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NUCLEAR WASTE

Quarterly Report on DOE's Nuclear Waste Program as of December 31, 1985

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GAO

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Resources, Community, and
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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 December 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 Indian tribes.

We are sending copies of the report to the Chairmen of the Senate Committee on Governmental Affairs, the House Committee on Government Operations, and the House Committee on Energy and Power; the Secretary of Energy; the Nuclear Regulatory Commission; and other interested parties.

J. Dexter Peach
Director

Executive Summary

United States nuclear power plants have produced over 22 million pounds of highly radioactive waste that will remain hazardous to people and the environment for thousands of years. The Nuclear Waste Policy Act of 1982 established a program and milestones for developing and constructing deep underground facilities (repositories) to safely isolate this waste.

At the request of the Senate Committee on Energy and Natural Resources, GAO provides quarterly status reports on the Department of Energy's (DOE's) efforts to implement the act. This report provides information for the quarter ending December 31, 1985, on legislatively mandated program activities, selected management initiatives, and program funding.

Background

The act established numerous requirements for the selection of sites and construction and operation of repositories for the permanent burial of highly radioactive materials in deep underground rock formations. The act also required DOE to consider the need for and propose to the Congress the construction of a monitored retrievable storage facility where the waste can be packaged, monitored, stored, and subsequently retrieved for disposal in a permanent repository.

The act established the DOE Office of Civilian Radioactive Waste Management to manage the program and required it to (1) conduct detailed site characterization studies at potential repository sites, (2) design and construct the nation's first repository, and (3) consult and cooperate with affected states and Indian tribes in implementing the program. To finance the program, the act established the Nuclear Waste Fund to receive fees from the owners and generators of nuclear waste.

Results in Brief

The program has made progress towards meeting the act's requirements, but continues to lag behind legislated and DOE-imposed deadlines for such activities as the issuance of first repository final environmental assessments. Events related to requirements of the act that occurred during the quarter included issuance of a draft monitored retrievable storage facility proposal and a draft Area Recommendation Report for the second repository. One new lawsuit was filed concerning the nuclear waste program, and decisions against DOE were handed down on two of the previously filed suits.

Management initiatives during the quarter included the completion of a Program Management System manual, which defines the policies and procedures for a cohesive and cost-effective program. DOE also continued to monitor its contracted audits of the waste program and initiated its own audit of the program. In addition, DOE continued its efforts to inform states and tribes of program developments.

As of December 31, 1985, the Nuclear Waste Fund had a balance of about $1.6 billion, most of which has been invested in Treasury bills and notes.

GAO Analysis

Program Activities

DOE continued to prepare environmental assessments, which evaluate and rank the suitability of candidate sites for the first waste repository. The act required that these assessments be issued January 1, 1985; however, DOE officials do not expect to complete the assessments until April 1986.

Many comments on the draft environmental assessments criticized DOE's methodology for ranking potential repository sites as inadequate and not state-of-the-art. As a result, DOE revised its methodology and requested the National Academy of Sciences to independently review it. DOE also requested the Academy to review how DOE is applying the revised methodology to the data it has collected on each site. Although the Academy approved the revised methodology, DOE does not intend to apply it until the next quarter. Consequently, DOE officials do not yet know whether these actions will change the final rankings of the sites. (See p. 14.)

In December 1985 DOE issued for formal comment a draft monitored retrievable storage facility proposal and accompanying program plan and environmental assessment to implement the proposal. DOE expects the final documents to be submitted to the Congress by early February 1986. (See p. 16.)

A draft Area Recommendation Report, which narrows the number of rock formations for consideration as a host for the second repository, was issued in January 1986. It identifies 12 sites in 7 states where DOE proposes to conduct field studies.

In April 1985 the President advised DOE that its defense high-level waste should also be deposited in the repository to be used for commercial waste because of cost savings. As a result, DOE has prepared a draft agreement that establishes a process for determining the cost to the government for depositing defense waste in the repository. DOE submitted the draft agreement to the Office of Management and Budget for review in December 1985 and plans to release the agreement for public comment in March 1986. (See p. 20.)

During the quarter one lawsuit was filed. Tennessee filed suit in the U.S. Court of Appeals contending that DOE violated the Nuclear Waste Policy Act because it did not consult with the state before preparing its draft monitored retrievable storage proposal.

Also during the quarter, decisions on two previously filed suits were handed down against DOE. In December the U.S. Court of Appeals rejected DOE's argument that states are not entitled to grant funds from DOE to finance their independent testing and data-gathering activities during the site characterization phase. In addition, in December the U.S. District Court ruled that only electricity generated by utilities and sold off-site is subject to the ongoing fee paid into the Nuclear Waste Fund. This differs from the current contracts between nuclear utilities and DOE, in which utilities must pay fees into the fund on the basis of the total amount of electricity generated. DOE has not assessed how these decisions will affect the waste program, including the financial impact on the Nuclear Waste Fund. (See p. 22.)

Management Initiatives

DOE finalized a Program Management System manual, which is intended to enable managers to better plan, monitor, and analyze the program and provides centralized managerial direction from headquarters. (See p. 26.)

Several audit reviews continued, including a public accountant examination of the Nuclear Waste Fund's financial statements for fiscal year 1985. DOE updated a verification report of the one-time fees paid into the fund by utilities, reducing the number of fees that had not been verified from 15 to 10. DOE is continuing to resolve the remaining inconsistencies. In addition, DOE's Office of the Inspector General began an audit of the waste program. (See p. 28.)

DOE continued its efforts to inform states, tribes, and other interested parties about waste program activities. DOE sponsored meetings and

workshops concerning the environmental assessments, transportation issues, the monitored retrievable storage proposal, and the second repository program. However, state and tribal officials said that their confidence in DOE's implementation of the program remains low. These officials want more input in the decision-making process and earlier notification of planned meetings.

Funding

The Nuclear Waste Fund balance as of December 31, 1985, was about $1.6 billion. During the first quarter of fiscal year 1986, the fund received about $110.8 million in fees from the owners and generators of nuclear waste plus about $57.7 million in interest from fund investments, and disbursed about $85 million. (See p. 39.)

Recommendations

GAO is making no recommendations.

Agency Comments

The views of directly responsible officials were sought during the course of GAO's work and are incorporated in the report where appropriate. At the Committee's request, GAO did not ask DOE to review and comment officially on a draft of this report.

