, and MPC LAs. Maintain interaction with NRC for resolution of issues concerning repository licensing. Maintain review of NRC licensing process documents as they relate to Yucca Mountain surface-based testing, and development of MRS and MPCs. Develop DOE petitions for licensing-related rulemaking. Develop and negotiate MOU's and procedural agreements. Continue development of policy basis for nuclear safeguards/security program for OCRWM activities.
	$ 0	$ 0	$ 4,145	$ 3,349	$ 2,831

III. Systems Integration and Compliance (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Systems Integration and Compliance	$ 0	$ 0	$ 15,145	$ 11,960	$ 9,900

DEPARTMENT OF ENERGY
FY 1994 CONGRESSIONAL BUDGET REQUEST
NUCLEAR WASTE FUND
(dollars in thousands)

KEY ACTIVITY SUMMARY

NUCLEAR WASTE FUND

I. Preface: Quality Assurance

This decision unit, which was formerly included in the Program Management and Technical Support decision unit, provides quality assurance (QA) support for the Yucca Mountain Site Characterization Project Office and OCRWM Headquarters. Its objectives are to maintain and implement the OCRWM QA program, which is required by the Nuclear Regulatory Commission (NRC) for activities associated with the Yucca Mountain Site Characterization Project (YMP), Monitored Retrievable Storage (MRS), transportation, waste acceptance and production of a high-level waste form, and to ensure that OCRWM activities are executed in a manner which protects the public health, safety and the environment. To accomplish these objectives, QA efforts are designed to verify that OCRWM activities are performed and documented in accordance with regulatory requirements and that personnel are qualified and adequately trained at the locations where the work is performed. Additionally, the QA program includes the provision of guidance and counsel on QA matters to line management and associated personnel and the performance of required verification activities, such as audits, surveillances and reviews. FY 1994 QA activities will focus on supporting underground exploration and surface-based testing design at the Yucca Mountain candidate repository site, multipurpose container system (MPC) design, and viable MRS siting activities.

II. A. Summary Table: Quality Assurance

Program Activity	FY 1992 Enacted	FY 1993 Enacted	FY 1994 Request	% Change	FY 1995 Request	FY 1996 Request
Quality Assurance	$ 0	$ 0	$ 9,539	>999	$ 8,776	$ 8,585
Total, Quality Assurance	$ 0	$ 0	$ 9,539	>999	$ 8,776	$ 8,585

NOTE: FY 1992 - FY 1993 QUALITY ASSURANCE ACTIVITIES INCLUDED IN THE PROGRAM MANAGEMENT AND TECHNICAL SUPPORT DECISION UNIT.

III. Activity Descriptions: (New BA in thousands of dollars)

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Quality Assurance	Included in Program Management and Technical Support decision unit for FY 1992.	Included in Program Management and Technical Support decision unit for FY 1993.	Continue to maintain and implement the QA program, which is required by the NRC for activities associated with radiological health and safety. Ensure that activities are executed in a manner which protects worker and public health, safety and the environment. Provide QA guidance and counsel to line management and associated personnel in the areas of Exploratory Studies Facility (ESF) design and construction, surface-based testing (SBT), multipurpose container (MPC) design, and systems integration. Continue to support QA training efforts and ensure that personnel are qualified and adequately trained at the locations where the work is performed. Perform required verification activities such as audits, surveillances, and reviews. Provide support for the OCRWM Quality Concerns Program in accordance with the NRC Standard Review Plan. Continue consolidation of the Headquarters and YMP QA programs.	Continue to maintain and implement the QA program which is required by the NRC for activities associated with radiological health and safety. Ensure that activities are executed in a manner which protects worker and public health, safety and the environment. Provide QA guidance and counsel to line management and associated personnel in the areas of ESF design and construction, SBT, MPC design, and systems integration. Continue to support QA training efforts and ensure that personnel are qualified and adequately trained at the locations where the work is performed. Perform required verification activities such as audits, surveillances, and reviews. Continue to provide support for the OCRWM Quality Concerns Program in accordance with the NRC Standard Review Plan.	Continue to maintain and implement the QA program which is required by the NRC for activities associated with radiological health and safety. Ensure that activities are executed in a manner which protects worker and public health, safety and the environment. Provide QA guidance and counsel to line management and associated personnel in the areas of ESF design and construction, SBT, MPC design and fabrication, and systems integration. Continue to support QA training efforts and ensure that personnel are qualified and adequately trained at the locations where the work is performed. Perform required verification activities such as audits, surveillances, and reviews. Continue to provide support for the OCRWM Quality Concerns Program in accordance with the NRC Standard Review Plan.

III. Quality Assurance (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Quality Assurance (Cont'd)	$ 0	$ 0	$ 9,539	$ 8,776	$ 8,585
Quality Assurance	$ 0	$ 0	$ 9,539	$ 8,776	$ 8,585

DEPARTMENT OF ENERGY
FY 1994 CONGRESSIONAL BUDGET REQUEST
NUCLEAR WASTE FUND
(dollars in thousands)

KEY ACTIVITY SUMMARY

NUCLEAR WASTE FUND

I. Preface: Program Management and Technical Support

This decision unit includes: 1) Program Management (Federal salaries, benefits, and travel), 2) Technical Support (Nuclear Waste Fund audit services, external relations activities, radioactive waste management graduate fellowship and Historically Black College and University (HBCU) programs, information management, quality assurance (QA), strategic planning, and other support services), and 3) Contractual Services (administrative support costs, including office space, printing, telecommunications, and computer-related services).

II. A. Summary Table: Program Management and Technical Support

Program Activity	FY 1992 Enacted	FY 1993 Enacted	FY 1994 Request	% Change	FY 1995 Request	FY 1996 Request
Program Management	$ 17,556	$ 18,354	$ 0	-100	$ 0	$ 0
Technical Support	35,259	30,059	0	-100	0	0
Contractual Services and Supplies	6,798	6,798	0	-100	0	0
Total, Program Management and Technical Support	$ 59,613	$ 55,211	$ 0	-100	$ 0	$ 0

II. B. Major Laboratory and Facility Funding

CHICAGO FIELD OFFICE	$ 2,371	$ 2,500	$ 0	-100	$ 0	$ 0
IDAHO FIELD OFFICE	$ 704	$ 704	$ 0	-100	$ 0	$ 0
LAWRENCE BERKELEY LABORATORY	$ 1,119	$ 1,150	$ 0	-100	$ 0	$ 0
LAWRENCE LIVERMORE NATIONAL LABORATORY	$ 1,119	$ 1,250	$ 0	-100	$ 0	$ 0
LOS ALAMOS NATIONAL LABORATORY	$ 977	$ 1,100	$ 0	-100	$ 0	$ 0
NEVADA FIELD OFFICE	$ 780	$ 850	$ 0	-100	$ 0	$ 0
OAK RIDGE FIELD OFFICE	$ 913	$ 1,020	$ 0	-100	$ 0	$ 0
OAK RIDGE NATIONAL LABORATORY	$ 65	$ 75	$ 0	-100	$ 0	$ 0
PACIFIC NORTHWEST LABORATORY	$ 610	$ 650	$ 0	-100	$ 0	$ 0
RICHLAND FIELD OFFICE	$ 1,238	$ 1,500	$ 0	-100	$ 0	$ 0
YUCCA MOUNTAIN PROJECT OFFICE	$ 7,787	$ 8,500	$ 0	-100	$ 0	$ 0

NOTE: FY 1994 - FY 1996 PROGRAM MANAGEMENT AND TECHNICAL SUPPORT ACTIVITIES TRANSFERRED TO THE NEW PROGRAM MANAGEMENT DECISION UNIT.

III. Activity Descriptions: (New BA in thousands of dollars)

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Program Management and Technical Support					
Program Management	Oversaw first repository site investigation work, including management of new surface-based testing (SBT) to optimize early site suitability evaluation and hydrologic considerations, Exploratory Studies Facility (ESF) evaluation and design, and review of geologic and hydrologic data. Provided geoscience support to the in-situ testing program. Continued liaison with the State of Nevada and local governments. Continued extensive, in-depth interactions with Nuclear Regulatory Commission (NRC) on licensing matters to facilitate early issue closure. Continued near-field environment testing and modeling in support of site investigation. Continued limited barrier material testing and modeling in support of site investigation. Continued limited barrier material testing and modeling in support of performance	Oversee first repository full-scale SBT and ESF site preparation at Yucca Mountain, and supporting activities to ensure early determination of site suitability. Continue repository-related support and complete Title II design for first access buildings and surface structures. Manage site preparation and surface facility construction at first access. Continue liaison with State of Nevada and local governments. Continue interactions with NRC on licensing matters. Oversee resource management program administrative activities at YMP.	Beginning in FY 1994, Program management activities, including salaries, benefits, and travel of OCRWM employees, have been transferred to the Program Direction element of the Program Management decision unit.		

III. Program Management and Technical Support (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Program Management (Cont'd)	assessment (PA), with focus on putting in place the necessary PA tools.				
	Fully implemented a quality assurance (QA) program. This program provides assurances to OCRWM management that the technical activities are conducted in such a way as to appropriately address those issues relating to public health and safety and the protection of the environment and meet licensing requirements established by the NRC. Implemented a Quality Concerns Program. Implemented QA administrative procedures and implementing line procedures throughout OCRWM, including Yucca Mountain Site Characterization Project Office (YMP), and took corrective action where needed. Conducted audits and surveillances and prepared corrective action reports.	Continue to implement an NRC-approved QA program to ensure that technical activities are being conducted to address public health, safety and environmental issues. Continue the Quality Concerns Program, implementation of the QA administrative procedures, and implementing line procedures. Conduct audits and surveillances and prepare corrective action reports.			

III. Program Management and Technical Support (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Program Management (Cont'd)	Managed baseline documents and interface with OCRWM managers. Supported MRS siting and design activities. Responded to requests from the Nuclear Waste Negotiator. Obtained information on technology and intitiate integration into operational planning. Maintained ongoing transportation program institutional and government liaison. with focus on developing a shipping capability to support start of MRS operation. Conducted fee adequacy analyses, prepared the second Annual Acceptance Priority Ranking Report (AAPR), and approved/disapproved Delivery Commitment Schedules for spent nuclear fuel and high level waste from contract holders.	Continue NRC pre-licensing interactions. Oversee the administration of MRS financial assistance grants. Prepare and issue environmental documentation for up to three proposed federal sites in addition to those requested by Negotiator. Oversee the annual fee adequacy analysis and the third AAPR, and approve/disapprove Delivery Commitment Schedules for spent fuel and high-level radioactive waste acceptance from contract holders. Efforts will be focused on developing a shipping capability to support start of MRS operation.			

