

126921

3475

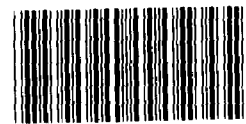
REPORT BY THE U.S.

General Accounting Office

Status Of The Department Of Energy's Implementation Of The Nuclear Waste Policy Act Of 1982 as of March 31, 1985

In March 1984, the Senate Committee on Energy and Natural Resources requested that GAO report quarterly on the status of the Department of Energy's progress in implementing the Nuclear Waste Policy Act of 1982. This report covers program activities from January through March 1985 and focuses on delays in meeting key requirements of the act and the status of management initiatives taken by the Office of Civilian Radioactive Waste Management, the office responsible for implementing the act.

The report also discusses the status of the Nuclear Waste Fund, the separate fund that receives fees from the owners of operating nuclear power plants and other waste-producing facilities and finances the development and construction of the nation's first geologic repository for commercial nuclear waste. During the quarter, the fund had revenues in excess of financial obligations and began investing the excess funds.



126921

GAO/RCED-85-116
APRIL 30, 1985

032011

Request for copies of GAO reports should be sent to:

**U.S. General Accounting Office
Document Handling and Information
Services Facility
P.O. Box 6015
Gaithersburg, Md. 20877**

Telephone (202) 275-6241

The first five copies of individual reports are free of charge. Additional copies of bound audit reports are \$3.25 each. Additional copies of unbound report (i.e., letter reports) and most other publications are \$1.00 each. There will be a 25% discount on all orders for 100 or more copies mailed to a single address. Sales orders must be prepaid on a cash, check, or money order basis. Check should be made out to the "Superintendent of Documents".



UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

RESOURCES, COMMUNITY,
AND ECONOMIC DEVELOPMENT
DIVISION

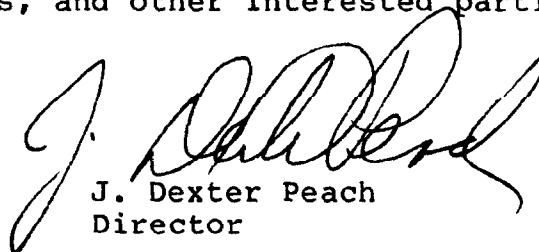
B-202377

The Honorable James A. McClure
Chairman, Committee on Energy
and Natural Resources
United States Senate

The Honorable J. Bennett Johnston
Ranking Minority Member
Committee on Energy and Natural Resources
United States Senate

In response to your request, this report provides the status of the Department of Energy's implementation of the Nuclear Waste Policy Act of 1982 for the quarter ending March 31, 1985. It discusses the Department's progress in meeting legislated deadlines, summarizes the status of the Nuclear Waste Fund, and discusses management initiatives and federal relations with states and tribes.

We are also sending copies to appropriate legislative committees, federal agencies, and other interested parties.



J. Dexter Peach
Director



D I G E S T

The Nuclear Waste Policy Act of 1982 established a national policy for the long-term safe disposal of high-level radioactive nuclear waste.¹ The act requires the Department of Energy (DOE) to develop and construct permanent repositories to dispose of such materials and established the Office of Civilian Radioactive Waste Management within DOE (hereafter called the Waste Office) to administer the waste disposal program. It also requires the owners and generators of high-level radioactive waste to pay fees into a Nuclear Waste Fund established to finance all costs associated with developing and operating repositories.

In March 1984, the Senate Committee on Energy and Natural Resources requested GAO to report quarterly on the status of DOE's progress in implementing the act. This third quarterly report discusses Waste Office activities and related litigation, highlights management initiatives, and provides the status of the Nuclear Waste Fund for the quarter ending March 31, 1985. (See p. 4.)

KEY REQUIREMENTS OF THE ACT
CONTINUE TO BE DELAYED

The Nuclear Waste Policy Act of 1982 established several program requirements and deadlines. In particular, the act calls for DOE to have recommended to the President by January 1985 at least three sites to be the subject of characterization studies--detailed geologic reviews. One of these sites will likely be the location of the first repository. Before the recommendation can be made, two key requirements of the act must be completed: (1) guidelines to

¹Most high-level radioactive nuclear waste is spent fuel, the used uranium fuel removed from commercial nuclear reactors, or defense waste resulting from the production of nuclear weapons material.

evaluate proposed sites and (2) environmental assessments of potential sites. The act also calls for DOE to have completed an overall strategy document, called a mission plan, by June 1984. In December 1984, DOE issued final siting guidelines. As of March 31, 1985, however, environmental assessments and the mission plan were not completed. (See p. 4.)

DOE issued draft environmental assessments on December 20, 1984, for each of the nine potential sites identified earlier in the program for the first repository. The draft assessments proposed sites in Nevada, Texas, and Washington for characterization studies. During the quarter DOE conducted many formal briefings and 19 public hearings in the six states where the nine potential sites are located and received about 700 written sets of comments on the draft assessments. (See p. 7.)

The Waste Office has developed a plan to respond to the written comments received and to prepare the final assessments--now likely to be completed after August 1985. The estimated completion date of the assessments has been pushed back from earlier estimates, in part because more comments were received than expected. The recommendation of sites to be characterized will be made after the final assessments are completed. (See p. 8.)

The act also required DOE to complete by June 1984 a mission plan that establishes a strategy and a schedule for accomplishing the act's objectives. DOE officials told us the final plan has been delayed because comments on the May 1984 draft plan required extensive revisions and because key employees had to be reassigned to work on the environmental assessments. DOE now expects to issue the plan in May 1985 and to revise it periodically as situations change. (See p. 9.)

The final plan to be issued in May 1985 will differ from the draft plan released in May 1984 for comment. For example, it will include a new chapter on state and tribal relations. The Waste Office plans to issue a comment response document addressing all comments received on the

draft plan when the final plan is released.
(See p. 9.)

GAO also examined the status of other Waste Office activities, including a forthcoming proposal on monitored retrievable storage facilities and the latest fee adequacy report issued in January 1985. See page 10 for a discussion of these activities.

STATUS OF LITIGATION REGARDING WASTE OFFICE ACTIVITIES

As of March 31, 1985, four lawsuits initiated by states, private associations, and individuals were pending in federal circuit courts of appeals as a result of Waste Office repository siting activities. The state of Washington's Nuclear Waste Board's request for a court review of the siting guidelines was the only new case initiated during the quarter. DOE expects that case may be consolidated with an earlier lawsuit on the siting guidelines filed in the same circuit court by environmental groups. The other two cases are also in preliminary stages, but DOE has moved for dismissal in one of them--a case involving the process used to narrow the area of proposed sites in Texas. (See p. 12.)

STATUS OF SELECTED MANAGEMENT INITIATIVES

During the quarter, little documented progress was apparent on two earlier identified management initiatives--a contracted certified public accountant's review of the Waste Office's financial statements and an internal program management system. The accountant completed field audit work for fiscal years 1983 and 1984 in January 1985. However, the accountant's final audit report was not completed during the quarter as expected. The final audit report is now expected during the next quarter. As of the end of the quarter, the Waste Office had not prepared a concept paper or overview chapter for a new program management system manual as expected. Also, little had been done toward implementing a new automated information system. (See pp. 16-18.)

In addition to these management activities, DOE expended considerable effort explaining and

soliciting comments on the draft environmental assessments. During the quarter most of the interaction between DOE and affected states and Indian tribes involved the draft assessments. Oral comments on the assessments, however, included state and tribal complaints about DOE's failure to adequately involve them in preparation of the assessments. Waste office officials said that an overall strategy for federal/state relations would be contained in the forthcoming May 1985 mission plan. (See pp. 18-21.)

STATUS OF THE NUCLEAR WASTE FUND

The Nuclear Waste Fund was established to finance the repository program estimated in January 1985 to cost between \$20.6 and \$35.1 billion. The fund accumulates two types of fees paid by the owners and generators of highly radioactive nuclear waste. The first is a 1-mill fee to be paid for each kilowatt hour of electricity generated by nuclear power beginning April 7, 1983. In the quarter ending March 31, 1985, about \$85 million was paid into the fund, making a total of about \$578.5 million since the fund began accepting the fees in 1983. (See p. 22.)

The fund is also to receive an estimated \$2.3 billion in one-time fees from the owners of high-level nuclear waste generated before April 7, 1983. The owners have until June 30, 1985, to decide which one of three fee payment schedules they will use. The Waste Office expects between \$770 million and \$1.3 billion in one-time fees to be paid by June 30, 1985. (See p. 23.)

In February 1985, DOE began to invest excess nuclear waste funds. Investments ranging from \$1.6 to \$18.7 million were made in overnight Treasury bills during the quarter earning a total of about \$145,000. (See pp. 22-24.)

The Waste Office spent about \$74 million for various program activities during the quarter. About 70 percent of these costs was for first repository development activities, including preliminary site studies and the preparation of environmental assessments. (See pp. 25-27.)

As of March 31, 1985, the Waste Office had unpaid obligations of about \$204 million and a cash balance of about \$260 million. In addition, the office must repay the U.S. Treasury about \$258.4 million plus interest for the appropriations it received when the act was passed. Waste Office officials said that repayment to the Treasury will probably be made after the owners begin to pay the one-time fees later this year. (See p. 30.)