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Tables

Abbreviations

DOE	Department of Energy
EIA	Energy Information Administration
FERC	Federal Energy Regulatory Commission
GAO	General Accounting Office
MRS	monitored retrievable storage
NAS	National Academy of Sciences
NRC	Nuclear Regulatory Commission
NWPA	Nuclear Waste Policy Act of 1982
OCRWM	Office of Civilian Radioactive Waste Management
OIG	Office of the Inspector General
OMB	Office of Management and Budget
RCED	Resources, Community, and Economic Development Division
R&D	research and development
TVA	Tennessee Valley Authority

Introduction

Enacted on January 7, 1983, the Nuclear Waste Policy Act of 1982 (NWPA) (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 accept title to nuclear waste for disposal beginning 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 NWPA 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, Department of Energy's Initial Efforts to Implement the Nuclear Waste Policy Act of 1982, (GAO/RCED-85-27, Jan. 10, 1985), focused on the problems DOE had in initiating the program and establishing its financial basis. Our second annual audit report, Nuclear Waste Policy Act: 1984 Implementation Status, Progress, and Problems, (GAO/RCED-85-100, Sept. 30, 1985), focused 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 previous five quarterly reports discussed actions that took place during the period July 1, 1984, through September 30, 1985.[1] They discussed the status of OCRWM program activities directed towards meeting the act's legislatively mandated milestones, especially those that were past due or upcoming, related litigation, the status of selected management actions, and the status of the Nuclear Waste Fund. This report covers the status of selected management actions, program and fund activities, and related litigation, during the quarter ending December 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 program activities and focuses on those activities directed towards meeting legislatively mandated milestones that are current, past due, or upcoming in the next several months. It also summarizes the status of litigation resulting from OCRWM repository activities. Chapter 3 discusses the status of selected management actions, including OCRWM's relations with states and Indian tribes. Chapter 4 describes the status of the Nuclear Waste Fund as of December 31, 1985, and includes a

[1]See appendix I for a list of our quarterly and annual reports concerning DOE's nuclear waste program.

description of Nuclear Waste Fund investment activity conducted by DOE.

Overview

The safe disposal of spent nuclear fuel and other highly radioactive nuclear waste[2] 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 nuclear waste. 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 (110 million pounds) of highly radioactive nuclear waste will have accumulated.

In October 1985 DOE issued a report estimating near-term requirements for additional spent-fuel storage capacity. The report is based on information supplied by utilities that operate commercial nuclear power plants. It concludes that about 9,300 metric tons of additional storage capacity will be needed in the year 2000 to accommodate the accumulated spent fuel. This estimate is about 18 percent lower than a year ago because of utilities' (1) increased use of fuel cycles with longer periods between discharges of spent fuel, (2) reuse of fuel assemblies, and (3) increased estimates of maximum storage capacity due to the reracking of spent-fuel rods. However, the report states that significant projected requirements for additional storage still exist for the next decade.

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. Program costs are to be paid from the Nuclear Waste Fund, which receives fees from the owners of operating nuclear power plants and the owners of high-level nuclear waste generated in the past. The total cost of the program was estimated in April 1985 to be between $20.9 billion and

[2]Spent nuclear fuel is the used uranium fuel that has been removed from a nuclear reactor. High-level radioactive waste also results from producing nuclear weapons material. The act requires DOE to use one or more of the repositories developed under the act to dispose of all high-level waste. Spent fuel and other high-level wastes are difficult to dispose of because of their high toxicity and long radioactive life, and because they produce heat.

$35.3 billion (in 1984 dollars), depending upon the geologic media[3] selected for the two repositories and possible delays in the repository program. This estimate includes the cost of developing, constructing, operating, and closing two geologic repositories.

The act authorized DOE to enter into contracts with all generators and owners of highly radioactive materials. As of December 31, 1985, DOE had contracts with 65 commercial owners and generators covering 149 nuclear reactors. The contracts establish (1) the terms and conditions under which DOE will dispose of spent fuel generated by civilian nuclear power reactors and (2) the procedures to follow in collecting fees to fully recover the government's disposal costs.

The contracts require the payment of a 1-mill-per-kilowatt-hour fee for electricity generated by nuclear power beginning on 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. During the quarter DOE collected about $109.3 million in these quarterly fees.

The contracts also require the payment of a one-time fee for spent fuel generated before April 7, 1983. The owners were required to select one of three options for paying the one-time fee, currently estimated to total $2.3 billion, and inform DOE by June 30, 1985, which method each would use. These options included full payment before June 30, 1985, with no interest charges; full payment with interest before delivery of the spent fuel to DOE; or quarterly payments plus interest spread over 10 years. By June 30, 1985, DOE had collected $1.4 billion of the estimated $2.3 billion in one-time fees. Since that time, DOE has collected another $3 million in one-time fee payments. Chapter 4 contains details about the one-time fee payments.

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 geologic media (basalt, salt, and tuff) under consideration for selection as the first repository site. The Richland office is primarily working with basalt,

[3]Geologic 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.

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. A separate project office in Richland, along with a monitored retrievable storage (MRS) project site office in Oak Ridge, Tennessee, established in April 1985, manage the MRS program. These offices, in turn, rely heavily on contractors and national laboratories to conduct specific activities.

In February 1983 DOE formally identified nine areas in six states[4] as potential sites for the first repository. After available data have been analyzed and a number of requirements have been completed, 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—1,200 to 3,000 feet, depending upon the geologic medium selected. One of the characterized sites will likely be the location of the first repository.

As discussed 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 accompany the recommendations of the three sites 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. OCRWM officials stated at the end of December 1985 that they expect to issue the final assessments in April 1986.

After DOE completes the site characterization studies, NWPA requires the President to recommend by March 31, 1987, one site to the Congress for repository construction. However, DOE does not expect to complete site characterization studies until 1990, and does not expect the President to make his recommendation until 1991.

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. However, DOE does not expect to make its recommendation of three

[4]The states containing potential sites for the first repository are Louisiana, Mississippi, Nevada, Texas, Utah, and Washington.

sites to the President for the second repository until after the President recommends the site for the first repository to the Congress. DOE expects that the President will not make his recommendation for the second repository, due to the Congress by March 31, 1990, until 1998. As described in chapter 2, OCRWM is conducting a site-screening process for the second repository.

NWPA also required that DOE submit to the Congress, by June 1985, a determination of whether the waste program should include an MRS facility and a proposal for the construction of this facility. DOE has concluded that an MRS facility should be an integral part of the waste management system; however, DOE does not expect to submit the final proposal to the Congress until February 1986.

Objectives, Scope, and Methodology

This report discusses OCRWM activities during the quarter ending December 31, 1985. It (1) highlights OCRWM's activities directed towards meeting NWPA's legislatively mandated milestones, including those that are past due or forthcoming in the next several months, (2) discusses related litigation, (3) describes selected OCRWM management activities, including federal relations with states, Indian tribes, and local communities, and (4) provides the status of the Nuclear Waste Fund, including its 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 pertinent program documents, including the final Transportation Business Plan to include the private sector in packaging and transporting high-level waste, a draft Transportation Institutional Plan to identify and resolve institutional issues concerning the transportation system, the regional characterization reports for the second repository, the draft Project Decision Schedule, and an update to DOE's Energy Information Administration's (EIA's) June 1985 report verifying utilities' one-time fees. We also reviewed selected comments from states and others on the draft environmental assessments and internal documents describing OCRWM's plan for preparing the final assessments. In addition, we reviewed documents relating to DOE's proposed MRS facility.

During the quarter, we attended three meetings or workshops in Atlanta, Georgia, concerning the waste management program. The first was an OCRWM-sponsored meeting in November 1985 that focused on program information services, resources, and systems; the second was an OCRWM-sponsored workshop in November 1985 that focused on the development and implementation of OCRWM's transportation plans; the third was the first repository states' and tribes' quarterly meeting in December 1985 to discuss the program in general and address specific problems and questions.

To obtain information on Nuclear Waste Fund receipts, costs, and disbursements, and the fund's investment activity, we contacted officials responsible for DOE's financial activities. We also obtained financial and contract data directly from the DOE financial information system and from EIA. We were unable to verify data obtained from DOE's financial information system within the time frame of this report. To obtain information on litigation, we reviewed the lawsuits as filed and talked with DOE Office of the General Counsel officials.