III. Program Management and Technical Support (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Program Management (Cont'd)	Managed NWF resources. Maintained program cost and schedule baselines, including preparation of budgets, financial documents and NWF management support. Received matrix support for legal, administrative, financial, environmental, safety, and health. Oversaw Program Management System (PMS) and change control process, provided Executive Secretariat services to OCRWM change control board. Developed PDS changes and prepared reports to Congress as necessary. Provided management and administrative support services. Oversaw resource management program. Managed interactions with the Government Accounting Office (GAO) and the DOE Inspector General (IG) and developed Departmental responses to audit recommendations. Developed and maintained internal control procedures for resource management activities (procurement, personnel, records management, etc.). Managed the activities	Manage NWF resources and investment portfolio. Prepare annual OCRWM assurance letter to the Secretary. Maintain program cost and schedule baseline, including milestone schedule and tracking systems, preparation of OCRWM budgets, financial documents, and NWF management reports. Develop PDS changes and reports to the Congress as required. Provide management and administrative support services. Oversee resource management program administrative activities. Manage interactions with GAO and DOE IG, and develop Departmental responses to audit recommendations. Maintain internal control procedures for resource management activities. Receive matrix support for legal, administrative, financial, environmental, safety, and health, and Congressional liaison activities. Manage the activities of the M&O Contractor.			

III. Program Management and Technical Support (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Program Management (Cont'd)	of the Management and Operation (M&O) contractor.				
	Implemented program-wide public education, information and outreach programs. Directed full implementation of university support program. Developed and managed external communications policies and plans. Responded to external inquiries and comments about the OCRWM program-wide. Managed high volume of official records. Prepared and submitted the Annual Report to Congress.	Continue implementation of public education, information, and outreach programs. Continue implementation of the university support program. Manage external communications. Respond to external inquiries and comments about OCRWM. Prepare and submit the Annual Report to Congress.			
	Managed program-wide strategic and contingency planning activities. Continued interactions with the Office of the Nuclear Waste Negotiator and the National Academy of Sciences. Implemented risk management program. Managed cooperative agreements with foreign waste management programs and conduct interactions with multi-national organizations.	Manage program-wide strategic and contingency planning activities. Revise OCRWM Mission Plan as necessary. Continue interactions with the National Academy of Sciences. Oversee the risk management program. Manage cooperative agreements with foreign waste management programs and conduct interactions with multi-national organizations.			

III. Program Management and Technical Support (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Program Management (Cont'd)	242.0 FTE $ 17,556	248.0 FTE $ 18,354	$ 0	$ 0	$ 0
Technical Support	Supported independent financial audit activities and fund management activities. Conducted fee adequacy analyses and prepared the Annual Acceptance Priority Ranking Report (AAPR). Analyzed delivery commitment schedules for spent nuclear fuel and high-level waste from contract holders. $2,739	Manage independent financial and compliance audit of the Nuclear Waste Fund. Beginning in FY 1993, waste acceptance activities transferred to the Waste Acceptance decision unit. $300	Beginning in FY 1994, audit activities have been transferred to the Program Control and Administration element of the Program Management decision unit.		
	Began development of a long-term education strategy. Initiated an active education program, including teacher training and curriculum development activities. Supported Fellowship and Historically Black Colleges and Universities (HBCU) programs. Participated in national teacher/educator workshops. Developed materials for presentations to Congress, National Association of Regulatory Utility Commissioners (NARUC), American Committee on Radioactive Waste Disposal (ACORD),	Continue development of long-term education strategy. Continue support for education programs, including expansion of Nevada programs, as well as teacher training and curriculum development activities. Continue support of Fellowship and HBCU programs and initiate junior faculty support program. Plan and participate in national and international teacher/educator workshops. Develop materials for presentations to Congress, NARUC, ACORD, technical societies and international conferences. Continue	Beginning in FY 1994, external relations activities have been transferred to the External Relations element of the Program Management decision unit.		

III. Program Management and Technical Support (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Technical Support (Cont'd)	technical societies and international conferences. Managed program-wide scientific and technical information inventory and dissemination policies and publication procedures. Participated in international exchange of information on outreach and education programs. Provided funds for the National Conference of State Legislatures (NCSL), and National Congress of American Indians (NCAI) and the League of Women Voters. Continued outreach with new groups. Integrated technical/institutional programs. Coordinated socioeconomic research. Managed program-wide participation in International High-level Radioactive Waste Conference and other technical conferences and symposia. Continued policy coordination of Payment-Equal-to-Taxes (PETT) and other financial grant programs. Interfaced with technical and working groups to coordinate OCRWM participation in planning of symposia. Initiated Director's forum. Administered	to manage program-wide scientific and technical information inventory and dissemination policies and publication procedures. Participate in international exchange of information on outreach and education programs. Continue to provide funds for the NCSL, NCAI, and the League of Women Voters. Continue outreach with new groups. Continue to integrate technical/institutional programs. Continue to coordinate socioeconomic research. Continue to manage program-wide participation in International High-level Radioactive Waste Conference and other technical conferences and symposia. Continue policy coordination of PETT, including PETT appeals, and other financial grant programs. Interface with technical and industry groups to coordinate OCRWM participation in planning of symposia. Continue Director's forum. Administer OCRWM-wide Headquarters security program for classified documents			

III. Program Management and Technical Support (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Technical Support (Cont'd)	OCRWM-wide Headquarters security program for classified documents and information. $4,614	and information. $5,639			
	Provided program technical support and integration efforts to assist OCRWM in planning and reviewing activities associated with the waste management/disposal system. Provide funds for OCRWM support contractors' internal administrative management. $9,395	Continue to provide program technical support and integration efforts to assist OCRWM in planning and reviewing activities associated with the waste management/disposal system. Provide funds for OCRWM support contractors' internal administrative management. $6,499	Beginning in FY 1994, program integration activities have been transferred to the Program Control and Administration element of the Program Management decision unit. Contract business management activities have been transferred to the Contract Business Management element of the Program Management decision unit.		
	Provided support for development, implementation, management, and operation of the program-wide Information Resource Management (IRM) Program, including backlog processing and technical data management. $12,954	Continue funding support for development, implementation, management, and operation of the program-wide IRM Program. Develop screening criteria for all program information and backlog. Complete redesign of InfoStreams to process all program information and records. $12,954	Beginning in FY 1994, IRM activities have been transferred to the Information Management element of the Program Management decision unit.		

III. Program Management and Technical Support (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Technical Support (Cont'd)	Provided centralized oversight management of program-wide Quality Assurance (QA) implementation activities. $3,539	Continue support and implementation of the QA program, which is required by the NRC for licensing of a repository and MRS, to ensure that OCRWM activities are executed in a manner which protects public health, safety, and the environment. Successful QA implementation includes assurance that all personnel are qualified and adequately trained at the locations where the work is performed. Continue development and maintenance of QA documents. Continue internal and external verification, the QA concerns program, and the corrective action program. $ 2,739	Beginning in FY 1994, QA activities have been transferred to the Quality Assurance decision unit.		
	Supported review and refinement of program-wide strategic and contingency planning. Supported implementation of risk management program. Provided funds to support National Academy of Sciences (NAS) reviews. $2,018	Continue strategic and contingency planning to meet ad-hoc requirements. Meet Departmental requirements for strategic planning. Provide funds to the NAS for special studies at OCRWM's request. $1,928	Beginning in FY 1994, strategic planning activities have been transferred to the Strategic Planning element of the Program Management decision unit.		

III. Program Management and Technical Support (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Technical Support (Cont'd)	$ 35,259	$ 30,059	$ 0	$ 0	$ 0
Contractual Services and Supplies	Provided administrative support services, including employee development, printing, reproduction, office space, equipment rental, postage, telecommunications, materials, and supplies. Supported additional mainframe use, timesharing data preparation support, and continue upgrade of workstation and MIS software.	Continue administrative support services, including employee development, printing, reproduction, office space, equipment rental, postage, telecommunications, materials, and supplies. Continue additional mainframe use, time- sharing data preparation support, and continued upgrade of workstation and MIS software.	Beginning in FY 1994, contractual service activities have been transferred to the Program Control and Administration element of the Program Management decision unit.		
	$ 6,798	$ 6,798	$ 0	$ 0	$ 0
Program Management and Technical Support	242.0 FTE $ 59,613	248.0 FTE $ 55,211	$ 0	$ 0	$ 0

DEPARTMENT OF ENERGY
FY 1994 CONGRESSIONAL BUDGET REQUEST
NUCLEAR WASTE FUND
(dollars in thousands)

KEY ACTIVITY SUMMARY

NUCLEAR WASTE FUND

I. Preface: Program Management

This decision unit encompasses the former Program Management and Technical Support element, with the exception of the Quality Assurance activity, which has been elevated to level 2 in the budget structure for emphasis, and the addition of the International Waste Management Technology activity, which was formerly budgeted under the First Repository decision unit. The Program Management decision unit provides funding for the following activity groupings: 1) Program Direction (Federal salaries, benefits, and travel), 2) Strategic Planning, 3) International Waste Management Technology (international cooperative agreements and information exchange), 4) External Relations (public outreach and education activities), 5) Program Control and Administration (Program cost and schedule control, Nuclear Waste Fund audit services, and contractual services), 6) Information Management (computer support services), 7) Contract Business Management (analysis of contractor performance), 8) First Repository Support (Program-level repository support not included in the Yucca Mountain Site Characterization major systems acquisition (MSA), and 9) MRS Project Support (Program-level MRS support not included in the MRS Project MSA).

The FY 1994 funding level of $58.1 million will support salaries, benefits, and travel for 245 FTE's, detailed strategic and contingency planning, the international program, public outreach, program control and administration activities, and information resource management.