AGENCY COMMENTS

The views of DOE officials directly responsible for the waste program were sought during the course of the review and are incorporated in the report where appropriate. GAO did not request DOE to review and comment officially on a draft of this report.



C o n t e n t s

	<u>Page</u>
DIGEST	i
CHAPTER	
1 INTRODUCTION	1
Overview	2
Objectives, scope, and methodology	4
2 STATUS OF OCRWM ACTIVITIES DIRECTED TOWARD LEGISLATED REQUIREMENTS DURING THE JANUARY-MARCH 1985 QUARTER	6
Final environmental assessments taking longer than expected	7
Final mission plan expected to be issued in May 1985	9
Other activities directed toward the act's requirements	10
Status of litigation regarding OCRWM activities	12
3 STATUS OF SELECTED OCRWM MANAGEMENT ACTIVITIES	15
OCRWM staff is increasing	15
Little progress in developing an internal program management system	16
Certified public accountant audit of Nuclear Waste Fund not completed	17
DOE relations with states and Indian tribes	18
4 STATUS OF THE NUCLEAR WASTE FUND AS OF MARCH 31, 1985	22
Nuclear Waste Fund receipts and costs	22
OCRWM contract activity	28
Overall status of the Nuclear Waste Fund	30
Other funding sources	30

ILLUSTRATIONS

OCRWM staffing levels as of March 31, 1985	16
State/Indian tribe assistance provided by DOE January 1983 through March 1985	21
Nuclear Waste Fund investment activities	24
Status of Nuclear Waste Fund costs for fiscal year 1985	26
Costs by work breakdown structure for the first and second repositories for quarter ending March 31, 1985	27

	<u>Page</u>
Summary of OCRWM contract activities	29
Status of Nuclear Waste Fund as of March 31, 1985	30
Costs for civilian radioactive waste R&D program for fiscal year 1985	31

ABBREVIATIONS

DOE	Department of Energy
GAO	General Accounting Office
NRC	Nuclear Regulatory Commission
NWPA	Nuclear Waste Policy Act of 1982
OCRWM	Office of Civilian Radioactive Waste Management
R&D	research and development

CHAPTER 1

INTRODUCTION

Enacted on January 7, 1983, the Nuclear Waste Policy Act of 1982 (NWPAA) (Public Law 97-425) established a comprehensive national program to construct geologic repositories for the long-term disposal of high-level radioactive nuclear waste. The Department of Energy (DOE) intends to begin accepting title to the nuclear waste for disposal in January 1998 under provisions of contracts entered into with nuclear utilities. The act also established within DOE the Office of Civilian Radioactive Waste Management (OCRWM) to carry out the provisions of NWPAA and established the Nuclear Waste Fund to finance the program.

The act requires us to report to the Congress on the results of an annual audit of OCRWM. Our first annual audit report,¹ issued on January 10, 1985, focused on the problems DOE had in initiating the program and establishing its financial basis. Our second annual audit is underway and focuses on problems OCRWM has had in meeting the act's requirements.

On March 26, 1984, the Senate Committee on Energy and Natural Resources requested that we also report, on a quarterly basis, the status of OCRWM activities to implement the act. Our first quarterly reports² discussed actions that took place during the last 6 months of calendar year 1984. They discussed the status of OCRWM program activities directed toward meeting the act's legislatively mandated milestones, especially those that were past due or immediately upcoming, the status of selected management actions, and the status of the Nuclear Waste Fund. This report covers the status of program and fund activities during the quarter ending March 31, 1985.

This chapter provides an overview of OCRWM's activities and discusses the report's objectives, scope, and methodology. Chapter 2 discusses OCRWM's activities and focuses on those directed toward meeting legislatively mandated milestones that are current, past due, or upcoming in the next several months. Chapter 3 discusses the status of selected management actions and includes a discussion of OCRWM's relations with states and tribes. Chapter 4

¹Department of Energy's Initial Efforts to Implement the Nuclear Waste Policy Act of 1982 (GAO/RCED-85-27, Jan. 10, 1985).

²Status of the Department of Energy's Implementation of the Nuclear Waste Policy Act as of September 30, 1984 (GAO/RCED-85-42, Oct. 19, 1984).
Status of the Department of Energy's Implementation of the Nuclear Waste Policy Act as of December 31, 1984 (GAO/RCED-85-65, Jan. 31, 1985).

describes the status of the Nuclear Waste Fund as of March 31, 1985, and includes a description of initial Nuclear Waste Fund investment activity conducted by DOE.

OVERVIEW

The safe disposal of spent nuclear fuel³ and other highly radioactive nuclear waste⁴ in the United States has been a matter of national concern since the first civilian nuclear reactor began generating electricity in 1957. These materials, which remain potentially hazardous for tens of thousands of years, must be isolated from the environment until their radioactivity decays to levels that will pose no significant threat to people or the environment. Electric utilities have accumulated over 10,000 metric tons (over 22 million pounds) of highly radioactive spent nuclear fuel. Most of it is in the form of spent fuel rods that are stored in pools of water at the reactor sites. DOE estimates that by the year 2000, approximately 50,000 metric tons of radioactive spent fuel will have accumulated.

NWPA requires DOE to develop deep geologic repositories to accommodate the long-term safe disposal of nuclear waste and to conduct related research, development, and demonstration projects. The act also established OCRWM within DOE to administer the waste disposal program. Costs are to be paid from the Nuclear Waste Fund, which receives fees from owners of operating nuclear power plants and owners of high-level nuclear waste generated in the past. The full cost of the program was estimated in January 1985 to be between \$20.6 billion and \$35.1 billion (in 1984 dollars), depending upon the geologic media⁵ selected for the two repositories and possible delays in the repository program. This

³Spent nuclear fuel is the used uranium fuel that has been removed from a nuclear reactor. Spent fuel and other types of highly radioactive wastes are difficult to dispose of because of their high toxicity and long radioactive life, and because they produce heat.

⁴The act also requires DOE to use one or more of the repositories developed under the act to dispose of high-level radioactive waste resulting from the production of nuclear weapons material unless the President finds that a separate repository is required for the disposal of such defense wastes. (See p. 12.)

⁵Geologic media are the underground rock formations in which the radioactive waste will be placed. The formations now being considered as host rocks for the repositories are basalt lava, a molten material from volcanoes or fissures; tuff, a hard, compacted ash from volcanoes; rock salt, a sedimentary rock formed by the evaporation of water from a saline solution; and crystalline rock, a general term used for igneous and metamorphic rocks, which include granite.

estimate includes the cost of developing, constructing, operating and closing two geologic repositories that are projected to extend through closure of the second repository.

The act authorized DOE to enter into contracts with all generators and owners of highly radioactive materials. As of March 31, 1985, DOE had contracts with 64 commercial owners covering 147 reactors. The contracts establish (1) the terms and conditions under which DOE will dispose of spent fuel generated by civilian power reactors and (2) the procedures to follow in collecting fees to provide for full recovery of the government's disposal costs.

The contracts require the payment of a one-time fee for spent fuel generated before April 7, 1983, and a 1-mill-per-kilowatt-hour fee for electricity generated by nuclear power beginning April 7, 1983. The 1-mill fee covers the generation of spent fuel during the ongoing production of electricity from nuclear plants and is to be paid every 3 months. The one-time fee is to be paid by the owners of spent nuclear fuel generated prior to April 7, 1983. Under the contracts, the owners are to individually select one of three methods of paying the one-time fee, currently estimated to total \$2.3 billion, and inform DOE by June 30, 1985, which method each will use.⁶ These methods include full payment before June 30, 1985, full payment with interest before delivery of the spent fuel to DOE, or payments plus interest spread over 10 years. OCRWM officials estimated in early March 1985 that, on the basis of inquiries of selected utilities, about \$770 million in one-time fees would be paid by June 30, 1985. As of March 31, 1985, OCRWM estimated that these payments will total \$770 million to \$1.3 billion.

OCRWM, located at DOE headquarters in Washington, D.C., is supported by DOE's field operations offices. OCRWM project offices in Columbus, Ohio; Las Vegas, Nevada; and Richland, Washington, are responsible for conducting repository development activities in the three main geological media under consideration for selection as the first repository site. The Richland office is primarily working with basalt, while the Columbus and Las Vegas offices are examining salt and tuff sites, respectively. The Chicago project office manages the crystalline rock program for the second repository, and a separate project office in Richland

⁶On March 5 and 21, 1985, we testified before the House Subcommittee on Energy and Environment, Committee on Interior and Insular Affairs and the House Subcommittee on Energy Conservation and Power, Committee on Energy and Commerce, respectively, on our first annual audit report (GAO/RCED-85-27). That report presents a detailed discussion of the fee payment program under the act and includes ways to accelerate the quarterly fee collection schedule and use commercial rather than Treasury interest rates on delayed payments.

manages the monitored retrievable storage program. These offices, in turn, rely heavily on contractors and national laboratories to conduct specific activities.