We sought the views of directly responsible officials during the course of our work and incorporated them in the report where appropriate. At the committee's request, we did not ask DOE to review and comment officially on a draft of this report.

Status of OCRWM Activities Directed Towards Legislated Requirements During the October-December 1985 Quarter

This chapter discusses activities during the quarter ending December 31, 1985, directed towards meeting the requirements of NWPA. It focuses on those requirements with deadlines that are currently due, past due, or upcoming. In particular, the chapter discusses

- OCRWM's efforts to complete environmental assessments, which must be done before DOE can recommend three sites to the President for site characterization studies;
- the status of the proposal for a monitored retrievable storage program; and
- progress on the Area Recommendation Report for the second repository.

The following sections also highlight other OCRWM activities, including determining fees to be paid into the Nuclear Waste Fund for the disposal of high-level defense waste and completing draft and final documents to comply with the act's requirements. Also included is a discussion on the status of litigation resulting from OCRWM activities.

Final Environmental Assessments Now Targeted for April 1986

NWPA requires the Secretary of Energy to nominate at least five first repository sites that he determines suitable for site characterization and then to recommend three sites for characterization to the President. Each nominated site is to be accompanied by an environmental assessment. These assessments must include the probable impacts of site characterization activities, such as drilling the exploratory shafts necessary to collect geologic data, and ways to avoid such impacts.

The act required that the final assessments be completed no later than January 1, 1985, when the Secretary was to have recommended to the President three sites for characterization. Nine draft assessments—one for each potential first repository site located in six states—were originally scheduled for issuance by OCRWM in August 1984 but were not issued until December 20, 1984. The assessments compared each site with the others and ranked them according to criteria defined in the siting guidelines, which were also issued in December 1984. The five sites proposed in the draft assessments for nomination are located in Mississippi, Nevada, Texas, Utah, and Washington. The three sites recommended in the draft assessments for site characterization studies are located in Nevada, Texas, and Washington.

During a 90-day comment period that ended March 20, 1985, interested parties submitted written comments to DOE on the draft assessments. DOE received over 21,000 comments on the draft assessments from more

than 2,600 commenters, including all of the six states containing potential first repository sites, Indian tribes, federal agencies, and other interested parties. Each comment is to be addressed in a separate comment response document for each potential site.

DOE now plans to issue in April 1986 final environmental assessments for each of the five nominated sites. The number and complexity of the comments received delayed the August 1985 issuance date for the final assessments, and their issuance was rescheduled for December 1985. According to OCRWM officials, the final assessments were not issued in December largely because of OCRWM's desire to obtain a National Academy of Sciences (NAS) review of the ranking methodology, as explained below.

The NAS Board on Radioactive Waste Management commented in April 1985 that the analysis in chapter 7 of the draft assessments—the chapter that evaluates each site against each criterion in the siting guidelines and ranks all sites using three different decision-making methodologies—was "unsatisfactory, inadequate, and not state-of-the-art." For example, NAS stated that two of the three methodologies were not satisfactory because the rankings were subjectively determined. In response to that criticism and similar comments from states and other parties, OCRWM officials revised the ranking methodology by selecting the decision-making methodology that NAS said was a more valid means of comparing sites.

On August 29, 1985, at the request of the governor of Washington and in response to other comments calling for an independent review of the methodology to be used in assessments, the Director, OCRWM, formally requested the NAS Board on Radioactive Waste Management to independently review the revised methodology to "assure an effective and credible document." The NAS Board agreed, and copies of the revised methodology were sent to the Board in September.

According to OCRWM officials, the Board agreed that the suggested methodology was appropriate for the task but cautioned that its application was critical. The Director, OCRWM, requested that the Board review the actual application of the methodology. In early December 1985, OCRWM submitted preliminary materials to the Board for its review.

OCRWM and NAS officials met on December 19, 20, and 21, 1985, to discuss the preliminary materials. OCRWM officials told us that they explained to NAS the siting objectives and how achievement against

these objectives would be measured. They discussed the evaluation process; in particular, who would participate in the application of the methodology. In addition, they explained how OCRWM would compare the technical data contained in each assessment and make policy decisions, which could affect the ranking of the individual sites. According to OCRWM officials, NAS made suggestions for content, clarity, and organization in OCRWM's methodology, documentation, and presentation. NAS also wants to review the documentation connected with the site-selection methodology and application at the next meeting with OCRWM in the second quarter of fiscal year 1986.

At the end of the quarter, OCRWM officials were making adjustments to the methodology on the basis of NAS comments. At the NAS meeting in the next quarter, OCRWM officials expect NAS to (1) review how OCRWM applied the methodology to at least one site and (2) make cross comparisons among sites on certain key issues. OCRWM officials said that NAS officials did not want to see the final rankings because they believed that was not necessary to evaluate the methodology and OCRWM's application of it. OCRWM officials stated that if NAS has no problems with the information presented, the final environmental assessments will be issued by late April 1986. OCRWM officials will not know whether the revised methodology will change the site rankings presented in the draft environmental assessments until after it has been applied to the data and then reviewed by NAS.

Although states and tribes support the NAS review, they criticized OCRWM's decision that they not be permitted to attend the meetings. OCRWM officials said they received many requests to attend the meetings and could not honor one without honoring all requests. OCRWM officials told states and tribes at the quarterly meeting in Atlanta, Georgia, in December that the meetings are intended to be working sessions; thus, the participation needed to be limited to essential working participants. OCRWM officials told us that because these are working sessions, state and tribal presence at the meetings could be distracting.

Status of DOE's Efforts to Develop a Monitored Retrievable Storage Facility

NWPA required DOE to complete a detailed study of the need for and feasibility of one or more MRS facilities on or before June 1, 1985. DOE was also required to submit, by that date, a proposal for the construction of one or more of these facilities to the Congress for its approval. NWPA specified that the proposal include a program plan for (1) siting, developing, constructing, and operating an MRS facility, (2) funding the construction and operation of such facilities, and (3) integrating such

facilities into the federal waste management system. The act also required that DOE submit with the proposal an environmental assessment that includes a discussion of the probable impacts of constructing and operating the facility and an examination of alternative sites and designs.

In April 1985 OCRWM completed the study, which determined that an MRS facility should be part of an integrated waste management system and would enhance the system's operation by repackaging and consolidating spent fuel shipped to it from nuclear power plants. At that time, OCRWM identified three sites in Tennessee for an MRS facility and selected the Clinch River Breeder Reactor site as the preferred site.

DOE did not submit its proposal by June 1, 1985; however, on that date DOE issued a status report to the Congress on the MRS program, stating that DOE would submit the MRS proposal to the Congress by January 15, 1986. DOE estimates that, after congressional approval, it will take approximately 10 years to have an operational MRS facility.