II. A. Summary Table: Program Management

Program Activity	FY 1992 Enacted	FY 1993 Enacted	FY 1994 Request	% Change	FY 1995 Request	FY 1996 Request
Program Direction	$ 0	$ 0	$ 18,131	>999	$ 18,675	$ 19,235
Strategic Planning	0	0	1,928	>999	1,774	1,735
Int'l Waste Management Technology	0	0	7,154	>999	6,582	6,439
External Relations	0	0	4,495	>999	4,135	4,046
Program Control and Administration	0	0	8,954	>999	7,773	7,204
Information Management						
Information Management	0	0	12,954	>999	11,918	11,659
Licensing Support System	0	0	0	0	0	0
Subtotal, Information Management	$ 0	$ 0	$ 12,954	>999	$ 11,918	$ 11,659
Contract Business Management	$ 0	$ 0	$ 1,800	>999	$ 1,656	$ 1,620
First Repository Support	0	0	866	>999	797	779
MRS Project Support	0	0	1,813	>999	1,668	1,632
Total, Program Management	$ 0	$ 0	$ 58,095	>999	$ 54,978	$ 54,349

NOTE: FY 1992 - FY 1993 PROGRAM MANAGEMENT ACTIVITIES INCLUDED IN THE PROGRAM MANAGEMENT AND TECHNICAL SUPPORT DECISION UNIT.

II. B. Major Laboratory and Facility Funding

	FY 1992 Enacted	FY 1993 Enacted	FY 1994 Request	% Change	FY 1995 Request	FY 1996 Request
CHICAGO FIELD OFFICE	$ 0	$ 0	$ 2,600	>999	$ 2,704	$ 2,812
IDAHO FIELD OFFICE	$ 0	$ 0	$ 725	>999	$ 811	$ 844
NEVADA FIELD OFFICE	$ 0	$ 0	$ 884	>999	$ 919	$ 956
OAK RIDGE FIELD OFFICE	$ 0	$ 0	$ 1,061	>999	$ 1,103	$ 1,147
RICHLAND FIELD OFFICE	$ 0	$ 0	$ 1,560	>999	$ 865	$ 900
LAWRENCE BERKELEY LABORATORY	$ 0	$ 0	$ 1,196	>999	$ 1,243	$ 1,294
LAWRENCE LIVERMORE NATIONAL LABORATORY	$ 0	$ 0	$ 1,300	>999	$ 1,352	$ 1,406
LOS ALAMOS NATIONAL LABORATORY	$ 0	$ 0	$ 1,144	>999	$ 1,190	$ 1,237
OAK RIDGE NATIONAL LABORATORY	$ 0	$ 0	$ 78	>999	$ 81	$ 84
PACIFIC NORTHWEST LABORATORY	$ 0	$ 0	$ 676	>999	$ 703	$ 731
YUCCA MOUNTAIN PROJECT OFFICE	$ 0	$ 0	$ 8,840	>999	$ 9,194	$ 9,561

III. Activity Descriptions: (New BA in thousands of dollars)

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Program Management					
Program Direction	Included in Program Management and Technical Support decision unit for FY 1992.	Included in Program Management and Technical Support decision unit for FY 1993.	Provide salaries, benefits, and travel for 245 Federal FTE's.	Provide salaries, benefits, and travel for 245 Federal FTE's.	Provide salaries, benefits, and travel for 245 Federal FTE's.
	$ 0	$ 0	245.0 FTE $ 18,131	245.0 FTE $ 18,675	245.0 FTE $ 19,235
Strategic Planning	Included in Program Management and Technical Support decision unit for FY 1992.	Included in Program Management and Technical Support decision unit for FY 1993.	Continue strategic and contingency planning activities to meet Departmental requirements. Conduct analyses of technology issues related to strategic and contingency planning initiatives. Continue implementation of risk management program. Provide funds for the National Academy of Science (NAS) reviews. Initiate Mission Plan	Continue strategic and contingency planning activities to meet Departmental requirements. Conduct analyses of technology issues related to strategic and contingency planning initiatives. Continue implementation of risk management program. Provide funds for NAS reviews. Conduct Mission Plan Amendment activities, as	Continue strategic and contingency planning activities to meet Departmental requirements. Conduct analyses of technology issues related to strategic and contingency planning initiatives. Continue implementation of risk management program. Provide funds for NAS reviews. Conduct Mission Plan Amendment activities, as

III. Program Management (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Strategic Planning (Cont'd)			Amendment preparation, as necessary, and prepare draft for external review. Coordinate with external parties and finalize document.	necessary.	necessary.
	$ 0	$ 0	$ 1,928	$ 1,774	$ 1,735
Int'l Waste Management Technology	Included in the Repository element of the First Repository decision unit for FY 1992.	Included in the Repository element of the First Repository decision unit for FY 1993.	Continue to maintain current knowledge of developments in foreign high-level waste management programs and disseminate this knowledge into the U.S. program. Continue technical and management support for cooperative international activities, including the Canadian Subsidiary Agreement No. 2, the Swiss Project Agreement No. 3, and the Swedish Hard Rock Laboratory Project Agreement. Continue development of new initiatives with other countries, including France, Germany and Japan. Begin implementation of new agreement for information exchange with Spain. Provide support for coordination and planning of international cooperative agreements	Continue to maintain current knowledge of developments in foreign high-level waste management programs and disseminate this knowledge into the U.S. program. Continue technical and management support for cooperative international activities, including the Canadian Subsidiary Agreement No. 2, the Swiss Project Agreement No. 3, and the Swedish Hard Rock Laboratory Project Agreement. Support participation in natural analogue studies in New Zealand and possibly the Oklo site in Gabon. Continue development of new initiatives with other countries, including Spain, France, Germany and Japan. Provide support for coordination and planning of international	Continue to maintain current knowledge of developments in foreign high-level waste management programs and disseminate this knowledge into the U.S. program. Continue technical and management support for cooperative international activities, including the Canadian Subsidiary Agreement No. 2, the Swiss Project Agreement No. 3, and the Swedish Hard Rock Laboratory Project Agreement. Begin negotiations with Canada and Switzerland on new subsidiary agreement and project agreement, respectively. Continue participation in new natural analogue projects. Participate in negotiations and developing scopes of work for project agreements with other countries, including

III. Program Management (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Int'l Waste Management Technology (Cont'd)			and testing programs with Yucca Mountain Site Characterization Project Office (YMP). Participate in consensus development and information exchange activities sponsored by international organizations and through bilateral agreements with other countries. Provide support to cooperative activities with the Former Soviet Union (FSU). Continue technology exchange and consensus development activities program-wide.	cooperative agreements and testing programs with YMP. Participate in consensus development and information exchange activities sponsored by international organizations and through bilateral agreements with other countries. Provide support to cooperative activities with the FSU. Continue technology exchange and consensus development activites program-wide.	Spain, France, Germany, and Japan. Provide support for coordination and planning of international cooperative agreements and testing programs with YMP. Participate in consensus development and information exchange activities sponsored by international organizations and through bilateral agreements with other countries. Provide support to cooperative activities with the FSU. Continue technology exchange and consensus development activities program-wide.
	$ 0	$ 0	$ 7,154	$ 6,582	$ 6,439
External Relations	Included in Program Management and Technical Support decision unit for FY 1992.	Included in Program Management and Technical Support decision unit for FY 1993.	Continue implementation of education program. Continue support for national education programs, including the ongoing Nevada programs. Continue support of precollege scholarship, Fellowship, and Historically Black Colleges and Universities (HBCU) programs. Develop materials for	Continue implementation of education program. Continue support for national education programs, including expansion of Nevada programs, and development of education evaluation programs. Continue support of precollege scholarship, Fellowship and HBCU programs, and initiate a junior faculty program.	Continue implementation of education program. Continue support for national education programs, including Nevada programs, and implementation of education evaluation programs. Continue support of precollege scholarship, Fellowship, HBCU, and junior faculty programs. Develop materials for

III. Program Management (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
External Relations (Cont'd)			presentations to Congress, National Association of Regulatory Utility Commissioners (NARUC), American Committee on Radioactive Waste Disposal (ACORD), technical societies and international conferences. Continue to manage program-wide scientific and technical information inventory and dissemination policies and publication procedures. Continue to provide funds for the National Conference of State Legislatures (NCSL), National Congress of American Indians (NCAI), and the League of Women Voters. Continue socioeconomic efforts to support theYucca Mountain Environmntal Assessment (EA) and Environmental Impact Statement (EIS). Continue NARUC support. Provide liaison/coordination activities with U.S. Nuclear Waste Negotiator. Continue development and management of financial assistance and payments-equal-to-taxes (PETT) policy. Continue policy support and program coordination for the annual International	Develop materials for presentations to Congress, NARUC, ACORD, technical societies and international conferences. Continue to manage program-wide scientific and technical information inventory and dissemination policies and publication procedures. Continue to provide funds for the NCSL, NCAI, and the League of Women Voters. Continue socioeconomic efforts to support the Yucca Mountain EA and EIS. Continue NARUC support. Continue development and management of financial assistance and PETT policy. Continue policy support and program coordination for the annual International High-Level Radioactive Waste Management Conference. Continue to provide policy support and assistance for Headquarters security program.	presentations to Congress, NARUC, ACORD, technical societies and international conferences. Continue to manage program-wide scientific and technical information inventory and dissemination policies and publication procedures. Continue to provide funds for the NCSL, NCAI, and the League of Women Voters. Continue socioeconomic efforts to support the Yucca Mountain EA and EIS. Continue NARUC support. Continue development and management of financial assistance and PETT policy. Continue policy support and program coordination for the annual International High-Level Radioactive Waste Management Conference. Continue to provide policy support and assistance for Headquarters security program.