In February 1983, DOE formally identified nine potential areas in six states for the first repository. After an analysis of available data and completion of a number of requirements, the act calls for the Secretary of Energy to formally nominate five sites as suitable for further study and to recommend three sites to the President by January 1985 for site characterization studies. These studies are to include the construction of exploratory shafts for geologic tests at repository depth. One of the characterized sites will most likely be the location of the first repository.

As discussed in more detail in chapter 2, OCRWM has not yet completed all the necessary requirements prior to recommending three sites to the President. Although final siting guidelines, due by July 7, 1983, establishing performance objectives for a geologic repository, were issued in December 1984, environmental assessments that will identify the three sites to be recommended for site characterization studies have not been finalized. Draft environmental assessments, which evaluate each site using the formal siting guidelines and provide the basis for determining whether a site is suitable for site characterization activities, were issued on December 20, 1984. All interested parties could submit written comments to DOE on the draft assessments in the 90-day comment period that ended March 20, 1985. OCRWM officials stated at the end of the quarter that the projected August issuance date for the assessments is likely to slip; however, they were not able to estimate how long the delay might be.

At the completion of the site characterization studies, the President is required by NWPA to recommend to the Congress, one site for repository construction. NWPA requires the President to make his recommendation by March 31, 1987; however, DOE currently does not expect to complete site characterization studies until 1990.

The act also requires the Secretary of Energy to recommend to the President, by July 1, 1989, at least three potential sites for a second repository. The President is required to make a final site recommendation to the Congress by March 31, 1990; however, DOE does not expect to make its recommendation to the President for the second repository until after he recommends the site for the first repository to the Congress. As described in chapter 2, OCRWM is conducting a site-screening process for the second repository.

OBJECTIVES, SCOPE, AND METHODOLOGY

On March 26, 1984, the Senate Committee on Energy and Natural Resources requested that we report on a quarterly basis the status

of OCRWM activities to implement NWPA. This third quarterly report discusses OCRWM activities during the quarter ending March 31, 1985. It (1) highlights OCRWM's activities directed toward meeting NWPA's legislatively mandated milestones, especially those that are already past due or are forthcoming in the next several months, (2) discusses ongoing litigation, (3) describes selected OCRWM management activities, including a discussion of federal/state relations, and (4) provides the status of the Nuclear Waste Fund, including recently initiated investment activity.

To obtain information on the status of OCRWM program activities and selected management initiatives, we reviewed DOE and OCRWM program documents, publications, correspondence, and studies, and interviewed OCRWM managers and operating personnel responsible for planning and managing activities associated with the research and development of the waste repositories. We reviewed DOE's draft report concerning whether defense radioactive wastes should be disposed of in a separate repository, the strategy options document for developing a plan for the inclusion of the private business sector in the packaging and transportation of high-level wastes, the preliminary draft project decision schedule, the January 1985 fee adequacy report, the draft environmental assessments, and OCRWM's management plan for preparing the final assessments. In addition, we attended public hearings held in the four states (Mississippi, Nevada, Texas, and Washington) that had the highest ranked potential repository sites according to the draft environmental assessments. We also interviewed state officials in those four states and Yakima Indian officials in Washington to obtain their comments on DOE efforts to consult and cooperate with states and tribes, as required by NWPA. We also attended a March 1985 annual waste management conference sponsored by DOE and others in Tucson, Arizona.

To obtain information on Nuclear Waste Fund receipts and disbursements and the fund's investment activity, we contacted DOE officials responsible for the department's financial activities. We also obtained financial, contract, and personnel data directly from the DOE financial information system and from DOE's Energy Information Administration. We did not verify data obtained from DOE's financial information system--a task that could not be accomplished within the time frame of this report.

As requested by the Senate Committee on Energy and Natural Resources office, we did not obtain official agency comments; nor did we obtain official comments from state or tribal officials or other interested parties on our draft report. However, we informally provided OCRWM officials directly responsible for program implementation with a draft of this report and discussed it with them. We made appropriate revisions on the basis of their comments.

CHAPTER 2

STATUS OF OCRWM ACTIVITIES DIRECTED TOWARD LEGISLATED REQUIREMENTS DURING THE JANUARY - MARCH 1985 QUARTER

This chapter discusses DOE activities during the quarter ending March 31, 1985, directed toward meeting requirements of NWPA. It focuses on those requirements with deadlines that are due, have already passed, or are upcoming in calendar year 1985. In particular, the chapter discusses the status of OCRWM's efforts to complete environmental assessments that evaluate potential sites for the first repository. These assessments must be completed before DOE can recommend three sites to the President for detailed geologic characterization studies. NWPA required DOE to make its recommendation to the President by January 1, 1985. The chapter also discusses the status of another key requirement of the act--the mission plan. The mission plan, which was to have been issued by June 7, 1984, is intended to present overall program strategy and respond to specific informational requirements of the act.

DOE officials told GAO in December 1984 that the draft environmental assessments, released December 20, 1984, for comment, were to be finalized in June 1985, and the recommendation to the President was to be made in mid-1985. A March 1985 OCRWM management plan estimated the date for issuance of the final environmental assessments to be August 29, 1985. However, DOE officials said that date was also likely to slip but were unable to estimate the magnitude of the delay. DOE officials said the dates had changed because they received more comments on the assessments than they expected and because the earlier dates were too optimistic. State and Indian representatives indicated that the assessments are late primarily because DOE failed to adequately consult with them in collecting and evaluating data necessary to prepare them.

DOE officials also told us at the end of the quarter that the final mission plan will be submitted to the Congress in May 1985 and will include a comment response document addressing all comments received on the draft plan released in May 1984. These officials said the plan has undergone major revisions on the basis of comments received and because OCRWM now has a better understanding of the nuclear waste program as it has evolved.

The following sections discuss the status of the draft environmental assessments and the mission plan and highlight other OCRWM activities during the quarter directed toward legislative requirements of the act. Also included in this chapter is a status report on litigation that has been initiated as a result of OCRWM activities.

FINAL ENVIRONMENTAL ASSESSMENTS
TAKING LONGER THAN EXPECTED

Section 112 of NWPA requires OCRWM to prepare environmental assessments for potential repository sites and specifies that these assessments must include the probable impacts of site characterization studies, such as drilling the exploratory shafts necessary to collect geologic data, and ways to avoid such impacts. Nine draft assessments--one for each potential first repository site--originally scheduled by DOE to be released in August 1984, were issued on December 20, 1984.

In January 1985 DOE held public briefings in the six states containing the nine potential sites for the first repository.¹ At these briefings DOE explained the draft assessments and answered questions on the drafts and the overall waste management program. In February and March 1985, DOE held public hearings in the same six states to obtain both oral and written comments on the draft assessments.

During a 90-day comment period that ended March 20, 1985, all interested parties could submit written comments to DOE on the draft assessments. Five of the six first repository states formally requested DOE to extend the March 20 deadline because they did not believe they had adequate time to respond. Individuals and state representatives said that the Christmas holiday period shortened the response period by 2 weeks and that DOE did not provide copies of the draft assessments to various requestors, including state representatives, until January or February, thus reducing the time in which to prepare comments.

OCRWM did not extend the 90-day comment period, although the Director said that the office will consider all comments received. DOE officials told us that the request was denied because the comment period had already been extended from 60 to 90 days and that the states had earlier drafts of the assessments. In denying the states' requests for an extension, the Director of OCRWM wrote to the states stating that he was hoping to strike a balance between providing time for public comment and a need to maintain a reasonable rate of progress toward resolving the nation's nuclear waste problem.

As of the end of the official comment period, DOE had received over 700 sets of comments on the draft assessments from states, Indian tribes, other federal agencies, and interested parties. Of the six states containing a potential site, only Nevada did not submit detailed comments, and it indicated that it intended to submit its comments in mid-April. The most voluminous comments were received from the Nuclear Regulatory Commission

¹Louisiana, Mississippi, Nevada, Texas, Washington, and Utah.

(NRC), which submitted 18 volumes, 2 for each draft assessment issued. At the end of the quarter, OCRWM officials stated they had not had time to analyze and characterize the comments received, because most of the comments were received near the end of March.

Although we have not reviewed the written comments submitted to DOE on the draft assessments, we attended the public hearings in Mississippi, Nevada, Texas, and Washington. The oral comments presented at those hearings were generally critical of the draft assessments and the site selection process. Some of the most often repeated comments included:

- The draft assessments lack sufficient technical information to justify conclusions made about site suitability.
- Conclusions about the suitability of the sites for repository development are overly optimistic, especially given the environmental repercussions that could result in the event of waste leakage or other accidents.
- The draft assessments contain technical and factual errors.
- The site selection process was based on political or other considerations such as federal land ownership rather than technical factors.
- Waste transportation issues were not adequately addressed in the draft environmental assessments.

The OCRWM Siting Division within the Office of Geologic Repositories is responsible for coordinating the preparation of the final assessments. It will be assisted by a contractor who will compile, categorize, and track actions taken on specific comments. Both OCRWM headquarters and the cognizant project offices will be responsible for preparing responses to comments and making appropriate revisions to the final assessments. OCRWM has not made a decision on whether to finalize only the assessments for those five sites formally nominated, or to finalize all nine assessments. However, comments for all nine sites will be addressed in the comment response document included with the final assessments. Three of the nominated sites will be recommended to the President by the Secretary of Energy for site characterization.