Although DOE has made progress during the quarter in preparing documents to support its MRS proposal to the Congress, OCRWM now estimates that the proposal will not be submitted to the Congress until February 1986. Specifically, a preliminary copy of the environmental assessment was released to the Nuclear Regulatory Commission (NRC), the Environmental Protection Agency, and the state of Tennessee in early November. However, the Director, OCRWM, determined that preliminary versions of the MRS proposal and program plan required revisions before they could be released for review. The revised drafts of the proposal, program plan, and environmental assessment were officially released for formal comment on December 23, 1985. These comments will be included in the final proposal to the Congress. OCRWM said that delays caused by revisions to the draft documents have caused DOE to miss its commitment to submit the proposal to the Congress by January 15, 1986.

The draft proposal includes a program plan for funding the facility and integrating the facility into the overall waste management system. It estimates the cost of the program from congressional approval to start-up to be $970 million with annual operating expenses of $70 million (in constant 1985 dollars). The environmental assessment examines the three alternative sites and six site and design combinations. It concludes that there are no significant adverse environmental impacts expected from the MRS.

In response to concerns raised by the state of Tennessee and others that the MRS would diminish DOE's resolve to develop a geologic repository, DOE proposes in the draft that the Congress link the start-up of the MRS to the repository schedule. Specifically, DOE proposes that

- no waste be accepted at the MRS until NRC issues a construction license for the first repository and
- the Congress limit the MRS storage capacity to 15,000 metric tons.

While DOE has been completing its proposal for MRS, two local Tennessee groups completed their analysis of DOE's plans, and the state of Tennessee announced its preliminary findings on MRS to the public.

- In October 1985 the Clinch River MRS Task Force, representing Roane County and the city of Oak Ridge, Tennessee, reported that an MRS facility could be safely built and operated at either of two sites in the Oak Ridge area provided that certain impacts are mitigated. For example, the Task Force recommended that a citizen board be established to monitor construction, operation, and decommissioning of the MRS facility.
- In November 1985 a group representing the five counties surrounding Hartsville, Tennessee, reported their opposition to siting an MRS facility at the Tennessee Valley Authority (TVA) Hartsville site. This group considered public opinion, transportation routes and facilities, land values, and potential loss of payment in lieu of taxes from TVA in determining that the negative impacts of construction would outweigh any positive impacts from the facility.
- In early December 1985, at a series of public meetings, the state of Tennessee reported its preliminary findings on the basis of its review of DOE's MRS environmental assessment. The state's review is being conducted by several different state agencies as well as Vanderbilt University and the University of Tennessee. Each of these groups has reached its own conclusions on aspects of DOE's proposal. For example, the Tennessee Department of Conservation criticized DOE for (1) not sufficiently demonstrating a need for the MRS facility, (2) using a flawed site-selection process, and (3) choosing the Clinch River site as preferred, although geologic data indicates that it may be subject to sink holes and flooding. On the other hand, the Tennessee Department of Health and Environment has determined that MRS could operate in a safe and beneficial manner and that any radioactive emissions would be within permitted limits. After considering all studies, a final decision on the acceptability of MRS to the state will be made by Tennessee's governor.

Status of the Second Repository Program

In September 1985 OCRWM issued the final Regional Characterization Reports for the second repository program. These reports describe the environmental and geologic data to be used in identifying candidate areas for the nation's second high-level nuclear waste repository. The reports identify 236 candidate bodies of crystalline rock formations in 17 states. This information provides the data base which, in conjunction with DOE's Screening Methodology Document issued in April 1985, was used to develop a draft Area Recommendation Report.

The draft Area Recommendation Report, originally scheduled for issuance in November 1985, was issued in January 1986 for public comment. The draft report narrows the candidate rock formations to 12 sites in 7 states as potentially acceptable sites for a second high-level waste repository. These sites contain bodies of crystalline rock, which DOE has decided is the preferred geologic medium for the second repository. The seven states selected are Georgia, Maine (two sites), Minnesota (three sites), New Hampshire, North Carolina (two sites), Virginia (two sites), and Wisconsin. DOE officials stated that they intend to brief states and tribes on the report and allow 90 days for comment. Some states and tribes have expressed concern that the 90-day comment period is not sufficient.

During the quarter representatives from OCRWM and the second repository states and Indian tribes met in Denver, Colorado, to discuss the draft Area Characterization Plan, which describes activities DOE will undertake during area field investigations. These investigations will allow DOE to evaluate sites identified in the Area Recommendation Report for nomination and recommendation for site characterization. According to DOE officials, technical issues such as geology, environment, transportation, and socioeconomics were discussed at this meeting. They said that the information collected from the states and tribes will be considered in preparing the Area Characterization Plan.

As of the end of the quarter, OCRWM officials stated that the delay in issuing the Area Recommendation Report will delay issuing other program documents for the second repository program. For example, the draft Area Characterization Plan will be postponed from March to late summer 1986, the final Area Characterization Plan from summer 1986 to early 1987, and the final Area Recommendation Report from May to July 1986. The officials said that all other dates, from nominating five sites in 1991 to accepting high-level waste beginning in 2006, should not be affected.

Status of Other Program Documents

At the end of the quarter, the Office of Management and Budget (OMB) was considering an agreement to establish DOE's obligation for defense waste fees. OCRWM delayed issuance of a Project Decision Schedule but did complete the Transportation Business Plan.

DOE's Agreement for Defense Waste Costs

On April 30, 1985, the President advised the Secretary of Energy that, under NWPA, DOE should deposit defense high-level nuclear waste and commercial waste in a single repository because of the cost savings. During the quarter officials in DOE's Office of Defense Programs and OCRWM negotiated a fee recommendation agreement on defense wastes that would establish the Defense Office's obligation for funding its share of the nuclear waste disposal program's total costs. According to these officials, the agreement establishes a fee comparable to the quarterly fee paid by the commercial sector. The agreement also establishes procedures for determining DOE's one-time fee for defense wastes generated prior to fiscal year 1987. DOE intends its financial obligation to be comparable to the obligation of commercial generators of high-level waste. The agreement does not determine how much defense waste is to be deposited in the repositories, but only the methodology for the fees. The amount of waste to be deposited is under separate review within DOE.

OCRWM officials expected the agreement to be available for public review during this quarter. However, because DOE submitted the agreement to OMB for its review, DOE now plans to publish a draft agreement for comment in the Federal Register in March 1986. DOE will accept comments from the public, including the fee-paying utilities, for 60 days. DOE intends to issue the final agreement in June 1986. OCRWM officials said that the utilities' comments will be incorporated into the final cost allocation agreement where appropriate.

OCRWM Delays Issuance of a Project Decision Schedule

NWPA requires the Secretary of Energy to prepare, in cooperation with affected federal agencies, a Project Decision Schedule that portrays the optimum way to attain the operation of a repository. The schedule is to include a description of objectives and a sequence of deadlines for all federal agencies involved and is to identify activities that, if delayed, would delay the beginning of repository operation. DOE expects to begin accepting title to the spent fuel and high-level waste in 1998.

In July 1985 OCRWM issued its second draft Project Decision Schedule, which was based on its final Mission Plan, also issued in July. (OCRWM issued its first draft Project Decision Schedule in January 1985, which

was based on its draft Mission Plan.) The draft schedule included deadlines for the first repository, second respository, MRS, and transportation programs. As further activity is authorized by the Congress in these areas, DOE plans to modify the schedule.