III. Program Management (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
External Relations (Cont'd)			High-Level Radioactive Waste Management Conference. Continue to provide policy support and assistance for Headquarters security program.		
	$ 0	$ 0	$ 4,495	$ 4,135	$ 4,046
Program Control and Administration	Included in Program Management and Technical Support decision unit for FY 1992.	Included in Program Management and Technical Support decision unit for FY 1993.	Continue routine development and integration of HQ/field training activities, including QA training for OCRWM & OCRWM contractor personnel. Continue support for Nuclear Waste Fund (NWF) management activities, including development and implementation of investment strategies; annual projections of receipts and interest earnings; and OCRWM budget preparation and execution activities. Update/revise the Project Decision Schedule (PDS) as necessary to reflect changes in the Program schedule that impact on other Federal agencies; coordinate changes with affected agencies. Continue to provide accounting, independent auditing, and NWF property management services. Maintain the	Continue routine development of HQ/field training activities, including QA training for OCRWM & OCRWM contractor personnel. Continue support for NWF management activities, including development and implementation of investment strategies; annual projections of receipts and interest earnings; and OCRWM budget preparation and execution activities. Update/revise the PDS as necessary to reflect changes in the Program schedule that impact on other Federal agencies; coordinate changes with affected agencies. Continue to provide accounting, independent auditing, and NWF property management services. Maintain the Program WBS and support Program oversight over maintenance of YMP and MRS Project WBS's.	Continue implementation of program-level planning, coordination, and oversight of integrated HQ/field training program, including QA training for OCRWM & OCRWM contractor personnel. Continue support for NWF management activities, including development and implementation of investment strategies; annual projections of receipts and interest earnings; and OCRWM budget preparation and execution activities. Update/revise the PDS as necessary to reflect changes in the Program schedule that impact on other Federal agencies; coordinate changes with affected agencies. Continue to provide accounting, independent auditing, and NWF property management services. Maintain the Program WBS and support

III. Program Management (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Program Control and Administration (Cont'd)			Program Work Breakdown Structure (WBS) and support Program oversight over maintenance of YMP and Monitored Retrievable Storage (MRS) Project WBS's. Update/revise the Program Cost and Schedule Baseline (PCSB) as necessary to reflect program evolution/redirection. Complete development of FY 1993 Total System Life Cycle Cost (TSLCC) analysis and initiate FY 1994 TSLCC analysis; update cost models. Continue to provide ad hoc support for YMP and MRS Project Energy System Acquisition Advisory Board (ESAAB) and independent cost estimate (ICE) reviews. Provide administrative support services, including employee development, printing, reproduction, office space, equipment rental, postage, telecommunications, materials, and supplies.	Update/revise the PCSB as necessary to reflect program evolution/redirection. Complete development of FY 1994 TSLCC analysis and initiate FY 1995 TSLCC analysis; update cost models. Continue to provide ad hoc support for YMP and MRS Project ESAAB and ICE reviews. Provide administrative support services, including employee development, printing, reproduction, office space, equipment rental, postage, telecommunications, materials, and supplies.	Program oversight over maintenance of YMP and MRS Project WBS's. Update/revise the PCSB as necessary to reflect program evolution/redirection. Complete development of FY 1995 TSLCC analysis and initiate FY 1996 TSLCC analysis; update cost models. Continue to provide ad hoc support for YMP and MRS Project ESAAB and ICE reviews. Provide administrative support services, including employee development, printing, reproduction, office space, equipment rental, postage, telecommunications, materials, and supplies.
	$ 0	$ 0	$ 8,954	$ 7,773	$ 7,204

III. Program Management (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Information Management					
Information Management	Included in Program Management and Technical Support decision unit for FY 1992.	Included in Program Management and Technical Support decision unit for FY 1993.	Continue ongoing IRM program. Continue development of InfoSTREAMS. Begin developing functionality with the addition of expert systems capabilities for document relevance analysis, document disposition, records retention, and automated dissemination based on user interest profiles. Continue office automation and ongoing records processing activities. Continue Program computer mainframe and telecommunications network center operations. Continue Headquarters mailroom and correspondence control functions. Provide support for ongoing hardware and software maintenance and upgrade costs.	Continue ongoing IRM program. Continue development of InfoSTREAMS. Complete expert systems and begin implementation of full document image handling capabilities and fine tuning of expert systems. Begin the integration of technical and records management systems. Continue office automation and ongoing records processing activities. Continue Program computer mainframe and telecommunications network center operations. Continue Headquarters mailroom and correspondence control functions. Provide support for ongoing hardware and software maintenance and upgrade costs.	Continue ongoing IRM program. Continue development of InfoSTREAMS. Completion of imaging functionality and then sustained in a maintenance mode and major development, implementation, and management efforts are undertaken in support of developing integrated records and technical data management systems. Continue office automation and ongoing records processing activities. Continue Program computer mainframe and telecommunications network center operations. Continue Headquarters mailroom and correspondence control functions. Provide support for ongoing hardware and software maintenance and upgrade costs.
	$ 0	$ 0	$ 12,954	$ 11,918	$ 11,659
Licensing Support System	No Licensing Support System (LSS) activity.	No activity.	No activity.	No activity.	No activity.
	$ 0	$ 0	$ 0	$ 0	$ 0

III. Program Management (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Subtotal, Information Management	$ 0	$ 0	$ 12,954	$ 11,918	$ 11,659
Contract Business Management	Included in Program Management and Technical Support decision unit for FY 1992.	Included in Program Management and Technical Support decision unit for FY 1993.	Continue to provide funds for OCRWM support contractors' internal administrative management, including contract human resources, financial management, subcontractor management, contractor facilities and supplies.	Continue to provide funds for OCRWM support contractors' internal administrative management, including contract human resources, financial management, subcontractor management, contractor facilities and supplies.	Continue to provide funds for OCRWM support contractors' internal administrative management, including contract human resources, financial management, subcontractor management, contractor facilities and supplies.
	$ 0	$ 0	$ 1,800	$ 1,656	$ 1,620
First Repository Support	Included in Program Management and Technical Support decision unit for FY 1992.	Included in Project Management element of the First Repository decision unit for FY 1993.	Provide Headquarters support to develop planning documents and document reviews for First Repository activities not included in the Yucca Mountain Site Characterization Project major systems acquisition (MSA).	Provide Headquarters support to develop planning documents and document reviews for First Repository activities not included in the Yucca Mountain Site Characterization Project MSA.	Provide Headquarters support to develop planning documents and document reviews for First Repository activities not included in the Yucca Mountain Site Characterization Project MSA.
	$ 0	$ 0	$ 866	$ 797	$ 779
MRS Project Support	Included in Program Management and Technical Support decision unit for FY 1992.	Included in Project Management element of the MRS decision unit for FY 1993.	Provide Headquarters support to develop planning documents and document reviews for MRS activities not included in the MRS Project MSA.	Provide Headquarters support to develop planning documents and document reviews for MRS activities not included in the MRS Project MSA.	Provide Headquarters support to develop planning documents and document reviews for MRS activities not included in the MRS Project MSA.
	$ 0	$ 0	$ 1,813	$ 1,668	$ 1,632

III. Program Management (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Program Management	$ 0	$ 0	245.0 FTE $ 58,095	245.0 FTE $ 54,978	245.0 FTE $ 54,349

DEPARTMENT OF ENERGY
FY 1994 CONGRESSIONAL BUDGET REQUEST
OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
(OBLIGATIONS IN THOUSANDS OF DOLLARS)
OBJECT CLASS
NUCLEAR WASTE FUND

Direct Obligation:	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996
Personnel Compensation:					
11.1 Full-time permanent.....	$ 12,761	$ 13,813	$ 13,605	14,016	14,437
11.3 Other than full-time permanent..	326	502	524	540	556
11.5 Other personnel compensation....	371	255	265	273	281
11.9 Total Personnel Compensation.....	13,458	14,570	14,394	14,829	15,274
12.1 Civilian personnel benefits.....	2,548	2,625	2,593	2,671	2,751
13.0 Benefits for former personnel...	3	3	3	3	3
21.1 Travel and trans. of persons....	1,074	1,156	1,141	1,172	1,207
22.0 Transportation of things.....	36	15	17	18	19
23.1 Standard level user charges.....	1,031	1,072	1,115	1,160	1,206
23.2 Rental payments to others.....	10	12	16	17	18
23.3 Communications and utilities....	226	241	265	276	287
24.0 Printing and reproduction.....	1,241	261	269	280	291
25.0 Other services.....	271,023	351,959 *	321,882 *	361,156 *	365,837 *
26.0 Supplies and materials.....	184	231	240	250	260
31.0 Equipment.....	2,999	17,600	17,600	12,800	22,700
32.0 Land and structures.....	0	175	175	182	189
41.0 Grants and subsidies.....	18,258	17,600	20,290	21,000	21,000
99.0 Subtotal, Direct Obligations.....	$ 312,091	$ 407,520	$ 380,000	$ 415,814	$ 431,042
Less, Defense Nuclear Waste Disposal	--	-100,000	-120,000	-130,000	-140,000
99.9 Total, Nuclear Waste Fund Obligations	$ 312,091	$ 307,520	$ 260,000	$ 285,814	$ 291,042
FTE's	242	248	245	245	245

* Includes Defense Nuclear Waste Disposal Obligations

DEPARTMENT OF ENERGY
FY 1994 CONGRESSIONAL BUDGET REQUEST
NUCLEAR WASTE FUND

Comparability Matrix
(dollars in thousands)
FY 1993

NEW BUDGET STRUCTURE

CURRENT STRUCTURE	Yucca Mountain Site Characterization Project	MRS	Transportation System	Waste Acceptance	Quality Assurance	Systems Integration and Compliance	Program Management	Total
First Repository	244,697				6,800		8,020	259,517
MRS		16,308					1,000	17,308
Transportation and Waste Acceptance			19,662	3,660			813	24,135
Systems and Compliance						18,900		18,900
Program Management/ Technical Support					2,739		52,472	55,211
Total	244,697	16,308	19,662	3,660	9,539	18,900	62,305	375,071

DEPARTMENT OF ENERGY
FY 1994 CONGRESSIONAL BUDGET REQUEST
NUCLEAR WASTE FUND

Comparability Matrix
(dollars in thousands)
FY 1992

NEW BUDGET STRUCTURE

CURRENT STRUCTURE	Yucca Mountain Site Characterization Project	MRS	Transportation System	Waste Acceptance	Quality Assurance	Systems Integration and Compliance	Program Management	Total
First Repository	150,746				6,000	3,240	5,564	165,550
MRS		16,225						16,225
Transportation, Systems Integration, and Eng. Development		2,268	18,355			13,060		33,683
Program Management/ Technical Support		115	1,000	2,479	3,539	2,600	49,880	59,613
Total	150,746	18,608	19,355	2,479	9,539	18,900	55,444	275,071

NUCLEAR WASTE FUND
Nuclear Waste Disposal Fund
I. Yucca Mountain Site Characterization Project