In March 1985 the Siting Division finalized a management plan for preparing the final assessments. The plan outlines the responsibilities of the various OCRWM offices in preparing the final assessments and provides a mechanism for considering and resolving comments.

The plan calls for the final assessments to be issued on August 29, 1985. According to OCRWM officials, however, that issue date was likely to slip, but they were unable to say how

long the delay would be. The recommendation of three sites for characterization studies will follow the final assessments. The officials gave the following reasons for the delay in finalizing the assessments:

1. Earlier completion dates (including the August date) were overly optimistic of the time required to review comments and to prepare the final assessments.
2. OCRWM did not expect the volume or complexity of the comments it has received.
3. OCRWM expects more comments will be received. In particular, comments from Nevada and the Department of the Interior had not been received at the end of the comment period.

FINAL MISSION PLAN EXPECTED
TO BE ISSUED IN MAY 1985

Section 301 of NWSA requires that DOE prepare a mission plan--a comprehensive report that is to provide sufficient information to permit informed decisions on the nuclear waste program and related research. The plan must contain a schedule of milestones directed toward meeting the legislative milestones of the act.

The act called for the final mission plan to be submitted to the appropriate committees of the Congress by June 7, 1984. As of March 31, 1985, DOE officials expected to issue the final mission plan on May 17, 1985. DOE officials said the plan has been delayed because (1) extensive comments (over 100 sets) were received on the draft mission plan issued in May 1984, (2) extensive revisions were necessary to respond to the comments, and (3) many key personnel needed to respond to the comments were redirected last fall to work on the environmental assessments and did not return to work on the mission plan until January 1985.

DOE officials expect to issue the mission plan in three volumes. Volume I will be a modified and expanded version of the draft mission plan that was issued for comment in May 1984. Volume II will be a comment response document that is a synopsis of the comments received and DOE's response to them, grouped according to issue area. Volume III will be an annotated reprint of all comments received.

OCRWM officials said that as a result of comments received on the final mission plan and as a result of DOE's growing realization of the importance of these areas, a new chapter on relations with states and Indian tribes has been added to the plan, and sections of the plan dealing with a quality assurance program and the management of defense high-level waste had been expanded. In

addition, the final plan will also reflect DOE's current thinking that the nuclear waste program should be an integrated system rather than one that relies strictly on repository development. Therefore, the plan will discuss DOE's strategy for integrating a transportation plan and a monitored retrievable storage facility into the system.

DOE officials characterize the mission plan as a living document that must be able to change as circumstances change. Thus they are providing contingencies in the plan so that it can be modified as necessary to guide the program for 30-40 years. DOE officials expect to update the plan as needed, possibly as often as once a year.

In concert with the mission plan, DOE plans to issue a Project Decision Schedule in September 1985. A preliminary draft schedule, issued in January 1985 and based on the schedules in the draft mission plan, details the key activities and milestones to be followed in developing the waste management system. It also includes a schedule of the responsibilities of other federal agencies such as NRC and the Environmental Protection Agency. In addition, the preliminary draft schedule includes provisions for DOE or other federal agencies to follow when they determine that they cannot meet the schedule's objectives.

OTHER ACTIVITIES DIRECTED TOWARD THE ACT'S REQUIREMENTS

During the quarter, OCRWM performed a number of other activities directed at accomplishing requirements of the act. Of particular importance was OCRWM's preparation and revision of a draft proposal for the monitored retrievable storage facility and issuance of a third fee adequacy report.

Monitored retrievable storage proposal being prepared

NWPA requires OCRWM to submit by June 1, 1985, a detailed study of the need for and feasibility of one or more monitored retrievable storage facilities. These facilities are generally thought of as ground-level or slightly below ground-level storage facilities. We reported in January 1985 that OCRWM planned to submit the required proposal to the Congress in June 1985 and that the proposal was to be based on "reference sites" based on various climates--arid, warm-wet, and cold-wet--throughout the country. At that time, monitored retrievable storage was generally considered to be a "back up" to the main repository program.

During the quarter, OCRWM reevaluated the proposal on the use of a monitored retrievable storage facility, revised the timing of the final proposal, and said it was going to issue at least two interim reports on the system. The OCRWM Director testified before the House Subcommittee on Energy Conservation and Power in March 1985 that a preliminary needs and feasibility analysis and siting plan will be forthcoming in 6-8 weeks. According to the

Director, the plan will (1) include specific proposed sites for the location of the facility and (2) discuss how the facility will become an integrated part of the total nuclear waste disposal system and not just a backup to the main repository program system. DOE intends to submit a status report on the monitored retrievable storage proposal to the Congress by June 1, 1985, and to submit a final proposal in January 1986. During the quarter, OCRWM requested that \$8.9 million be reprogrammed in its fiscal year 1985 budget so that it can prepare the final proposal.

Third annual fee adequacy report issued in January

Section 302 of NWPA requires that DOE annually evaluate whether the fees charged to the owners and generators of spent nuclear fuel are sufficient to cover all program costs associated with the disposal of spent nuclear fuel. DOE issued annual fee adequacy reports in July 1983 and July 1984, both of which stated that the 1-mill-per-kilowatt-hour fee and the one-time fee were sufficient to cover projected program costs.

DOE finalized its third annual fee adequacy report in January 1985. DOE officials had told us in September 1984 that the third fee adequacy report was to be issued in January 1985, to be consistent with the mission plan, which they had expected to issue to the Congress during that same month. Although the mission plan has not been issued, DOE decided to issue the third and all future fee adequacy reports in January of each year to coincide with its annual budget submission to the Congress.

The report recommends that the current fee remain at 1-mill-per-kilowatt hour for 1985 since the fee is projected to produce sufficient revenues to offset current projected program costs. However, the report cautions that the program is sensitive to annual inflation. The report notes that if inflation continues, the fee may need to be indexed to the inflation rate as early as 1986. The report estimates the total cost of the waste program to be between \$20.6 billion and \$35.1 billion² (in 1984 dollars), depending upon such factors as the geologic media selected for the two repositories and possible delays in repository development.

Other activities

The following activities were also directed toward meeting requirements of the act during the quarter.

--OCRWM reviewed a January 1985 advisory panel's report on alternative approaches to financing and managing the nuclear waste program. The Secretary of Energy formed a

²The \$35.1 billion cost estimate resulted from a 10-year repository delay sensitivity analysis.

departmental review group to develop DOE conclusions and recommendations on the report. OCRWM expects the report, the Secretary's comments, and NRC's comments on how the report's conclusions would affect the regulatory environment to be submitted to the Congress during the next quarter. A final copy of the panel's report was not available to us during the quarter ending March 31, 1985.

--On February 6, 1985, DOE submitted a report to the Executive Office of the President recommending that defense high-level waste and commercial waste be deposited in a single repository because building a separate repository for defense waste would cost an additional \$1.5 billion. As of the end of the quarter, DOE had not been informed whether the President had decided to commingle defense and commercial waste in a single repository, required by the act to take place by January 7, 1985.

--OCRWM made progress in reviewing comments received from the private sector on its transportation strategy options document issued in October 1984. In addition, OCRWM held a business plan workshop in February 1985 in which representatives from private industry, states, and other federal agencies presented comments, suggestions, and recommendations for a transportation plan OCRWM intends to develop.

--OCRWM made progress in reviewing comments received from states on its revised second repository draft regional characterization reports that were issued on December 11, 1984. These reports identify several hundred land areas within seventeen states from which OCRWM plans to select 10 to 20 specific areas where detailed field studies will be conducted. Most of the comments received dealt with corrections to data because the reports are mainly compilations of data based on literature searches.

STATUS OF LITIGATION REGARDING OCRWM ACTIVITIES

During the quarter, only one new lawsuit concerning the waste program was filed against DOE. Previously, four other suits had been filed in federal courts by states, private associations, and individuals as a result of OCRWM repository siting activities.³ Two of the lawsuits had been consolidated by the fifth circuit court. The following sections describe each case.

³Two other lawsuits challenging the amount of fees paid into the Nuclear Waste Fund were dismissed by the U.S. District Court and, according to DOE's Office of General Counsel, are now on appeal before the U.S. Court of Appeals for the District of Columbia Circuit.

Nevada v. Herrington

In late 1984 OCRWM disapproved \$1.5 million of Nevada's \$3.5 million 1985 grant request because the funds were to be used for independent data-collection activities for purposes of site characterization, e.g., drilling boreholes.⁴ OCRWM informed Nevada that such activities were not appropriate at this stage of the site selection process. On December 14, 1984, the state of Nevada filed in the U.S. Court of Appeals for the Ninth Circuit, an emergency petition for a preliminary injunction asking the court to (1) approve Nevada's application for financial assistance for fiscal year 1985 and (2) order DOE to remit to the state part of its approved fiscal year 1984 grant that it had not spent. Nevada asked the court in the alternative to prohibit DOE from engaging in activities directed toward recommending sites for characterization studies, including the issuing of the draft environmental assessments, until DOE approves Nevada's 1985 grant application and remits to Nevada the unexpended portion of its 1984 grant.