In the quarter ending September 30, 1985, OCRWM officials said that the final schedule would be issued by November 1985. During the quarter ending December 31, 1985, issuance had been postponed until February 1986. OCRWM officials said the main reason the final schedule is being delayed is that many near-term document issue dates—such as the final environmental assessments and Area Characterization Plan, draft and final—are uncertain, and DOE believes that the schedule should be as accurate as possible when issued.

Transportation Business Plan Completed

NWPA authorized DOE to establish a national system for the disposal of high-level nuclear waste. A primary element of the waste management system will be the development of a waste transportation system, which will be subject to Department of Transportation regulations. NWPA directs DOE to contract with private industry to the fullest extent possible in each aspect of the transportation system.

In December 1985 DOE completed its final Transportation Business Plan, which describes DOE's expected contracting strategies and actions to acquire contractors and equipment to develop and operate the required transportation system. DOE had signed a memorandum of understanding in September 1985 with the Department of Transportation to delineate the two agencies' responsibilities and establish common planning assumptions.

The acquisition strategy in the plan is divided into two phases. Phase I covers the development and acquisition of prototype casks that will be used to ship radioactive waste to or between federal waste facilities. Phase I is estimated to cost about $75 million. Phase II will be implemented when DOE begins accepting waste at the first repository or the MRS facility. At that time, DOE will implement transportation operations. The cost to provide a fleet of casks for the first 5 years of phase II system operation is estimated to exceed $100 million.

In September 1985 DOE issued a draft Transportation Institutional Plan, which, among other objectives, provides mechanisms for interaction with affected parties in program planning and implementation. To further include affected parties in the planning and implementation of the

transportation program, DOE held a workshop in November 1985 in Atlanta, Georgia, involving representatives from first and second repository states, Indian tribes, state and local governments, public utilities, and private industry. The purpose of the workshop was to permit the participants to comment and prepare reports on the various issues related to the transportation system. The reports and comments DOE is receiving on the draft plan will be incorporated into the final plan. DOE intends to hold more workshops that deal with specific transportation issues.

As the program evolves, DOE plans to combine these documents into a single, coordinated plan for all activities related to developing and operating the transportation system. In addition, OCRWM intends to issue a transportation issues discussion document during 1986 that will describe the issues and discuss DOE's plans and options for addressing them. DOE is preparing issue discussion papers, which will be the basis for this document.

Status of Litigation Regarding OCRWM Activities

As discussed in our prior reports, 12 lawsuits directed at OCRWM repository activities had been filed. In addition, two other lawsuits had been filed early in the program challenging the amount of fees to be paid into the Nuclear Waste Fund. (One of these cases has been resolved in DOE's favor.)

During the quarter, the Supreme Court declined to review a lower court's decision on the Texas litigation. No action took place on the siting cases that had been consolidated and transferred to the Ninth Circuit Court. In addition, the state of Tennessee filed a lawsuit in the U.S. Court of Appeals for the Sixth Circuit that raised the same issues as a suit the state had previously filed in the U.S. District Court in Nashville, Tennessee. Decisions were handed down in the Nevada and Wisconsin Electric Power Company cases, both against DOE. DOE is reviewing the impacts of these suits on the program, including the status of the Nuclear Waste Fund and its legal options in each case.

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, in the hope that the court would invalidate the site-screening process. In February 1985 DOE filed a motion to dismiss the case, and on June 19, 1985, the

court granted that motion. The court concluded that DOE's preliminary siting decisions, challenged by Texas and the private petitioners, are not "final actions" and, therefore, not "ripe" for review. When considered in the context of the statutory scheme of NWPA, the court concluded that the screening decisions were but a preliminary step to actions that will later be reviewable by the court. According to a DOE official, the Supreme Court declined in December 1985 to take action on the state of Texas' petition that asked it to review the Circuit Court's decision.

Environmental Policy Institute, et al. v. Herrington, and Other Siting Cases

In December 1984 and March 1985, a number of environmental groups and the state of Washington, respectively, petitioned the U.S. Court of Appeals for the Ninth Circuit to review the siting guidelines issued by DOE in December 1984 to determine whether they are in accordance with NWPA. In May 1985 DOE filed a motion to dismiss both cases—Environmental Policy Institute, et al. v. Herrington and Washington v. DOE—arguing that the claims of the petitioners are premature because the issuance of the guidelines is a preliminary step to the issuance of environmental assessments. During the quarter ending September 30, 1985, the seven siting cases filed during the quarter ending June 30, 1985, were transferred to the Ninth Circuit where the Environmental Policy Institute and Washington cases had been filed.

On August 16, 1985, the court ordered that action on the seven new guidelines cases be deferred until the motion to dismiss the Environmental Policy Institute and Washington cases is resolved. However, according to a DOE official, the motion to dismiss the two cases was still pending as of the end of the the quarter.

Tennessee v. Herrington

On August 20, 1985, the state of Tennessee filed suit in the U.S. District Court located in Nashville, Tennessee, alleging that any DOE proposal to request authority from the Congress to construct an MRS facility in Tennesseee would violate NWPA. Tennessee contends that, contrary to NWPA, DOE had not consulted with the state before conducting a study of the suitability of three Tennessee locations for an MRS facility. In addition, Tennessee requested that the Secretary of Energy be enjoined from presenting any proposal to the Congress for MRS in Tennessee until the requirements of the act have been fulfilled.

During the past quarter DOE moved to dismiss this case, contending that the District Court lacked jurisdiction. The District Court determined,

however, that it does have jurisdiction. DOE has appealed the District Court's decision on the jurisdiction question.

During the quarter the state of Tennessee filed a lawsuit on the same issues in the U.S. Court of Appeals for the Sixth Circuit. According to a DOE General Counsel official, this filing has been characterized by Tennessee as a protective filing to avoid the possibility of missing NWPA's deadline for commencing action. NWPA requires that a civil action for judicial review be brought not later than the 180th day after the date of a program decision. The state filed a motion that no action take place until the District Court case has been resolved. DOE filed another motion asking for an expedited review in the Sixth Circuit Court. As of the end of the quarter, DOE was awaiting action by both courts.

Nevada v. Herrington

In December 1984 Nevada filed suit against DOE over the disapproval of part of its fiscal year 1985 grant request. (See ch. 3 for a description of OCRWM's grant program.) DOE had disapproved $1.5 million of Nevada's 1985 grant request because it felt that the funds were to be used for independent data-gathering activities that were not appropriate at this stage of the site-selection process.

On December 2, 1985, the U.S. Court of Appeals for the Ninth Circuit found that, subject to certain limitations laid out by the court, NWPA supports funding of pre-site characterization activities. The court decision emphasized that the independent oversight and peer review, which only the states are poised to provide through such activities, would immeasurably promote public confidence. The court also found that certain provisions of DOE's grant guidelines for the site characterization phase are unlawful because they minimize the independent collection of primary data, thereby restricting state tests of primary data that DOE has collected, and thus, "undermine the independent oversight role that the Congress envisioned for the states."

As of the end of the quarter, the court's decision, its impact, and potential legal challenges were under review within DOE. According to an Office of General Counsel official, DOE has not given the state of Nevada any of the grant funds in question, nor has it revised its grant guidelines. In addition, DOE has not decided whether to appeal the court's decision.