ACTIVITY	EXP TYP	CONTR-LAB	DOE OFC	CITY	STATE	CONG DIST	CONTRACTOR NAME	LABORATORY NAME	FY 1992 ACTUAL	FY 1993 ESTIMATE	FY 1994 ESTIMATE	REC NO.
WD-A -01	OE	ZZOTH-SF1C	NV	LIV	CA	09	ALL OTHER CONTRACTORS	LAWRENCE LIVERMORE NATION	$ 7,107	$ 11,583	$ 1,125	4
WD-A -01	OE	ZZOTH-SF2H	NV	BERK	CA	08	ALL OTHER CONTRACTORS	LAWRENCE BERKELEY LABORAT	$ 2,393	$ 1,579	$ 1,517	5
WD-A -01	OE	ZZOTH-WA90	HQ	WAS	DC	01	ALL OTHER CONTRACTORS	DOE WASHINGTON HEADQUARTE	$ 23,804	$ 52,221	$ 50,158	1
WD-A -01	OE	ZZOTH-CH2B	CH	ARG	IL	13	ALL OTHER CONTRACTORS	ARGONNE NATIONAL LABORATO	$ 730	$ 0	$ 0	19
WD-A -01	OE	SAI -NV90	NV	LAS	NV	02	SCIENCE APPLICATIONS INC	DOE NEVADA FIELD OFFICE	$ 38,666	$ 35,774	$ 34,361	6
WD-A -01	OE	REECO-NV9J	NV	LAS	NV	02	REYNOLDS ELEC & ENG CO IN	NEVADA TEST SITE	$ 16,961	$ 37,199	$ 59,829	7
WD-A -01	OE	ZZOTH-NV90	NV	LAS	NV	02	ALL OTHER CONTRACTORS	DOE NEVADA FIELD OFFICE	$ 32,264	$ 25,366	$ 35,493	8
WD-A -01	OE	USGS -NV90	NV	LAS	NV	02	U.S. GEOLOGICAL SURVEY	DOE NEVADA FIELD OFFICE	$ 20,598	$ 22,447	$ 21,560	9
WD-A -01	OE	EGG -NV90	NV	LAS	NV	02	EG&G IDAHO INC	DOE NEVADA FIELD OFFICE	$ 3,824	$ 5,227	$ 5,020	18
WD-A -01	OE	RSN -NV9J	NV	LAS	NV	02	REATHEON SERVICES	NEVADA TEST SITE	$ 11,908	$ 9,257	$ 8,891	23
WD-A -01	OE	ZZOTH-AL1L	NV	LOS	NM	03	ALL OTHER CONTRACTORS	LOS ALAMOS NATIONAL LABOR	$ 12,534	$ 14,629	$ 14,051	10
WD-A -01	OE	ZZOTH-ALSA	NV	ALBU	NM	01	ALL OTHER CONTRACTORS	SANDIA NATIONAL LABORATOR	$ 13,994	$ 13,151	$ 12,631	11
WD-A -01	OE	ZZOTH-CH30	CH	UPT	NY	01	ALL OTHER CONTRACTORS	BROOKHAVEN NATIONAL LABOR	$ 110	$ 0	$ 0	31
WD-A -01	OE	ZZOTH-OR2H	OR	OAKR	TN	03	ALL OTHER CONTRACTORS	OAK RIDGE NATIONAL LABORA	$ 2	$ 0	$ 0	2
WD-A -01	OE	ZZOTH-OR90	OR	OAKR	TN	03	ALL OTHER CONTRACTORS	DOE OAK RIDGE FIELD OFFIC	$ 72	$ 25	$ 24	25
WD-A -01	OE	BMI -RLD0	RL	RICH	WA	04	BATTELLE MEMORIAL INSTITU	PACIFIC NORTHWEST LABORAT	$ 2,162	$ 142	$ 136	3
								TOTAL OE	$ 187,129	$ 228,600	$ 244,796	
WD-A -01	CE	ZZOTH-WA90	HQ	WAS	DC	01	ALL OTHER CONTRACTORS	DOE WASHINGTON HEADQUARTE	$ 0	$ 0	$ 0	63
WD-A -01	CE	REECO-NV9J	NV	LAS	NV	02	REYNOLDS ELEC & ENG CO IN	NEVADA TEST SITE	$ 1,237	$ 15,300	$ 16,300	26
WD-A -01	CE	USGS -NV90	NV	LAS	NV	02	U.S. GEOLOGICAL SURVEY	DOE NEVADA FIELD OFFICE	$ 790	$ 800	$ 500	27
WD-A -01	CE	EGG -NV90	NV	LAS	NV	02	EG&G IDAHO INC	DOE NEVADA FIELD OFFICE	$ 95	$ 400	$ 200	28
WD-A -01	CE	RSN -NV9J	NV	LAS	NV	02	REATHEON SERVICES	NEVADA TEST SITE	$ 0	$ 400	$ 0	30
WD-A -01	CE	SAI -NV90	NV	LAS	NV	02	SCIENCE APPLICATIONS INC	DOE NEVADA FIELD OFFICE	$ 225	$ 200	$ 100	62
WD-A -01	CE	ZZOTH-AL1L	NV	LOS	NM	03	ALL OTHER CONTRACTORS	LOS ALAMOS NATIONAL LABOR	$ 0	$ 0	$ 0	29
								TOTAL CE	$ 2,347	$ 17,100	$ 17,100	
								TOTAL WD-A -01	$ 189,476	$ 245,700 **	$ 261,896 ***	

** INCLUDES $100,000 FROM DEFENSE NUCLEAR WASTE DISPOSAL FUND.
*** INCLUDES $120,000 FROM DEFENSE NUCLEAR WASTE DISPOSAL FUND.

NUCLEAR WASTE FUND
Nuclear Waste Disposal Fund
II. Monitored Retrievable Storage

ACTIVITY	EXP TYP	CONTR-LAB	DOE OFC	CITY	STATE	CONG DIST	CONTRACTOR NAME	LABORATORY NAME	FY 1992 ACTUAL	FY 1993 ESTIMATE	FY 1994 ESTIMATE	REC NO.
WD-A -02	OE	ZZOTH-WA90	HQ	WAS	DC	01	ALL OTHER CONTRACTORS	DOE WASHINGTON HEADQUARTE	$ 24,657	$ 22,067	$ 13,160	12
WD-A -02	OE	EGG -ID90	ID	IDA	ID	02	EG&G IDAHO INC	DOE IDAHO FIELD OFFICE	$ 320	$ 353	$ 0	35
WD-A -02	OE	ZZOTH-ID90	ID	IDA	ID	02	ALL OTHER CONTRACTORS	DOE IDAHO FIELD OFFICE	$ 1,948	$ 2,288	$ 2,490	36
								TOTAL OE	$ 26,925	$ 24,708	$ 15,650	
								TOTAL WD-A -02	$ 26,925	$ 24,708	$ 15,650	

NUCLEAR WASTE FUND
Nuclear Waste Disposal Fund
III. Transportation System

ACTIVITY	EXP TYP	CONTR-LAB	DOE OFC	CITY	STATE	CONG DIST	CONTRACTOR NAME	LABORATORY NAME	FY 1992 ACTUAL	FY 1993 ESTIMATE	FY 1994 ESTIMATE	REC NO.
WD-A -03	OE	ZZOTH-WA90	HQ	WAS	DC	01	ALL OTHER CONTRACTORS	DOE WASHINGTON HEADQUARTE	$ 6,250	$ 14,293	$ 8,560	15
WD-A -03	OE	ZZOTH-ID90	ID	IDA	ID	02	ALL OTHER CONTRACTORS	DOE IDAHO FIELD OFFICE	$ 4,140	$ 7,675	$ 5,100	14
WD-A -03	OE	EGG -ID90	ID	IDA	ID	02	EG&G IDAHO INC	DOE IDAHO FIELD OFFICE	$ 1,000	$ 500	$ 500	16
WD-A -03	OE	ZZOTH-ALSA	AL	ALBU	NM	01	ALL OTHER CONTRACTORS	SANDIA NATIONAL LABORATOR	$ 2,530	$ 2,235	$ 2,000	39
WD-A -03	OE	ZZOTH-OR2H	OR	OAKR	TN	03	ALL OTHER CONTRACTORS	OAK RIDGE NATIONAL LABORA	$ 160	$ 0	$ 0	13
								TOTAL OE	$ 14,080	$ 24,703	$ 16,160	
WD-A -03	CE	ZZOTH-ALSA	AL	ALBU	NM	01	ALL OTHER CONTRACTORS	SANDIA NATIONAL LABORATOR	$ 70	$ 0	$ 0	64
								TOTAL CE	$ 70	$ 0	$ 0	
								TOTAL WD-A -03	$ 14,150	$ 24,703	$ 16,160	

NUCLEAR WASTE FUND
Nuclear Waste Disposal Fund
IV. Waste Acceptance

ACTIVITY	EXP TYP	CONTR-LAB	DOE OFC	CITY	STATE	CONG DIST	CONTRACTOR NAME	LABORATORY NAME	FY 1992 ACTUAL	FY 1993 ESTIMATE	FY 1994 ESTIMATE	REC NO.
WD-A -04	OE	ZZOTH-WA90	HQ	WAS	DC	01	ALL OTHER CONTRACTORS	DOE WASHINGTON HEADQUARTE	$ 2,597	$ 3,689	$ 3,515	33
WD-A -04	OE	ZZOTH-OR2H	OR	OAKR	TN	03	ALL OTHER CONTRACTORS	OAK RIDGE NATIONAL LABORA	$ 0	$ 0	$ 0	65
								TOTAL OE	$ 2,597	$ 3,689	$ 3,515	
								TOTAL WD-A -04	$ 2,597	$ 3,689	$ 3,515	

NUCLEAR WASTE FUND
Nuclear Waste Disposal Fund
V. Quality Assurance

ACTIVITY	EXP TYP	CONTR-LAB	DOE OFC	CITY	STATE	CONG DIST	CONTRACTOR NAME	LABORATORY NAME	FY 1992 ACTUAL	FY 1993 ESTIMATE	FY 1994 ESTIMATE	REC NO.
WD-A -05	OE	ROYW -WA90	HQ	WAS	DC	01	ROY F WESTON INC	DOE WASHINGTON HEADQUARTE	$ 75	$ 447	$ 75	17
WD-A -05	OE	ZZOTH-WA90	HQ	WAS	DC	01	ALL OTHER CONTRACTORS	DOE WASHINGTON HEADQUARTE	$ 375	$ 1,728	$ 375	20
WD-A -05	OE	CER -WA90	HQ	WAS	DC	01	CER	DOE WASHINGTON HEADQUARTE	$ 3,089	$ 3,089	$ 3,089	37
WD-A -05	OE	ZZOTH-NV90	NV	LAS	NV	02	ALL OTHER CONTRACTORS	DOE NEVADA FIELD OFFICE	$ 6,000	$ 6,000	$ 6,000	40
								TOTAL OE	$ 9,539	$ 11,264	$ 9,539	
								TOTAL WD-A -05	$ 9,539	$ 11,264	$ 9,539	