The court denied the state's request for emergency relief, including its request to prohibit DOE's issuance of the draft assessments in December 1984, and is proceeding with a review of the state's grant request. According to DOE's Office of General Counsel, by the end of March 1985, it had filed an administrative record (an index of documents supporting its decision) with the court and the state had filed its briefs supporting its contention that it should receive funding for independent data collection activities. The states of Washington, Utah, Texas, and Minnesota had filed amicus curiae ("friends of the court") briefs supporting Nevada's position.

Texas v. DOE, Devin v. DOE

In two separate actions filed in December 1984, the state of Texas and several private individuals and associations petitioned the U.S. Court of Appeals for the Fifth Circuit to review the screening process used to narrow the size of two potential repository sites in Texas. The plaintiffs are seeking the court review in the hope that it will invalidate the screening process. The two actions were consolidated by the court for review. A motion to intervene in support of DOE, filed by a group of electric utilities, was denied by the court.

On February 13, 1985, DOE officials filed a motion to dismiss the case. As of the end of March, the petitioners were preparing their responses to that motion. DOE expects the court to rule on that motion during the next quarter.

⁴See discussion of grant assistance on p. 20.

Environmental Policy Institute, et al.
v. Herrington

On December 18, 1984, the Environmental Policy Institute and six other environmental groups petitioned the U.S. Court of Appeals for the Ninth Circuit to review the siting guidelines to determine whether they are in accordance with the act. The petitioners have requested the court to invalidate the siting guidelines.

In January 1985, 32 utilities were granted a motion to intervene on the side of DOE. As of the end of the quarter, DOE said that the plaintiffs were reviewing the record and had filed with the court a supplemental list of issues to be addressed in the litigation. DOE also told us that in February 1985 it filed an administrative record with the U.S. Court of Appeals.

Washington v. DOE

On March 8, 1985, the state of Washington's Nuclear Waste Board petitioned the U.S. Court of Appeals for the Ninth Circuit to review the siting guidelines to determine whether they are in accordance with the act. As of the end of the quarter, no further action had taken place on this case. DOE's Office of General Counsel believes that the case may be consolidated by the court with the Environmental Policy Institute case.

CHAPTER 3

STATUS OF SELECTED OCRWM

MANAGEMENT ACTIVITIES

NWPA established OCRWM to carry out DOE responsibilities under the act. In October 1983 the Secretary of Energy formally approved and activated OCRWM, and in May 1984, a director was appointed and confirmed by the Senate.¹ In our first and second quarterly reports, we discussed several initiatives that OCRWM had taken during the last 6 months of 1984 to improve its management of activities directed toward accomplishing the objectives of the act. These included (1) organizational and staffing changes, (2) beginning development of an internal program management system with an automated information system, (3) contracting with a certified public accountant to audit the Nuclear Waste Fund, and (4) developing a program of coordination with affected states and Indian tribes. During the quarter ending March 31, 1985, staffing levels continued to increase, little documented progress occurred on the program management system, and the independent audit report had not been completed. Federal relations with states and Indian tribes during the quarter largely centered on the draft environmental assessments. In the following sections, we follow up on the status of each of these initiatives.

OCRWM STAFF IS INCREASING

As reported in our first two quarterly reports, OCRWM made progress during the last six months of 1984 in organizing to meet NWPA objectives and in filling staff positions both at headquarters and in the field project offices. At the end of December 1984, 3 vacancies existed at headquarters and 11 in the field (25 vacancies existed in the field including part-time support personnel). At that time, OCRWM officials said that they were attempting to fill all headquarters vacancies and were encouraging the field offices to do the same.

As the following table shows, personnel ceilings for OCRWM headquarters and field offices increased since December 1984 from 215 to 250. Office of Resource Management officials said that they did not expect the ceilings to be raised again in fiscal year 1985. Also, during the quarter the number of full-time personnel on board increased from 201 to 214. There were no significant organizational changes during the quarter.

¹For a detailed discussion of DOE's efforts to establish a separate organization to manage the waste disposal program, see our first annual audit report (GAO/RCED-85-27).

OCRWM Staffing Levels as of March 31, 1985

Program office	Full-time personnel ceiling ^a			Number of full-time personnel on board		
	Sept. 1984	Dec. 1984	Mar. 1985	Sept. 1984	Dec. 1984	Mar. 1985
Director's office	4	4	4	4	6	6
Institutional relations office	8	-	-	-	-	-
Policy office ^b	-	12	23	20	21	21
Management office	31	31	36	24	27	26
Repository office	42	42	46	29	31	38
Storage and transportation office	<u>15</u>	<u>15</u>	<u>22</u>	<u>15</u>	<u>16</u>	<u>21</u>
OCRWM headquarters total	<u>100</u>	<u>104</u>	<u>131</u>	<u>92</u>	<u>101</u>	<u>112</u>
Field offices:						
Chicago	58	64	68	54	55	56
Richland	28	30	32	32	33	32
Nevada	<u>14</u>	<u>17</u>	<u>19</u>	<u>10</u>	<u>12</u>	<u>14</u>
Field total	<u>100</u>	<u>111</u>	<u>119</u>	<u>96</u>	<u>100</u>	<u>102</u>
Program total ^c	<u>200</u>	<u>215</u>	<u>250</u>	<u>188</u>	<u>201</u>	<u>214</u>

^aDoes not include ceilings for part-time support personnel.

^bPolicy office was created in July 1984 and included the Institutional Relations Office.

^cTotal does not include staff time used by other DOE offices and charged to the Nuclear Waste Fund. For fiscal year 1985, OCRWM estimates this time will total about 18 staff years.

Source: DOE.

LITTLE PROGRESS IN DEVELOPING AN INTERNAL PROGRAM MANAGEMENT SYSTEM

As of March 31, 1985, OCRWM still lacked a centralized internal management system to assist its managers in directing the

complex and varied activities associated with the waste program. Its Office of Resource Management began in September 1984 to develop an overall program management system to enable OCRWM managers to better plan, monitor, and analyze all elements of its program. The program management system is to include all planning documents required by NWPA, an annual operating plan and a systems engineering management plan. It is also to include an automated management information system.

In our second quarterly report, we reported that, as of December 31, 1984, an internal OCRWM task force had completed a draft program management system manual outline and was expecting to complete and have approved by the end of January 1985 an overview chapter of the manual. In addition, a concept paper for a program management information system was nearing completion. Officials told us that they planned to implement the automated system incrementally and complete it by the end of 1985.

As of March 31, 1985, the system manual outline had been revised and simplified because existing field management systems duplicated sections of the previous draft outline. However, neither the concept paper nor the overview chapter had been completed. Little progress had been made on implementing the automated information system as well. An OCRWM official said that progress has been slower than previous estimates because OCRWM underestimated the time required to finalize necessary documents. In addition, completion of system planning documents is contingent, in part, on completion of the mission plan, which is now expected to be finalized in May 1985. DOE officials still believe, however, that the automated system will be completed by the end of 1985.

CERTIFIED PUBLIC ACCOUNTANT AUDIT
OF NUCLEAR WASTE FUND NOT COMPLETED

In September 1984, DOE signed a \$1.3 million contract with a certified public accounting firm--Main Hurdman--to provide auditing services for the fund for fiscal years 1983 and 1984 with options for 3 more years. The amount of the contract for the 1983 and 1984 audits was \$463,441. The scope of work defined in the contract included (1) examining the financial statements of the fund, (2) determining whether the statements presented the financial position and results of OCRWM operations in accordance with generally accepted accounting principles, and (3) determining whether laws and regulations affecting financial statements had been complied with.

OCRWM was to provide draft financial statements and reports to Main Hurdman and, in turn, Main Hurdman was to provide OCRWM with (1) audited financial statements, (2) a compliance report, (3) a study of internal controls conducted as part of the financial audit, and (4) a management letter. OCRWM plans to use the financial statements as an integral part of its second annual

report to the Congress, now expected to be issued in May 1985. The compliance report is to give the overall status of the Nuclear Waste Fund, and the management letter is to contain the auditors' recommendations. Main Hurdman had been expected to notify the Director, OCRWM, of any proposed adjustment to the financial statements and reach final conclusions in December 1984.

The accounting firm completed the field audit work for fiscal years 1983 and 1984 on January 9, 1985. OCRWM officials said at the time that Main Hurdman's final audit report, including the financial statements, compliance report, and management letter, would be completed in February 1985. Audited financial statements were provided in March 1985, but as of March 31, 1985, the final audit report had not been completed. According to OCRWM officials, the report was not completed because of the time needed to review the adjusting entries to be made to OCRWM accounts and because OCRWM field offices missed deadlines for reconciling various accounts. According to OCRWM officials, the final audit report is now scheduled to be released during the third quarter of fiscal year 1985.

We reported in January 1985 that, since OCRWM's contract with Main Hurdman is a cost-plus-fixed-fee contract, any reduction in total hours used for the fiscal year 1983 and 1984 audits would result in reduced costs. However, as of March 31, 1985, all but about 500 contract hours (of a total 11,700 hours) had been expended. Furthermore, during the quarter, the contract amount for the fiscal year 1983 and 1984 audits was modified to \$533,441, an increase of \$70,000, in order to pay for an agreed-upon higher mix of skilled labor.