Wisconsin Electric Power Co. v. Herrington

Following passage of NWPA, Wisconsin Electric Power Company challenged the utility contract provision under which DOE calculates the total amount of quarterly fees owed to the Nuclear Waste Fund. On December 6, 1985, the U.S. Court of Appeals for the District of Columbia ruled in the utility's favor. The decision states that only net, rather than gross electricity generated is subject to the fee—i.e., that the fee should not be applied to the electricity that the generating plant consumes. As of the end of the quarter, DOE was assessing the impact of the decision and reviewing its legal options. OCRWM officials estimate that the annual fees involved are about $15 million. Therefore, as of December 31, 1985, these officials said that the fees in question are about $35 to $40 million.

Status of Selected OCRWM Management Activities

NWPA established OCRWM to carry out DOE's responsibilities under the act. In October 1983 the Secretary of Energy formally approved and activated OCRWM, and in May 1984 a director was appointed by the President and confirmed by the Senate. Our previous quarterly reports discussed several initiatives that OCRWM has taken to improve its management of activities directed towards accomplishing the objectives of the act. These initiatives included (1) making organizational and staffing changes, (2) developing 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 process of coordination with affected states and Indian tribes.

During the quarter ending December 31, 1985, OCRWM continued to increase its staffing levels, issued its Program Management System manual and a report defining quality assurance management policies and requirements, and monitored the independent audit of fiscal year 1985 financial activities. Other audits by various DOE agencies were being considered or in progress, and one audit report was updated. OCRWM also continued to take steps to improve its relations with states and tribes; however, most state and tribal leaders remain critical of the program.

OCRWM Staffing Changes

OCRWM increased the number of persons in the program by a total of seven during the quarter. At the end of December, no vacancies remained in headquarters and eight remained in the field. Personnel ceilings for OCRWM remained the same during the quarter, but the number of full-time personnel increased from 242 to 249. See appendix II for a table showing OCRWM staffing levels.

Headquarters and project office officials said that the program still has trouble attracting qualified field technicians to fill vacancies. They said that the largest single problem in the program is staffing, mainly because the government offers lower wages than the private sector.

OCRWM Completes a Program Manual and a Quality Assurance Report

During the quarter OCRWM finalized its Program Management System manual, which defines policies and procedures that the office believes will promote a more cohesive, cost-effective program. OCRWM also completed a report defining the management policies and requirements needed for program quality assurance.

Program Management System Manual

OCRWM's Office of Resource Management furthered its development of an internal program management system to enable OCRWM managers to better plan, monitor, and analyze waste management program elements. The system, which is to include (1) all planning documents required by NWPA, (2) an annual operating plan, and (3) a system engineering management plan, had been finalized but has not yet been printed. However, OCRWM issued its final Program Management System manual during the quarter.

After issuing two drafts of the Program Management System manual for review in May and August 1985, OCRWM issued the final manual in December 1985. The manual describes the program management system, which is to provide centralized managerial direction from OCRWM headquarters by providing the OCRWM Director and headquarters staff with policies and procedures that can be used to integrate the various program elements into a cohesive, cost-effective program. It incorporates existing DOE orders, which have been and will continue to be used by project offices to manage contractor activities. The manual discusses program planning, program controls, financial and administrative management, quality assurance, safety, and institutional policy. It will be supported by detailed descriptions in management documents that individually address each procedure, plan, or system.

The manual also describes the OCRWM information system and directs the development of schedule, cost, and technical baselines for the program and establishes procedures for control of these baselines. A Resources Management official told us in September 1985 that OCRWM's management information system would not be fully automated for at least a year. At the end of December 1985, OCRWM had modified its plans for further automation and was reevaluating its original concept. OCRWM officials now say that because potential benefits did not warrant the costs, they no longer plan to automate that particular system, which would have provided daily contractor and project office data. Project offices are currently submitting actual cost and schedule data to headquarters by mail, not through computer terminals as planned. This data is being used to issue monthly reports on program cost and schedule performance to test the management information system. The reports provide information on cost and schedule variances for each major project, program milestones, actual and projected status of the fund, and financial status by first and second repository, MRS, and transportation projects.

Quality Assurance Management Policies Report

In October 1985 OCRWM issued a report defining its management policies and requirements for quality assurance. The report defines management responsibilities for assuring quality and provides a general framework for the development of more detailed quality assurance management policies and requirements by headquarters, project, and contractor organizations. It also sets forth requirements for technical reviews, effectiveness assessments, and internal and external audits for quality assurance.

According to the report, OCRWM's Office of Policy and Outreach has the lead responsibility for quality assurance management policy overview and coordination, while the Associate Directors for the Office of Geologic Repositories and the Office of Storage and Transportation Systems are responsible for establishing, implementing, and managing program-specific requirements, plans, and procedures. Office of Policy and Outreach officials told us that, by the end of the quarter, each headquarters office and each project office and contractor had appointed a full-time quality assurance manager to oversee implementation of requirements, plans, and procedures to determine their effectiveness. At the end of the quarter, 61 persons were assigned to the quality assurance program, according to OCRWM officials. Table 3.1 shows where these 61 persons were assigned and whether they are contractor or DOE personnel.

Table 3.1: Quality Assurance Program Personnel

Office	DOE personnel	Contractor personnel	Total
Office of Policy and Outreach	1.0	0	1.0
Office of Geologic Repositories	1.0	0	1.0
Office of Storage and Transportation Systems	1.5	0	1.5
Richland Project Office	5.0	11	16.0
Nevada Project Office	2.5	15	17.5
Columbus Project Office	2.0	22	24.0
Total	**13.0**	**48**	**61.0**

Several Audits or Reviews Are Underway

During the quarter several audits or reviews of OCRWM activities continued. Of particular note, (1) a certified public accounting firm is examining the Nuclear Waste Fund's financial statements for fiscal year 1985, (2) EIA updated its June 1985 verification report of one-time fees paid into the fund by utilities, and (3) DOE's Office of the Inspector General (OIG) contracted with a certified public accounting firm to evaluate selected program activities and began an audit of the waste program.

OCRWM is also negotiating an agreement with the Federal Energy Regulatory Commission (FERC) to have it verify the basis for fees paid by utilities.

Certified Public Accountant Examining Fund's Fiscal Year 1985 Financial Statements

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. Main Hurdman submitted the results of its examination of the fund's financial statements, internal controls, and overall fund status in March 1985, and submitted its recommendations in June 1985.[1]

In August 1985 OCRWM modified the contract and exercised the first option of the contract to have Main Hurdman examine the financial statements of the fund for the fiscal year ending September 30, 1985. The option's estimated cost-plus-fixed fee is $270,791. Under the contract, Main Hurdman is to determine whether the fund's financial statements present fairly the financial position and results of operations in accordance with generally accepted accounting principles and whether the fund has complied with laws and regulations that may have a material effect on the financial statements.

Main Hurdman was to notify the Director, OCRWM, by December 1, 1985, of any proposed adjustments to the fiscal year 1985 financial statements, and deliver the statements by December 15, 1985. Management and compliance reports, including recommendations and fund status, were to be submitted by January 15, 1986. On December 17, 1985, Main Hurdman told OCRWM that an extension on due dates to early second quarter 1986 was needed to complete its audit and reports. OCRWM officials told the contractor that the results of the audit must be available for DOE's annual report in February.