NUCLEAR WASTE FUND
Nuclear Waste Disposal Fund
VI. Systems Integration and Compliance

ACTIVITY	EXP TYP	CONTR-LAB	DOE OFC	CITY	STATE	CONG DIST	CONTRACTOR NAME	LABORATORY NAME	FY 1992 ACTUAL	FY 1993 ESTIMATE	FY 1994 ESTIMATE	REC NO.
WD-A -06	OE	ZZOTH-SF1C	SF	SANF	CA	09	ALL OTHER CONTRACTORS	LAWRENCE LIVERMORE NATION	$ 10	$ 20	$ 20	46
WD-A -06	OE	ZZOTH-WA90	HQ	WAS	DC	01	ALL OTHER CONTRACTORS	DOE WASHINGTON HEADQUARTE	$ 9,804	$ 15,008	$ 11,070	41
WD-A -06	OE	ROYW -WA90	HQ	WAS	DC	01	ROY F WESTON INC	DOE WASHINGTON HEADQUARTE	$ 2,600	$ 2,435	$ 2,435	42
WD-A -06	OE	ZZOTH-ALSA	AL	ALBU	NM	01	ALL OTHER CONTRACTORS	SANDIA NATIONAL LABORATOR	$ 30	$ 20	$ 20	45
WD-A -06	OE	ZZOTH-OR2M	OR	OAKR	TN	03	ALL OTHER CONTRACTORS	OAK RIDGE NATIONAL LABORA	$ 83	$ 1,215	$ 1,100	43
WD-A -06	OE	ZZOTH-RLDO	RL	RICH	WA	04	ALL OTHER CONTRACTORS	PACIFIC NORTHWEST LABORAT	$ 88	$ 506	$ 500	44
								TOTAL OE	$ 12,615	$ 19,204	$ 15,145	
								TOTAL WD-A -06	$ 12,615	$ 19,204	$ 15,145	

NUCLEAR WASTE FUND
Nuclear Waste Disposal Fund
VII. Program Management

ACTIVITY	EXP TYP	CONTR-LAB	DOE OFC	CITY	STATE	CONG DIST	CONTRACTOR NAME	LABORATORY NAME	FY 1992 ACTUAL	FY 1993 ESTIMATE	FY 1994 ESTIMATE	REC NO.
WD-A -07	OE	ZZOTH-SF2H	SF	BERK	CA	08	ALL OTHER CONTRACTORS	LAWRENCE BERKELEY LABORAT	$ 1,119	$ 1,150	$ 1,196	52
WD-A -07	OE	ZZOTH-SF1C	SF	LIV	CA	09	ALL OTHER CONTRACTORS	LAWRENCE LIVERMORE NATION	$ 330	$ 1,250	$ 1,300	53
WD-A -07	OE	ZZOTH-WA90	HQ	WAS	DC	01	ALL OTHER CONTRACTORS	DOE WASHINGTON HEADQUARTE	$ 26,110	$ 47,618	$ 26,263	38
WD-A -07	OE	ROYW -WA90	HQ	WAS	DC	01	ROY F WESTON INC	DOE WASHINGTON HEADQUARTE	$ 16,601	$ 10,835	$ 11,268	60
WD-A -07	OE	ZZOTH-ID90	ID	IDA	ID	02	ALL OTHER CONTRACTORS	DOE IDAHO FIELD OFFICE	$ 669	$ 704	$ 725	49
WD-A -07	OE	ZZOTH-CH98	CH	CH	IL	13	ALL OTHER CONTRACTORS	DOE CHICAGO FIELD OFFICE	$ 633	$ 2,500	$ 2,600	48
WD-A -07	OE	ZZOTH-WAGO	NV	LAS	NV	02	ALL OTHER CONTRACTORS	YUCCA MOUNTAIN	$ 6,579	$ 9,350	$ 9,724	58
WD-A -07	OE	ZZOTH-AL1L	AL	ALBU	NM	03	ALL OTHER CONTRACTORS	LOS ALAMOS NATIONAL LABOR	$ 977	$ 1,100	$ 1,144	54
WD-A -07	OE	ZZOTH-OR90	OR	OAKR	TN	03	ALL OTHER CONTRACTORS	DOE OAK RIDGE FIELD OFFIC	$ 335	$ 348	$ 361	50
WD-A -07	OE	ORAU -ORNN	OR	OAKR	TN	03	OAK RIDGE ASSOCIATED UNIV	OAK RIDGE ASSOCIATED UNIV	$ 745	$ 672	$ 700	55
WD-A -07	OE	ZZOTH-OR2H	OR	OAKR	TN	03	ALL OTHER CONTRACTORS	OAK RIDGE NATIONAL LABORA	$ 503	$ 75	$ 78	56
WD-A -07	OE	ZZOTH-RL90	RL	RICH	WA	04	ALL OTHER CONTRACTORS	DOE RICHLAND FIELD OFFICE	$ 1,000	$ 1,500	$ 1,560	51
WD-A -07	OE	ZZOTH-RLDO	RL	RICH	WA	04	ALL OTHER CONTRACTORS	PACIFIC NORTHWEST LABORAT	$ 868	$ 650	$ 676	57
								TOTAL OE	$ 56,469	$ 77,752	$ 57,595	
WD-A -07	CE	ZZOTH-WA90	HQ	WAS	DC	01	ALL OTHER CONTRACTORS	DOE WASHINGTON HEADQUARTE	$ 320	$ 500	$ 500	59
								TOTAL CE	$ 320	$ 500	$ 500	
								TOTAL WD-A -07	$ 56,789	$ 78,252	$ 58,095	
								TOTAL WD-A	$ 312,091	$ 407,520	$ 380,000	
								TOTAL WD	$ 312,091	$ 407,520 **	$ 380,000 ***	

** INCLUDES $100,000 FROM DEFENSE NUCLEAR WASTE DISPOSAL FUND.
*** INCLUDES $120,000 FROM DEFENSE NUCLEAR WASTE DISPOSAL FUND.

DEPARTMENT OF ENERGY

Proposed Appropriation Language

Defense Nuclear Waste Disposal

For nuclear waste disposal activities to carry out the purposes of Public Law 97-425, as amended, including the acquisition of real property or facility construction or expansion, [$100,000,000] $120,000,000 to remain available until expended, all of which shall be used in accordance with the terms and conditions of the Nuclear Waste Fund appropriation of the Department of Energy contained in this title. (Energy and Water Development Appropriations Act, 1993.)

DEPARTMENT OF ENERGY
FY 1994 CONGRESSIONAL BUDGET REQUEST
DEFENSE NUCLEAR WASTE DISPOSAL

OVERVIEW

DEFENSE NUCLEAR WASTE DISPOSAL

Section 8(b) of the Nuclear Waste Policy Act, as amended (NWPA) required the President to evaluate the use of disposal capacity at the civilian repository(ies) to be developed under Subtitle IA of the NWPA for the disposal of high-level radioactive wastes from atomic energy defense activities. The required evaluation is documented in "An Evaluation of Commercial Repository Capacity for the Disposal of Defense High-Level Waste" DOE/OP-0020/1, June 1985. This evaluation concluded that there was no basis for the establishment of a separate repository for the permanent disposal of defense high-level waste. Based on this conclusion, the Secretary of Energy recommended, and the President approved, the disposal of defense high-level wastes in the civilian repository. Upon receipt of the Presidential decision on April 30, 1985, the Secretary of Energy became obligated under Section 8(b)(2) of the NWPA to proceed promptly with arrangements for the use of the repository(ies) for the disposal of such waste. "Such arrangements shall include the allocation of costs of developing, constructing, and operating this repository or repositories to be developed under Subtitle IA of the Act. The costs resulting from permanent disposal of high-level radioactive waste from atomic energy defense activities shall be paid by the Federal Government, into the special account established under section 302." Section 302(b)(4) of the NWPA requires the Federal Government to make payments into the Nuclear Waste Fund before defense high-level wastes are disposed of in the repository.

A separate appropriation for Defense Nuclear Waste Disposal was established as part of the FY 1993 Energy and Water Development Appropriation (P.L. 102-377) in lieu of a payment from the Department of Energy into the Nuclear Waste Fund for the disposal of defense high-level waste in the civilian repository. Funds appropriated from this account are used entirely to support site characterization of the Yucca Mountain candidate repository site.

DEPARTMENT OF ENERGY
FY 1994 CONGRESSIONAL BUDGET REQUEST
DEFENSE NUCLEAR WASTE DISPOSAL
(Tabular dollars in thousands, narrative in whole dollars)

LEAD TABLE

DEFENSE NUCLEAR WASTE DISPOSAL

Activity	FY 1992 Adjusted	FY 1993 Appropriation	FY 1993 Adjustment	FY 1994 Request
DEFENSE NUCLEAR WASTE DISPOSAL				
Operating Expenses	$ 0	$ 100,000	$ 0	$ 120,000
TOTAL	$ 0	$ 100,000	$ 0	$ 120,000
Summary				
Operating Expenses	$ 0	$ 100,000	$ 0	$ 120,000
Total Program	$ 0	$ 100,000	$ 0	$ 120,000
Staffing (FTE's)	0	0	0	0

DEPARTMENT OF ENERGY
FY 1994 CONGRESSIONAL BUDGET REQUEST
DEFENSE NUCLEAR WASTE DISPOSAL
(dollars in thousands)

SUMMARY OF CHANGES

FY 1993 Appropriation	$ 100,000
Adjustments	0
FY 1994 Base	$ 100,000

DEFENSE NUCLEAR WASTE DISPOSAL

Increase for Yucca Mountain Site Characterization Project activities including initiation of underground exploration using a tunnel boring machine; surface-based testing, including an active drilling program; ongoing scientific studies which include seismicity, volcanism, hydrology, geochemistry, geophysics and climatology; and the development of the advanced conceptual design for the repository and waste package.	+20,000
FY 1994 CONGRESSIONAL BUDGET REQUEST	$ 120,000

DEPARTMENT OF ENERGY
FY 1994 CONGRESSIONAL BUDGET REQUEST
DEFENSE NUCLEAR WASTE DISPOSAL
(dollars in thousands)

KEY ACTIVITY SUMMARY

DEFENSE NUCLEAR WASTE DISPOSAL

I. Preface: DEFENSE NUCLEAR WASTE DISPOSAL

Since passage of the Nuclear Waste Policy Act in 1983, the Nuclear Waste Fund (NWF) has incurred costs for activities related to disposal of high-level waste generated from atomic energy defense activities. The balance owed by the Federal Government to the Nuclear Waste Fund was nearly $700 million (including principal and interest) at the end of FY 1992. Interest continues to accrue at approximately $50 million per year. Before establishment of the Defense Nuclear Waste Disposal Appropriation in FY 1993, the Federal Government had made two payments into the Nuclear Waste Fund, $5 million in FY 1991 and $7.5 million in FY 1992. The FY 1993 funding of $100 million from the Defense Nuclear Waste Disposal Appropriation represented the first significant contribution to the Program by the Federal Government.