DOE RELATIONS WITH STATES AND INDIAN TRIBES

NWPA requires DOE to consult and cooperate with affected states and Indian tribes as it implements the waste program. The act also provides for grant assistance to states and tribes to finance state and tribal activities associated with site-selection and repository development. In addition to formal federal interaction with states and tribes, the conduct of site selection activities and future site characterization studies requires almost constant coordination among federal, state, and tribal officials.

During this quarter much of the interaction between OCRWM and states and Indian tribes concerned the review of the draft environmental assessments. OCRWM officials stated that they conducted about 50 formal briefings on the assessments and participated in 19 public hearings in which about 650 individuals presented written and oral testimony.

We attended the draft assessment hearings in Mississippi, Nevada, Texas, and Washington in February and March 1985 and

talked with officials from those four states and with Yakima Indian tribal officials. The comments directed toward the draft assessments (see p. 8), the views expressed by those who testified at the hearings, and interviews with state and tribal officials led to the following observations about federal relations with states and tribes.

--States, Indian tribes, and the general public in the affected states are suspicious of DOE's management of the first repository siting process. Officials and individuals think the process has been affected by undue political influence, that DOE has not been objective in its technical assessments, and that optimistic technical assumptions have been made.

--States think that DOE has not involved them in the policy and decisionmaking aspects of the program to the extent that NWPAs intended when employing the language "consultation and cooperation." State representatives feel they should participate as equals in the early stages of program or policy development rather than operating as "reviewers and commentators" after DOE has made preliminary decisions.

OCRWM officials believe that they have taken reasonable steps to ensure state and tribal cooperation on specific repository development documents. They cite efforts to obtain and respond to comments on the siting guidelines and mission plan.² They also cite their release of early drafts of the environmental assessments to the states and tribes for preliminary comments, the numerous briefings and hearings on the draft assessments, and the extensive comment response program on the draft assessments. (See p. 7.) Also, the office has begun holding periodic meetings with states, tribes, and other interested parties to advise them of the status of program activities and to obtain their comments and suggestions.

In December 1984, officials in the Office of Policy Integration and Outreach told us they were developing a plan to direct the dissemination of information and educational material concerning the waste program to states, tribes, and other interested parties. As of the end of the quarter, an official in that office said that the new chapter in the forthcoming mission plan (see p. 9) would be the overall strategy for institutional relations. That chapter was prepared in response to comments received on the draft plan criticizing it for the lack of an overall outreach and information dissemination plan. Once the mission plan is released

²See the discussion of the siting guidelines in our earlier quarterly reports and our discussion of the mission plan on p. 9.

and approved, each waste project office will be responsible for developing a site specific institutional relations plan consistent with the overall strategy.

No states initiated negotiations with OCRWM during this quarter for a consultation and cooperation agreement under the act. Furthermore, negotiations with the only state (Washington) to approach OCRWM about a consultation and cooperation agreement have been temporarily suspended because of activity on the environmental assessments. (DOE is not required to initiate negotiations for these agreements before the sites are formally selected for site characterization studies.)

Negotiations with Washington, begun over a year ago, were mainly handled by the basalt, or Richland project office, with assistance from headquarters personnel. Currently, two major barriers to completion of the agreement still exist: resolution of the issue of liability in the event of a nuclear accident and the state's concerns about defense wastes that exist at the Hanford site. Washington state believes the Price-Anderson Act, which establishes limits on liability in the event of certain nuclear accidents, does not provide adequate protection. The state also believes that the defense waste stored at Hanford is within the scope of the agreement and that the state is entitled to grant funds as part of site characterization activities because of the proximity of the defense waste to the potential repository site. During the quarter, the Washington Nuclear Waste Board cancelled scheduled hearings on the consultation and cooperation agreement, although a draft agreement is being circulated within the state for public comment.

Grant assistance provided

Under NWPA, DOE must provide grant assistance from the Nuclear Waste Fund to affected states and tribes to aid them in such activities as (1) reviewing activities for potential economic, social, public health and safety, and environmental impacts, (2) developing requests for assistance from DOE to mitigate the impact of repository development, and (3) participating in monitoring, testing, and evaluating site characterization activities.

Since enactment of NWPA, grants totaling about \$18.8 million had been awarded to 28 different grantees. Most of the grants covered one year and went to individual state governments or Indian tribes; others, however, have been made to a university and to national associations representing states or Indian tribes. The following table details grant assistance provided by DOE from January 1983 through March 1985.

State/Indian Tribe Assistance Provided by DOE
January 1983 through March 1985

DOE operations office and grantee	Latest grant		Second quarter FY 1985 DOE obligations	Total DOE obligations from inception
	Date	Amount		
Chicago Office:				
Connecticut	11/21/84	\$ 132,824	\$ 0	\$ 328,167
Georgia	12/14/84	140,061	140,061	252,501
Louisiana	11/06/84	300,000	0	533,319
Maine	12/27/84	157,403	157,403	256,202
Maryland	a	73,461	73,461	105,195
Massachusetts	12/27/84	240,001	240,001	409,411
Michigan	12/31/84	187,684	187,684	461,815
Minnesota	a	189,816	189,816	551,811
Mississippi	02/25/85	950,665	1,024,464	1,885,836
New Hampshire	12/13/84	188,933	188,933	278,816
New Jersey	a	64,433	64,433	226,149
New York	09/04/84	46,450	0	246,450
N. Carolina	a	184,150	0	297,546
Rhode Island	02/07/85	132,486	132,486	232,011
S. Carolina	12/27/84	159,811	159,811	411,497
Texas	09/26/84	200,000	0	599,840
Utah	a	798,350	798,350	1,658,533
Vermont	11/21/84	60,788	0	113,250
Virginia	07/31/84	41,130	0	41,130
Wisconsin	a	247,854	0	341,665
Total			<u>\$3,356,903</u>	<u>\$9,231,144</u>
Nevada Office:				
Nevada	01/31/85	1,898,778	<u>\$1,898,778</u>	<u>\$2,894,861</u>
Total			<u>\$1,898,778</u>	<u>\$2,894,861</u>
Richland Office:				
Nez Perce Tribe	12/27/84	508,257	\$ 0	\$ 526,568
Confederated Tribe of Umatillas	02/28/85	547,122	-5,193 ^b	819,819
Washington state (2 grants)	a	1,681,171	0	2,717,297
Yakima Indian Nation	02/14/85	90,596	<u>90,596</u>	<u>2,146,852</u>
Total			<u>\$ 85,403</u>	<u>\$6,210,536</u>
Headquarters:				
National Congress of Amer. Indians	02/28/84	\$ 205,000	\$ 0	\$ 205,000
National Conference of State Legislators	07/24/85	216,873	0	216,873
National Governors' Association	c	c	c	c
Total			<u>0</u>	<u>\$ 421,873</u>
Total			<u>\$5,341,084</u>	<u>\$18,758,414</u>

^aGrant award made but signed award document not received by OCRWM at the end of the quarter.

^bFunds deobligated. (Grants revised downward from \$552,315.)

^cAccording to OCRWM officials, there has been no activity on this grant since 1981.

Source: Obligation data from DOE's financial information system.
Grant dates and amounts from OCRWM.

CHAPTER 4

STATUS OF THE NUCLEAR WASTE FUND

AS OF MARCH 31, 1985

NWPA established a separate fund, maintained by the Department of the Treasury, to finance the nuclear waste program. The Nuclear Waste Fund receives fees paid by the owners and generators of high-level radioactive waste and disburses funds to finance OCRWM activities. The fund began receiving fees late in fiscal year 1983. During the quarter ending March 31, 1985, fees received totaled \$85.0 million. During the same quarter, the fund disbursed about \$68.3 million, most of which went to contractors who conduct the bulk of program activities for OCRWM.

In addition to fees, two other funding sources currently support OCRWM activities: interest income from investments made with excess money in the waste fund and appropriated funds for generic research not directly related to repository development. OCRWM began investing funds in February 1985 and had investment returns of about \$145,000 as of March 31, 1985. OCRWM spent about \$5.8 million during the quarter in appropriated funds for research and development not directly related to repository development.

NUCLEAR WASTE FUND RECEIPTS AND COSTS

As described in chapter 1, DOE has contracted with 64 nuclear power plant owners for the payment of fees into the fund to finance the waste repository program. The fund began receiving fees late in fiscal year 1983; by the end of that fiscal year, it had collected about \$73.6 million. During fiscal year 1984, receipts totaled about \$329.5 million. During the second quarter of fiscal year 1985, receipts of about \$85.0 million were collected, making a total of \$175.4 million for the first two quarters of fiscal year 1985, and \$578.5 million since the program began.

DOE is investing funds that are in excess of current needs

NWPA provides that when the Nuclear Waste Fund has funds that are in excess of current needs (including the amount owed to the Department of the Treasury), DOE may request the Secretary of the Treasury to invest them in Treasury financial instruments as the DOE Secretary determines appropriate. Until January 30, 1985, DOE had not invested any funds because, for the most part, receipts at any one time did not exceed current needs and DOE did not have a process to obtain accurate and timely data needed to calculate the daily fund balances eligible for investment.