One-Time Fees Are Being Verified

In June 1985 EIA issued the results of a contractor-performed verification of the one-time fees calculated by each utility. (For an explanation of the one-time fees, see ch. 1.) The verification process covered 4 nuclear fuel storage facilities, 1 research reactor, and 78 commercial power reactors operated by 41 utility companies. It analyzed the consistency of the data reported by utilities to different agencies of the U.S.

[1]For a detailed discussion of Main Hurdman's June 1985 audit report, see GAO/RCED-85-156, July 31, 1985.

government on electricity generated. Utilities have reported this information in different formats to DOE's predecessor agencies and to NRC. Each utility's proposed one-time fee was considered verified if (1) the data independently provided to the different agencies was consistent, within certain limits, and (2) the mathematical computation was accurate.

EIA's analyses resulted in a reactor or other facility receiving either an unqualified verification, a qualified verification, or no verification. An unqualified verification meant that the proposed fee would not be altered. A qualified verification meant that the proposed fee would change because of discrepancies noted. No verification meant that information required to perform the verification was either not provided or was inadequate, or the discrepancies were not reconcilable. Fee changes for no verification could not be determined.

EIA will continue to verify information as it becomes available to resolve the inconsistencies. In November 1985 EIA published an update to its June report. The results are shown in table 3.2.

Table 3.2: EIA Verification Results

Dollars in millions

Verification status	Number of reactors/ facilities	Fee amount
Unqualified	73	$1,950.6
Qualified	9	366.2[a]
None	1	13.4
Total	**83**	**$2,330.2**

[a]These fees could increase by a much as $564,000 or decrease by as much as $139,000.

DOE's Inspector General Audits of the Nuclear Waste Program

In August 1985 DOE's OIG awarded an $864,000 cost-plus-fixed-fee contract to Leonard G. Birnbaum and Company, an independent public accounting firm, to audit various DOE programs including the nuclear waste program. The contract, to run for 1 year with two 1-year options, calls for the OIG to assign specific task orders to the firm. As of December 31, 1985, the contractor had begun work on the following two task orders.

- The contractor is evaluating the effectiveness of procedures followed by OCRWM and any offices delegated responsibility by OCRWM, such as EIA, to verify fees paid by utilities into the Nuclear Waste Fund. The evaluation

includes a review of all contracts for the disposal of spent nuclear fuel and high-level waste entered into by utilities, and a selected review of both the quarterly and one-time fee payments. The review also includes visits to selected nuclear reactor sites to identify causes for problems found in the verification process. The auditors expect to deliver a draft report on their findings to the OIG by January 20, 1986.

- The contractor completed a general survey in December 1985 of OCRWM's compliance with the milestones and objectives of the NWPA. The survey emphasized managerial controls designed to ensure that OCRWM operations are performed efficiently and economically. On the basis of the audit, the OIG selected three areas in which the contractor is to conduct detailed reviews. These areas are (1) grants management, (2) contracts management, and (3) site characterization plans for fiscal year 1986.

In addition, the OIG has scheduled its own audit on the transportation aspects of the waste disposal program. During this quarter the OIG completed a general survey of OCRWM operational programs and identified the transportation program as an area where further audit work is needed. The OIG intends to begin an audit in this area in early 1986.

OCRWM to Verify Fees Paid by Utilities

During the quarter OCRWM continued negotiations that began last quarter for an agreement that would have FERC assist OCRWM in verifying quarterly fees paid by utilities into the Nuclear Waste Fund. The agreement will call for FERC, during its regularly scheduled 3-year audits of nuclear utility companies, to verify the amount of electricity generated by the utilities. During the audits, FERC will determine whether utilities are consistently and accurately reporting data to OCRWM. OCRWM will reimburse FERC for the costs associated with performing this work. OCRWM and FERC had not agreed on the costs as of December 31, 1985.

DOE Relations With States and 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 their 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.

As discussed in previous quarterly reports, DOE's program for consulting and cooperating has changed from the level of interaction that existed in the first year after the passage of the act. In particular, OCRWM's Mission

Plan, issued in July 1985, included an institutional relations strategy comprising three elements: (1) outreach and participation to provide program information to interested parties and to involve these parties in the program, (2) formal consultation and cooperation agreements to establish a foundation for interaction with states and tribes, and (3) impact analysis and mitigation to assure that affected parties are involved in assessing program impacts. These elements are discussed in the following sections.

Outreach and Participation

During the quarter OCRWM continued its efforts to inform states and tribes of program issues and progress. For example, OCRWM sponsored

- several workshops concerning the draft environmental assessments, transportation issues, and the second repository program (see ch. 2);
- an information-sharing meeting to discuss the general status of the program; and
- a quarterly meeting of state and tribal leaders to discuss specific first repository issues identified by these leaders.

As of December 31, 1985, OCRWM's Office of Policy and Outreach, through contracts and in-house resources, had published about 19 new information pamphlets encompassing a wide range of program issues. In addition, during the quarter the Office of Policy and Outreach finalized a Near-Term Public Information Products Program Plan, which recommends that 27 OCRWM-sponsored publications be developed during the next 18 months. It also recommends that some existing publications be withdrawn or revised and other publications in process be completed and maintained.

During the quarter ending September 30, 1985, OCRWM issued new guidelines for interaction with community and local governments. According to OCRWM officials, these guidelines provide principles for DOE project offices' interaction with local populations. During the quarter ending December 31, 1985, state and tribal officials criticized these guidelines for being too broad and lacking implementation provisions. OCRWM officials told us that headquarters is clarifying certain aspects of guideline implementation, and each project office will eventually supplement the guidelines with its own specific implementation guidelines.

At the December 1985 quarterly meeting we attended, states and tribes reiterated criticisms about their lack of opportunity for substantive participation in OCRWM's planning and decision-making processes. State and

tribal officials said they need the opportunity for early input into decisions. As a start, they want full access to all meetings of OCRWM's coordinating groups, which were formed to agree on an approach to various issues, including site characterization, quality assurance, and institutional/socioeconomic concerns. OCRWM officials agreed that states and tribes could have access to meetings of the institutional/socioeconomic and environmental coordinating groups, but stated that their attendance at meetings of the more technical coordinating groups was not necessary. The officials agreed, however, to provide minutes of the technical meetings. As noted in chapter 2, states and tribes were also unhappy about being excluded from the meetings taking place with NAS officials concerning the methodology used to rank potential sites in the final environmental assessments. DOE said that these meetings were intended to be workshops, and that the presence of the states, tribes, and others might detract from the substance of the meeting. States and tribes, however, remain convinced that they should have more participation in all aspects of the program, including these meetings.

At the same December meeting, states and tribes also raised concerns about not receiving enough advance notice of OCRWM-sponsored meetings for their knowledgeable personnel to attend. OCRWM officials stated that the notification system would be improved; and one Office of Geologic Repositories official several weeks later told us that he had instructed his staff to give preferential treatment to states and tribes in providing documents and meeting-related information so that interested parties would know about upcoming meetings as soon as they are scheduled.