The FY 1994 Congressional budget request of $120 million from the Defense Nuclear Waste Disposal account supports exclusively the Yucca Mountain site characterization activities conducted by the Office of Civilian Radioactive Waste Management at the Yucca Mountain candidate repository site. This request of $120 million, when combined with the $141.9 million requested from the Nuclear Waste Fund, provides a total of $261.9 million in FY 1994 for scientific investigations of Yucca Mountain. FY 1994 activities at the site will focus on construction of the Exploratory Studies Facility, which is the principal facility for underground investigations. Emphasis will also be placed on ongoing surface-based testing activities, which include an active drilling program in addition to the scientific studies. Yucca Mountain activities are described in greater detail in the budget request for the Nuclear Waste Fund, which subsumes the Defense funding.

II. A. Summary Table: DEFENSE NUCLEAR WASTE DISPOSAL

Program Activity	FY 1992 Actual	FY 1993 Estimate	FY 1994 Request	% Change
DEFENSE NUCLEAR WASTE DISPOSAL.....	$ 0	$ 100,000	$ 120,000	+ 20
Total, DEFENSE NUCLEAR WASTE DISPOSAL	$ 0	$ 100,000	$ 120,000	+ 20

II. B. Major Laboratory and Facility Funding

YUCCA MOUNTAIN PROJECT OFFICE	$ 0	$ 100,000	$ 120,000	+ 20

III. Activity Descriptions: (New BA in thousands of dollars)

Program Activity	FY 1992	FY 1993	FY 1994
DEFENSE NUCLEAR WASTE DISPOSAL	Defense Nuclear Waste Disposal Appropriation not established in FY 1992.	Provide funds for Yucca Mountain site characterization activities, including Exploratory Studies Facility (ESF) construction, site investigations, systems engineering, waste package and repository design, and regulatory, institutional, quality assurance, and information management activities.	Provide funds for Yucca Mountain site characterization activities, including ESF construction, site investigations, systems engineering, waste package and repository design, and regulatory, institutional, quality assurance, and information management activities.
	$ 0	$ 100,000	$ 120,000
DEFENSE NUCLEAR WASTE DISPOSAL	$ 0	$ 100,000	$ 120,000

DEPARTMENT OF ENERGY
FY 1994 CONGRESSIONAL BUDGET REQUEST
DEFENSE NUCLEAR WASTE DISPOSAL
(OBLIGATIONS IN THOUSANDS OF DOLLARS)
OBJECT CLASS

Direct Obligation:	FY 1992	FY 1993	FY 1994
Personnel Compensation:			
11.1 Full-time permanent.....	$ --	$ 0	$ 0
11.3 Other than full-time permanent..	--	0	0
11.5 Other personnel compensation....	--	0	0
11.9 Total Personnel Compensation.....	--	0	0
12.1 Civilian personnel benefits.....	--	0	0
13.0 Benefits for former personnel...	--	0	0
21.1 Travel and trans. of persons....	--	0	0
22.0 Transportation of things.....	--	0	0
23.1 Standard level user charges.....	--	0	0
23.2 Rental payments to others.....	--	0	0
23.3 Communications and utilities....	--	0	0
24.0 Printing and reproduction.....	--	0	0
25.0 Other services.....	--	100,000	120,000
26.0 Supplies and materials.....	--	0	0
31.0 Equipment.....	--	0	0
32.0 Land and structures.....	--	0	0
41.0 Grants and subsidies.....	--	0	0
99.9 Total Obligations.....	$ --	$ 100,000	$ 120,000

DEPARTMENT OF ENERGY
FY 1994 CONGRESSIONAL BUDGET REQUEST

DEFENSE NUCLEAR WASTE DISPOSAL

OUTYEAR ESTIMATES

(dollars in thousands)

Defense Nuclear Waste Disposal	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998
Total BA	120,000	130,000	140,000	150,000	160,000
Total BO	110,000	125,000	135,000	145,000	155,000

DEPARTMENT OF ENERGY
FY 1994 CONGRESSIONAL BUDGET REQUEST
ENERGY SUPPLY, RESEARCH AND DEVELOPMENT

OVERVIEW

CIVILIAN RADIOACTIVE WASTE RESEARCH AND DEVELOPMENT

Title II of the Nuclear Waste Policy Act (NWPA), as amended, mandates a focused and integrated high-level radioactive waste and spent nuclear fuel research and development program. In compliance with this mandate, Office of Civilian Radioactive Waste Management (OCRWM) seeks to encourage and expedite the development and demonstration of new, cross-cutting technologies which allow an increase in the current on-site (at-reactor) storage capacity of spent nuclear fuel. Additional, temporary on-site storage will extend nuclear electricity production and thus contribute to the continuation of nuclear energy generation. The principal focal points of OCRWM's efforts under Title II of the NWPA are cooperative demonstrations of dry storage through monitoring and consolidation of spent nuclear fuel and development of data on spent fuel conditions and properties that can be used as a basis to support design, licensing, and operation of interim dry storage facilities.

During Fiscal Year 1994, OCRWM will conduct activities in each of the following areas in support of Title II of the NWPA, as amended:

Cooperative Demonstrations: Dry storage systems represent an alternative method of providing additional spent fuel storage at nuclear power plant sites. Potential methods of dry storage include casks, drywells, silos and vaults. OCRWM will continue to support these demonstrations to provide data and information for future Nuclear Regulatory Commission (NRC) licensing, including participating in a DOE/industry research, development, and demonstration (RD&D) dual purpose cask and dry transfer system project.

Spent Fuel Generic R&D: OCRWM will continue to support generic R&D of alternative spent nuclear fuel storage technologies to enhance at-reactor storage capacity.

International Cooperation: OCRWM will continue to engage in cooperative efforts with non-nuclear weapon states under Section 223 of the NWPA, as amended. OCRWM will, on request, provide technical assistance and information exchanges in the fields of at-reactor spent fuel storage; away-from reactor spent fuel storage; monitored retrievable storage; geological disposal of spent nuclear fuel; and the health, safety and environmental regulations associated with such activities.

The FY 1994 Civilian Radioactive Waste R&D Congressional budget request focuses on: 1) monitoring of casks loaded with intact and consolidated fuel; 2) conduct of research and development work on topics important to long-term storage of spent fuel; 3) conduct of international information exchanges through International Atomic Energy Agency (IAEA); and 4) continued cooperative information exchanges with non-nuclear weapon states.

DEPARTMENT OF ENERGY
FY 1994 CONGRESSIONAL BUDGET REQUEST
ENERGY SUPPLY, RESEARCH AND DEVELOPMENT
(dollars in thousands)

LEAD TABLE

Civilian Radioactive Waste Research and Development

Activity	FY 1992 Actual	FY 1993 Estimate	FY 1994 Base	FY 1994 Request	Program Change Request vs Base Dollar	Program Change Request vs Base Percent
Civilian Radioactive Waste Research and Development						
Operating Expenses	$ 4,700	$ 4,583	$ 4,583	$ 687	$ -3,896	-85%
TOTAL	$ 4,700	$ 4,583	$ 4,583	$ 687	$ -3,896	-85%
Summary						
Operating Expenses	$ 4,700	$ 4,583	$ 4,583	$ 687	$ -3,896	-85%
Total Program	$ 4,700	$ 4,583	$ 4,583	$ 687	$ -3,896	-85%
Staffing (FTE's)	2	2	2	2		

DEPARTMENT OF ENERGY
FY 1994 CONGRESSIONAL BUDGET REQUEST
ENERGY SUPPLY RESEARCH AND DEVELOPMENT

CIVILIAN RADIOACTIVE WASTE RESEARCH AND DEVELOPMENT
(dollars in thousands)

SUMMARY OF CHANGES

FY 1993 Appropriation	$ 4,583
Adjustments	0
FY 1994 Base	$ 4,583

CIVILIAN RADIOACTIVE WASTE RESEARCH AND DEVELOPMENT

Reduction due to completion of the Federal contribution to the cooperative demonstration project with the Sacramento Municipal Utility District to develop a dry spent fuel transfer system and transportable storage casks.	-3,896
FY 1994 CONGRESSIONAL BUDGET REQUEST	$ 687

DEPARTMENT OF ENERGY
FY 1994 CONGRESSIONAL BUDGET REQUEST
ENERGY SUPPLY, RESEARCH AND DEVELOPMENT
(dollars in thousands)

KEY ACTIVITY SUMMARY

CIVILIAN RADIOACTIVE WASTE RESEARCH AND DEVELOPMENT

I. Preface: Civilian Radioactive Waste Research and Development

The primary tasks associated with this activity are: cooperative demonstration programs with the electric utilities to develop transportable storage casks, a dry transfer system and dry storage of spent nuclear fuel, with the objective of establishing one or more technologies that the NRC may, by rule, approve for use by the utilities. Generic R&D is used to establish a data base which will assist utilities involved in the licensing process. Technical assistance is provided to non-nuclear weapon states. Headquarters staff is responsible for the assessment of technical progress, project planning, milestone progress, guidance, overview and integration of all contractor activities, and the initiation of appropriate actions to resolve problems in any of these areas.