DOE headquarters officials in the Office of the Controller, who are responsible for Nuclear Waste Fund investment decisions, stated that before daily investments could be made from the fund, they had to establish procedures to allow the accurate tabulation of daily disbursements so that DOE would know the daily investment potential. This required contractors and DOE operations offices to report on a daily basis data that previously were reported monthly.

OCRWM and DOE headquarters finance officials had numerous conversations with DOE operations office officials and, in early December 1984, met with them to establish a mechanism for obtaining daily disbursement data. By January 29, 1985, DOE headquarters had established requirements for furnishing daily disbursement data to the DOE controller. Data must be telephoned to the controller headquarters daily with written confirmation within 24 hours.

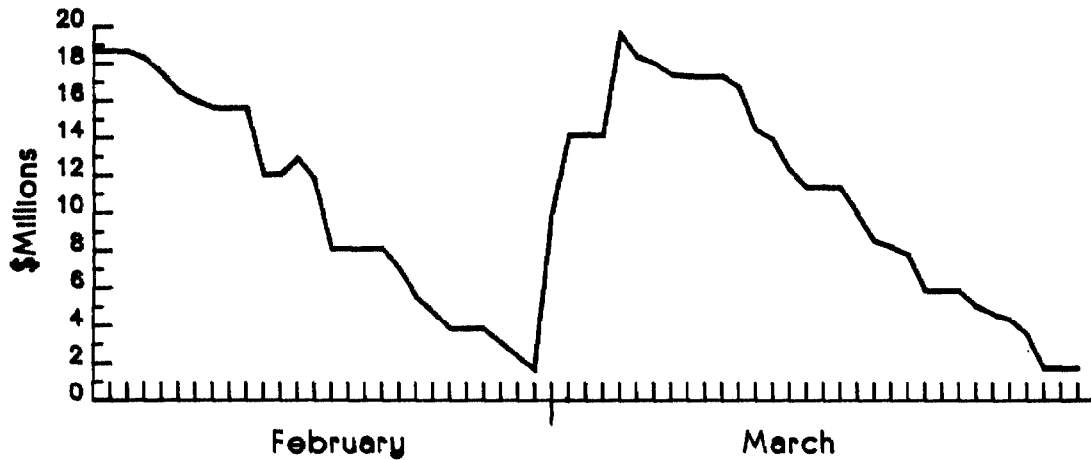
According to DOE controller officials, on January 31 and February 1, 1985, the fund received \$20.7 million in excess funds. DOE made its first investment of \$18.7 million in overnight Treasury bills on February 1, 1985,¹ and received interest totaling \$4,391 on February 2, 1985. The graph on the next page shows that daily investments fluctuated from \$1.6 million to \$18.7 million during the quarter, while daily interest received fluctuated between \$347 and \$4,391, totaling \$145,331 for the quarter.

DOE made only overnight investments during the quarter because of (1) the small amount of excess funds available and (2) the daily excess funds fluctuation. However, DOE's investment strategy calls for investments in up to 364-day Treasury bills when larger amounts of excess funds are available. In addition, the Secretary of the Treasury can make emergency daily investments when unusually large amounts of excess funds are received. According to DOE controller officials, DOE will make long-term investments this summer when utilities begin paying their one-time fees for spent fuel. DOE currently expects to receive \$770 million to \$1.3 billion in one-time fees this summer.

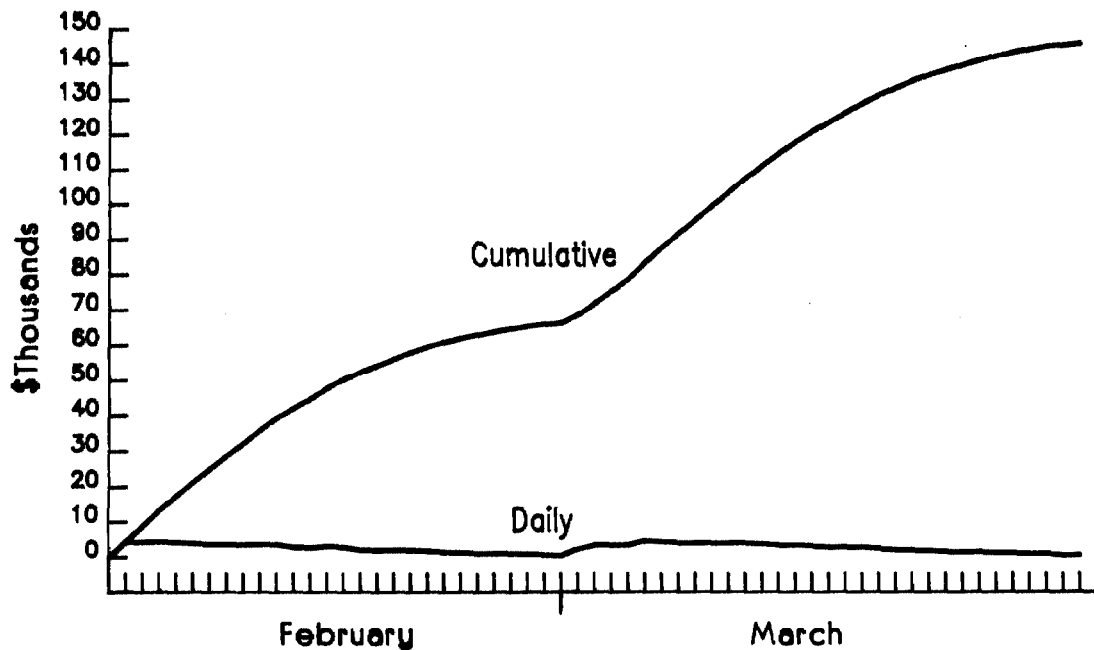
¹OCRWM normally receives the bulk of its quarterly fees on the last day of the first month following a quarter. Also, since daily investment decisions are made by the DOE controller's office by about 2:00 p.m., invested amounts reflect excess cash available at that time--not those amounts available at the end of the day.

Nuclear Waste Fund Investment Activities

Daily Investments



Daily and Cumulative Interest Income



Source: Prepared by GAO from DOE investment data.

Nuclear Waste Fund costs

OCRWM obligates from the Nuclear Waste Fund by awarding contracts and grants and disbursing funds for its civil service payroll and other program management needs. It can obligate amounts only as appropriated even though funds may be available in the Nuclear Waste Fund. OCRWM's appropriation for fiscal year 1985 totals \$327.6 million. Actual costs are recorded when invoices are received, and disbursements are recorded when payments are made. Obligations, costs, and disbursements are recorded into DOE's financial information system by the field finance offices that receive allocations from the fund.

Beginning with fiscal year 1985, these transactions are recorded under the five major cost activities shown in the following table. The table depicts waste fund costs by each major activity and subactivity for the first and second quarters of fiscal year 1985. The table shows that most of the funds were spent for the development of the first repository (70 percent). Activities in this category are primarily managed by the field offices and the Office of Geologic Repositories and include (1) the development, verification, and application of geological repository performance assessment models, (2) preliminary site characterization studies, (3) repository design development, and (4) the preparation of environmental assessments.

Status of Nuclear Waste Fund Costs for Fiscal Year 1985

Funding category	First quarter costs		Second quarter costs		Cumulative costs
	Subactivity	Major activity	Subactivity	Major activity	
First repository		\$ 32,218,616		\$ 51,967,988	\$ 84,186,604
Development, construction, operations	\$ 31,118,826		\$ 50,699,094		
Capital equipment	1,099,790		1,268,894		
Plant acquisition and construction	0		0		
Second repository		4,575,567		4,391,976	8,967,543
Development, construction, operations	4,528,144		4,390,476		
Capital equipment	47,423		1,500		
Plant acquisition and construction	0		0		
Monitored retrievable storage		1,481,904		3,588,948	5,070,852
Development, construction, operation	1,481,904		3,534,651		
Capital equipment	0		54,297		
Plant acquisition and construction	0		0		
Program management and technical support		7,589,097		13,328,873	20,717,970
Transportation, management, support	7,391,268		13,292,270		
Capital equipment	-2,171 ^a		36,603		
Plant acquisition and construction	0		0		
Debt service		474,516		302,639	777,155
Interest expense owed to Treasury	474,516		302,639		
Total	\$ 46,159,700	\$ 46,159,700	\$ 75,580,424	\$ 75,580,424	\$ 119,720,124

^aNegative figure due to adjustments to prior year costs.

Source: DOE's financial information system.

OCRWM field offices began, in fiscal year 1985, to report costs and obligations into the DOE financial information system by work breakdown structure.² Detailed cost data concerning the development, construction, and operation of the first and second repositories are shown in the following schedule.

²For more information on OCRWM's work breakdown structure, see our second quarterly report (GAO/RCED-85-65).