Consultation and Cooperation Agreements

The act requires DOE to formally negotiate consultation and cooperation agreements with states that have sites selected for site characterization studies. States and Indian tribes can request such agreements sooner, if they so desire. During the quarter, no states or tribes initiated formal negotiations with OCRWM for consultation and cooperation agreements. Furthermore, negotiations with the only state (Washington) to initiate formal discussions with OCRWM about a consultation and cooperation agreement remained suspended. (See our report, Status of the Department of Energy's Implementation of the Nuclear Waste Policy Act of 1982 as of March 31, 1985 (GAO/RCED-85-116, Apr. 30, 1985), for a discussion of issues hindering final agreement.)

On June 10, 1985, the Confederated Tribes of the Umatilla Indian Reservation requested DOE to begin negotiating a consultation and cooperation agreement to identify and provide a means for resolving the tribes'

public health, safety, environmental, and economic concerns associated with the proposed location of a repository in Hanford, Washington. During the quarter ending September 30, 1985, OCRWM and Richland project office officials and tribal representatives held three negotiation sessions. During the quarter ending December 31, 1985, no further negotiations were held. According to OCRWM officials, tribal representatives requested that negotiations be deferred. OCRWM officials said they hope negotiations will resume in early 1986.

Impact Analysis and Mitigation

NWPA requires DOE to provide grant assistance from the Nuclear Waste Fund to affected states and tribes to aid them in such activities as (1) reviewing activities with respect to proposed repository sites 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 $30 million have been awarded to the 29 grantees listed in appendix III. Most of the grants covered 1 year and went to individual state governments or Indian tribes; others, however, have been awarded to national associations representing states or Indian tribes. Grant assistance provided by DOE from January 1983 through December 1985 is shown in appendix III.

DOE decided during the quarter to award grants of up to $30,000 each to about 28 tribes potentially affected by a second repository. The grants are to be awarded to cover a 3-month period for review of the draft Area Recommendation Report and related documents, and for travel. The grants will be available during the second quarter of fiscal year 1986. One national Indian organization stated (in a December 1985 letter to the Chairman of the Senate Subcommittee on Energy Research and Development, Committee on Energy and Natural Resources) that the tribes are pleased that DOE finally acknowledged the need to include them in the second repository program. However, the tribes said a disparity in treatment exists between tribes and states that have had more funding and have been involved in the program longer. They said that neither $30,000 nor 90 days is sufficient to conduct the necessary reviews.

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

NWPA established the Nuclear Waste Fund, a separate fund maintained by the Department of the Treasury, to finance the nuclear waste program. It receives fees paid by the owners and generators of high-level radioactive waste and disburses funds to finance OCRWM activities. The fund began receiving quarterly fees from the ongoing generators of nuclear power late in fiscal year 1983. During the quarter ending December 31, 1985, the fund received quarterly fees totaling about $109.3 million. The fund also received one-time fees from the owners of spent fuel generated prior to April 7, 1983, of about $1.5 million. During this same quarter, the fund disbursed about $85.0 million, most of which went to contractors that conduct the bulk of program activities for OCRWM.

In addition to fees collected from utilities, two other funding sources support OCRWM activities: interest income from investments made with waste fund money that is in excess of current program needs, and appropriated funds for generic research not directly related to repository development. OCRWM began investing excess funds in February 1985. During the quarter ending December 31, 1985, the fund received about $57.7 million in interest from these investments. OCRWM spent about $5.0 million during the quarter in appropriated funds for research and development programs authorized under the act but not directly related to repository development or eligible for financing through the Nuclear Waste Fund.

Nuclear Waste Fund Receipts and Costs

Quarterly Receipts

As described in chapter 1, DOE has contracted with 65 owners of nuclear power plants for a 1-mill-per-kilowatt-hour fee to be paid quarterly into the fund to finance the waste program. The fund began receiving quarterly fees late in fiscal year 1983 and by the end of that fiscal year, had collected about $73.6 million. During fiscal year 1984 quarterly receipts totaled about $329.5 million and for fiscal year 1985, about $368.0 million. In the quarter ending December 31, 1985, about $109.3 million was collected, making a total of about $880.4 million since 1983.

One-Time Fees

Under the DOE contracts, owners of spent fuel generated prior to April 7, 1983, must have selected by June 30, 1985, one of three options to pay one-time fees: (1) full payment before June 30, 1985 without interest, (2) payment over 40 quarters with interest, or (3) lump-sum payment with interest before delivering spent fuel to the federal government.

By June 30, 1985, the fund had received about $1.4 billion in one-time fees from owners who chose option 1. During this quarter one of three owners who chose option 2 paid about $1.5 million. (These three owners owe a total of $174 million plus interest.) Eleven other owners decided to make future lump-sum payments totaling $735 million plus interest. None of these owners has made payments during this quarter.

DOE Is Investing Funds That Are in Excess of Current Needs

NWPA provides that when the amount of the Nuclear Waste Fund is in excess of current needs, DOE may request the Secretary of the Treasury to invest these excess funds in Treasury financial instruments in amounts as the Secretary of Energy determines appropriate. DOE made its first investment in overnight Treasury bills on February 1, 1985.

In the quarter ending December 31, 1985, DOE made both overnight and other short-term investments (less than 90 days). Daily overnight investments earned interest of about $661,000 during the quarter. DOE invested about $25 million in one short-term Treasury bill that matured during the quarter and earned interest of about $23,000. DOE also earned interest totaling $931,000 from a $51 million short-term Treasury bill that was purchased last quarter but matured during this quarter.

DOE will continue investing funds in overnight and other short-term Treasury instruments. However, as of July 2, 1985, DOE began to make long-term investments (90 days to 3 years) following the receipt of $1.4 billion in one-time fees. DOE invested in various long-term Treasury bills and notes so that they mature at different times to use for specific program purposes.[1] As of December 31, 1985, DOE has about $1.5 billion invested in various Treasury bills and notes. During the quarter DOE collected periodic earned interest on these long-term investments of about $55.5 million.

Nuclear Waste Fund Costs

OCRWM obligates money from the Nuclear Waste Fund by awarding contracts and grants and disbursing funds for its civil service payroll and

[1]See GAO/RCED-85-156, July 31, 1985, for a summary of DOE's long-term investment strategy.

other program management needs. It can obligate amounts only as appropriated even though more funds may be available in the Nuclear Waste Fund. OCRWM's appropriation for fiscal year 1986 totals $521 million. Actual costs are recorded when invoices are received, and disbursements are recorded when payments are made. Obligations, costs, and disbursements are recorded in 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 appendix IV. The appendix shows that a total of $66.1 million was spent during the quarter. The appendix also shows that about $48.9 million, or 74 percent, of the funds were spent for developing the first repository. 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 geologic repository performance assessment models, (2) preliminary site characterization studies, (3) repository design development, and (4) the preparation of environmental assessments.

OCRWM field offices began in fiscal year 1985 to report costs and obligations in 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 appendix V.

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, operating, and closing any repository, MRS facility, or test and evaluation facility authorized under the act; research, development, and demonstration activities connected with 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.

Most waste disposal activities have been and are being carried out by contractors. During the first quarter of fiscal year 1986, DOE spent about $60.9 million and obligated about $197.0 million for contractor services, about 94 percent of total dollars obligated during the quarter. For fiscal year 1985 OCRWM contract obligations were about $278 million. Since inception of the fund, OCRWM has obligated about $946 million for over 120 contracts.

[2]For more information on OCRWM's work breakdown structure, see GAO/RCED-85-65, Jan. 31, 1985.