II. A. Summary Table: Civilian Radioactive Waste Research and Development

Program Activity	FY 1992 Enacted	FY 1993 Enacted	FY 1994 Request	% Change
Spent Fuel Storage Development				
Cooperative Agreements				
Dry Cask Storage	$ 4,160	$ 4,061	$ 180	- 96
Subtotal, Cooperative Agreements	$ 4,160	$ 4,061	$ 180	- 96
Generic Research and Development Studies	$ 380	$ 380	$ 360	- 5
Cooperation with Non-Nuclear Weapons States	50	32	37	+ 16
Subtotal, Spent Fuel Storage Development	$ 4,590	$ 4,473	$ 577	- 87
Program Direction	$ 110	$ 110	$ 110	0
Total, Civilian Radioactive Waste Research and Development	$ 4,700	$ 4,583	$ 687	- 85

II. B. Major Laboratory and Facility Funding

DOE Idaho Field Office	$ 160	$ 160	$ 180	+ 13
DOE Richland Field Office	$ 2,500	$ 3,901	$ 0	-100
Pacific Northwest Laboratory	$ 630	$ 412	$ 397	- 4

III. Activity Descriptions: (New BA in thousands of dollars)

Program Activity	FY 1992	FY 1993	FY 1994
Civilian Radioactive Waste Research and Development			
Spent Fuel Storage Development			
Cooperative Agreements			
Dry Cask Storage	Continued limited monitoring of casks loaded with intact and consolidated fuel from dry storage demonstration projects.	Continue limited monitoring of casks loaded with intact and consolidated fuel from dry storage demonstration projects.	Continue limited monitoring of casks loaded with intact and consolidated fuel from dry storage demonstration projects.
	Initiated cooperative demonstration project (the Rancho Seco reactor owned by the Sacramento Municipal Utility District [SMUD]) for transportable storage casks and dry spent fuel transfer. Participants included DOE, SMUD and Electric Power Research Institute (EPRI). Project was conducted per DOE plan submitted to Congress on 6-8-91.	Continue cooperative demonstration project with SMUD and EPRI. Develop a dry spent fuel transfer system technology, which has application at nuclear power plants and the Monitored Retrievable Storage (MRS) facility. FY 1993 funding completes the Federal contribution to this cooperative demonstration.	Continue cooperative demonstration project with SMUD and EPRI.
	$ 4,160	$ 4,061	$ 180
Subtotal, Cooperative Agreements	$ 4,160	$ 4,061	$ 180

III. Civilian Radioactive Waste Research and Development (Cont'd):
Spent Fuel Storage Development (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994
Generic Research and Development Studies	Conducted research and development work on topics important to long-term storage of spent fuel, i.e., (1) support of Virginia Power/DOE Cooperative Agreement demonstrations to support at-reactor dry storage licensing at Surry and other utilities; (2) validation of COBRA-SFS and HYDRA-II computer codes to permit accurate predictions of heat transfer characteristics of dry storage systems; and (3) develop laboratory-scale data on spent fuel conditions and properties that can be used as bases to support the design, licensing and operation of dry storage installations. Conducted international information exchanges through the IAEA.	Conduct research and development work on topics important to long-term storage of spent fuel, i.e., (1) support of Virginia Power/DOE Cooperative Agreement demonstrations to support at-reactor dry storage licensing at Surry and other utilities; (2) validation of COBRA-SFS and HYDRA-II computer codes to permit accurate predictions of heat transfer characteristics of dry storage systems; and (3) complete laboratory-scale data on spent fuel conditions and properties that can be used as bases to support the design, licensing and operation of dry storage installations. Conduct international information exchanges through the IAEA.	Conduct research and development work on topics important to long-term storage of spent fuel, i.e., (1) support of Virginia Power/DOE Cooperative Agreement demonstrations to support at-reactor dry storage licensing at Surry and other utilities; (2) validation of COBRA-SFS and HYDRA-II computer codes to permit accurate predictions of heat transfer characteristics of dry storage systems. Conduct international information exchanges through the IAEA.
	$ 380	$ 380	$ 360
Cooperation with Non-Nuclear Weapons States	Continued cooperative information exchanges with non-nuclear weapon states, i.e., Korea and Spain.	Reduce cooperative information exchanges with non-nuclear weapon states, i.e., Korea and Spain.	Continue reduced cooperative information exchange program.
	$ 50	$ 32	$ 37
Subtotal, Spent Fuel Storage Development	$ 4,590	$ 4,473	$ 577
Program Direction	Continued to manage Storage R&D subprogram activities, including dry storage project activities and spent fuel storage technology development activities at Headquarters, Idaho Field Office and Richland Field Office.	Continue to manage Storage R&D subprogram activities, including dry storage project activities and spent fuel storage technology development activities at Headquarters, Idaho Field Office and Richland Field Office.	Continue to manage Storage R&D subprogram activities, including dry storage project activities and spent fuel storage technology development activities at Headquarters, Idaho Field Office and Richland Field Office.
	2.0 FTE $ 110	2.0 FTE $ 110	2.0 FTE $ 110

III. Civilian Radioactive Waste Research and Development (Cont'd):

Program Activity	FY 1992	FY 1993	FY 1994
Civilian Radioactive Waste Research and Development	2.0 FTE $ 4,700	2.0 FTE $ 4,583	2.0 FTE $ 687

DEPARTMENT OF ENERGY
FY 1994 CONGRESSIONAL BUDGET
OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
(Obligations in thousands of dollars)

OBJECT CLASS
CIVILIAN WASTE R&D

		FY 1992	FY 1993	FY 1994
Personnel Compensation:				
11.1	Full-time permanent.....	90	90	90
11.3	Other than full-time permanent..	1	1	1
11.5	Other personnel compensation....	0	0	0
11.9	Subtotal, personnel compensation	91	91	91
12.1	Personnel Benefits.....	16	16	16
13.0	Benefits for former personnel...	0	0	0
21.1	Travel and trans. of persons....	3	3	3
22.0	Transportation of things.....	0	0	0
23.1	Standard level user charges.....	0	0	0
23.2	Rental payments to others.....	0	0	0
23.3	Communications and utilities....	0	0	0
24.0	Printing and reproduction.....	0	0	0
25.0	Other services.....	4,590	4,473	577
26.0	Supplies and materials.....	0	0	0
31.0	Equipment.....	0	0	0
32.0	Land and structures.....	0	0	0
41.0	Grants and subsidies.....	0	0	0
	Total.....	4,700	4,583	687

DEPARTMENT OF ENERGY
FY 1994 CONGRESSIONAL BUDGET
OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
(Dollars in thousands)

OUTYEARS
CIVILIAN WASTE R&D

	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998
Civilian Waste R&D:					
Spent Fuel Storage	577	870	870	870	870
Program Direction	110	130	130	130	130
Total, Civilian Waste BA	687	1,000	1,000	1,000	1,000
Civilian Waste R&D:					
Spent Fuel Storage	565	853	853	853	853
Program Direction	108	127	127	127	127
Total, Civilian Waste BO	673	980	980	980	980
FTE's	2	2	2	2	2

ENERGY SUPPLY RESEARCH AND DEVELOPMENT
Civilian Radioactive Waste Management
I. Civilian Waste R&D

ACTIVITY	EXP TYP	CONTR-LAB	DOE OFC	CITY	STATE	CONG DIST	CONTRACTOR NAME	LABORATORY NAME	FY 1992 ACTUAL	FY 1993 ESTIMATE	FY 1994 ESTIMATE	REC NO.
YA-L -01	OE	ZZOTH-WA90	HQ	WAS	DC	01	ALL OTHER CONTRACTORS	DOE WASHINGTON HEADQUARTE	$ 114	$ 110	$ 110	21
YA-L -01	OE	EGG -ID90	ID	IDA	ID	02	EG&G IDAHO INC	DOE IDAHO FIELD OFFICE	$ 590	$ 160	$ 180	22
YA-L -01	OE	BMI -RL90	RL	RICH	WA	04	BATTELLE MEMORIAL INSTITU	DOE RICHLAND FIELD OFFICE	$ 630	$ 412	$ 397	24
YA-L -01	OE	ZZOTH-RL90	RL	RICH	WA	04	ALL OTHER CONTRACTORS	DOE RICHLAND FIELD OFFICE	$ 2,500	$ 3,901	$ 0	47
								TOTAL OE	$ 3,834	$ 4,583	$ 687	
								TOTAL YA-L -01	$ 3,834	$ 4,583	$ 687	
								TOTAL YA-L	$ 3,834	$ 4,583	$ 687	
								TOTAL YA	$ 3,834	$ 4,583	$ 687	

DEPARTMENT OF ENERGY
FY 1994 CONGRESSIONAL BUDGET
SAFEGUARDS AND SECURITY ESTIMATES
ENERGY SUPPLY R&D

(Dollars in Thousands)

Organization: Office of Civilian Radioactive Waste Management	FY 1992		FY 1993		FY 1994		FY 1995		FY 1996	
	B/A	B/O	B/A	B/O	B/A	B/O	B/A	B/O	B/A	B/O
Location: Idaho										
Operating:										
Facility Security	$ 4	$ 4	$ 5	$ 5	$ 5	$ 5	$ 5	$ 5	$ 5	$ 5
Communications	0	0	1	1	0	0	0	0	0	0
Nuclear Mat. Cont and Acct ..	0	0	0	0	0	0	0	0	0	0
Program Direction	0	0	0	0	0	0	0	0	0	0
Total, Operating	$ 4	$ 4	$ 6	$ 6	$ 5	$ 5	$ 5	$ 5	$ 5	$ 5
Capital Equipment:	--	--	--	--	--	--	--	--	--	--
Construction:	--	--	--	--	--	--	--	--	--	--
Subtotals:										
Facility Security	$ 4	$ 4	$ 5	$ 5	$ 5	$ 5	$ 5	$ 5	$ 5	$ 5
Communications	0	0	1	1	0	0	0	0	0	0
Nuclear Mat. Cont and Acct ..	0	0	0	0	0	0	0	0	0	0
Program Direction	0	0	0	0	0	0	0	0	0	0
Total	$ 4	$ 4	$ 6	$ 6	$ 5	$ 5	$ 5	$ 5	$ 5	$ 5

Note: Funding levels represent an allocation of indirect (overhead) costs.