Costs by Work Breakdown Structure for the First
and Second Repositories for Quarter Ending
March 31, 1985

Work breakdown structure task	<u>First repository</u>				<u>Second repository</u>		
	<u>Basalt</u>	<u>Tuff</u>	<u>Salt</u>	<u>Total^a</u>	<u>Crystal- line rock</u>	<u>Other rock types</u>	<u>Total</u>
	----- (millions) -----				----- (millions) -----		
Systems	\$1.02	\$0.61	\$1.20	\$2.84	\$0.26	\$ 0	\$0.26
Waste package	2.36	.79	1.05	4.21	.01	0	.01
Site	3.02	7.23	5.62	15.86	2.29	.48	2.77
Repository	1.12	3.09	2.07	6.29	.11	0	.11
Regulatory and insti- tutional	1.29	.95	5.02	7.27	.34	0	.34
Exploratory shaft	1.48	1.12	2.73	5.34	0	0	0
Test facilities	.45	.55	.10	1.10	.17	0	.17
Land acqui- sition	.00	.00	.28	.28	0	0	0
Program man- agement	1.52	2.51	2.23	6.26	.65	0	.65
Financial and techni- cal assis- tance	.73	.22	.43	1.38	.01	0	.01
Other	<u>.00</u>	<u>.00</u>	<u>-.13^b</u>	<u>-.13</u>	<u>.06</u>	<u>0</u>	<u>.06</u>
Total	<u>\$13.00</u>	<u>\$17.08</u>	<u>\$20.62</u>	<u>\$50.70</u>	<u>\$3.91</u>	<u>\$.48</u>	<u>\$4.39</u>

^aTotals do not add due to rounding.

^bNegative figure due to correcting prior period accounting error.

Source: DOE's financial information system.

OCRWM CONTRACT ACTIVITY

NWPA authorizes DOE to make expenditures from the fund to finance radioactive waste disposal activities. These activities include all phases of developing, constructing, and closing any repository, monitored retrievable storage facility, or test and evaluation facility authorized under the act; research, development, and demonstration activities connected with development of the repositories; the administrative cost of the radioactive waste disposal program; and any costs associated with transporting, treating, and packaging spent nuclear fuel or high-level radioactive waste.

Many of these waste disposal activities have been and are being carried out by contractors. During the second quarter of fiscal year 1985, DOE spent about \$66.8 million for contractor services and obligated about \$45.4 million, about 79 percent of total dollars obligated during the quarter. Since inception of the fund, OCRWM has obligated about \$648 million to 114 contractors.

Contracts for the most part are negotiated, awarded, and administered through DOE field operations offices in Richland, Washington; Chicago, Illinois; and Las Vegas, Nevada; and in DOE headquarters in Washington, D.C. Some contracts are monitored by other DOE operations offices, such as those in Albuquerque, New Mexico, and San Francisco, California. Each of the three first repository project offices has prime contracts with one or several contractors who perform waste program activities or sub-contract for these activities. The table on the next page is a summary of contract activity since inception of the fund. It also lists individually all prime contractors who have incurred costs or obligations of \$1 million or more during the quarter ending March 31, 1985. All other contract data are aggregated in the "others" category.

Summary of OCRWM Contract Activity

<u>DOE operations office contractor name</u>	<u>Total number of contracts</u>	<u>Costs second quarter FY85</u>	<u>Obligations second quarter FY85</u>	<u>Cumulative obligations since inception</u>
Albuquerque:				
Univ. of California	1	\$ 2,222,572	\$ 247,000	\$ 28,771,464
Western Electric Co., Inc.	1	5,353,601	430,000	50,529,722
Others	<u>4</u>	<u>86,578</u>	<u>0</u>	<u>340,810</u>
Total	<u>6</u>	<u>7,662,751</u>	<u>677,000</u>	<u>79,641,996</u>
Chicago:				
Battelle Memorial Institute	3	19,820,184	25,080,000	203,859,247
Flour Engineers & Construction	1	1,248,903	4,300,000	15,976,000
Parsons-Redpath	1	1,046,000	0	7,950,000
University of Texas	3	402,725	1,000,000	6,576,100
Others	<u>23</u>	<u>968,155</u>	<u>937,892</u>	<u>2,549,237</u>
Total	<u>31</u>	<u>23,485,967</u>	<u>31,317,892</u>	<u>236,910,584</u>
Idaho:				
Others	<u>4</u>	<u>207,160</u>	<u>0</u>	<u>3,146,143</u>
Total	<u>4</u>	<u>207,160</u>	<u>0</u>	<u>3,146,143</u>
Nevada:				
Department of the Interior ^a	1	4,600,000	0	21,898,000
Reynolds Electric & Energy	2	1,406,931	922,534	33,209,378
Science Applications Inc.	1	1,553,328	1,500,000	12,683,000
Others	<u>16</u>	<u>1,300,503</u>	<u>127,466</u>	<u>13,491,970</u>
Total	<u>20</u>	<u>8,860,762</u>	<u>2,550,000</u>	<u>81,282,348</u>
Oak Ridge:				
Others	<u>4</u>	<u>764,168</u>	<u>50,000</u>	<u>5,164,198</u>
Total	<u>4</u>	<u>764,168</u>	<u>50,000</u>	<u>5,164,198</u>
Richland:				
Battelle Memorial Institute	1	3,803,908	656,000	33,948,305
Ralph M. Parsons Co.	1	1,799,558	1,140,000	11,015,925
Rockwell Hanford Co.	1	10,293,346	4,005,000	124,127,299
Others	<u>17</u>	<u>1,852,187</u>	<u>1,493,920</u>	<u>25,097,843</u>
Total	<u>20</u>	<u>17,748,999</u>	<u>7,294,920</u>	<u>194,189,372</u>
San Francisco:				
Univ. of California	2	2,585,040	2,779,675	24,117,060
Others	<u>2</u>	<u>0</u>	<u>0</u>	<u>663,320</u>
Total	<u>4</u>	<u>2,585,040</u>	<u>2,779,675</u>	<u>24,780,380</u>
Headquarters:				
Roy F. Weston, Inc.	1	4,304,678	0	18,223,172
Others	<u>24</u>	<u>1,164,414</u>	<u>692,000</u>	<u>4,602,012</u>
Total	<u>25</u>	<u>5,469,092</u>	<u>692,000</u>	<u>22,825,184</u>
Total (all contractors)	<u>114</u>	<u>\$ 66,783,939</u>	<u>\$ 45,361,487</u>	<u>\$647,940,205</u>

^aThe Department of the Interior's U.S. Geological Survey is performing on-site work for the Nevada Project Office under contract.

Source: DOE's financial information system.

OVERALL STATUS OF THE
NUCLEAR WASTE FUND

Section 302 of NWPA required DOE to transfer unexpended appropriations as of January 7, 1983, from the ongoing nuclear waste program to the waste fund. Subsequently, DOE transferred about \$254 million into the fund in fiscal year 1983. Another \$4.6 million was transferred into the fund in fiscal year 1984 from other appropriations that had been passed before the fund was established. These funds are to be repaid to the U.S. Treasury with interest. As of March 31, 1985, about \$777,000 in interest expense had accumulated for fiscal year 1985.

The following table summarizes the overall status of the fund as of March 31, 1985. It shows that the fund has sufficient cash from the 1983 appropriation transfer and from fees collected to cover all financial requirements through March 1985. OCRWM officials said that repayment of the appropriated debt to the Treasury will probably take place after the owners pay the one-time fees later this year.

Status of the Nuclear Waste Fund
As of March 31, 1985

Beginning cash balance - January 1, 1985	\$242,835,033
Receipts from waste owners	85,030,567
Investment earnings	<u>145,331</u>
Total funds available	<u>328,010,931</u>
Disbursements	<u>-68,296,429</u>
Cash balance as of March 31, 1985	<u>\$259,714,502</u>
Unpaid obligations as of March 31, 1985	\$203,962,085
Appropriated debt owed to Treasury	\$258,443,533

Source: DOE's financial information system.

OTHER FUNDING SOURCES

In addition to fees collected and investment returns, OCRWM receives funds through DOE's annual appropriation process for its civilian waste research and development (R&D) program. These funds, maintained in a separate account, are used to conduct research in areas that are not directly related to the geologic repositories. Research efforts include studies on subseabed disposal, fuel integrity, cooperative demonstrations with utilities, and international activities. The table below shows accrued costs for this program for the first and second quarters of fiscal year 1985.

Costs for Civilian Radioactive
Waste R&D Program for Fiscal Year 1985

	<u>First quarter</u>	<u>Second quarter</u>	<u>Cumulative^a</u>
	----- (millions) -----		
Spent fuel storage R&D	\$ 2.14	\$ 2.20	\$ 4.33
Alternative disposal concepts	.60	3.05	3.65
Generic methods and supporting studies	.35	.50	.85
Program direction	<u>.07</u>	<u>.06</u>	<u>.13</u>
Total	\$ <u>3.16</u>	\$ <u>5.81</u>	\$ <u>8.96</u>

^aTotals do not add due to rounding.

Source: DOE's financial information system.

Another source of funding authorized by the act is the Interim Storage Fund. That fund is to receive fees from utilities that apply for and receive, from the government, interim storage services for spent fuel. Fees are to be based on the estimated prorated costs of storage, which include the costs of developing and maintaining interim storage facilities. To date, no utilities have applied for interim storage services, and DOE officials do not anticipate using interim storage in the near future.





31175

AN EQUAL OPPORTUNITY EMPLOYER

UNITED STATES
GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE \$300

**BULK RATE
POSTAGE & FEES PAID
GAO
PERMIT No. G100**

GE