

The NRC also completed the safety and environmental review of the Trojan Nuclear Plant License Termination Plan (LTP) leading to the first approval by the staff of an LTP submitted pursuant to NRC's requirements at 10 CFR 50.82.

NRC completed its evaluation of previously terminated licenses to determine if the facilities had been adequately decontaminated prior to license termination. Appropriate follow-up actions are being taken for those sites requiring further review.

Waste Safety Research

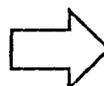
The Waste Safety Research program supports the NRC's activities associated with decommissioning of nuclear reactors and other facilities, and the interim storage and transportation of spent nuclear fuel. Research activities provide the technical basis to confirm the adequacy of regulations and guidance to maintain safety in areas such as decommissioning and interim spent fuel storage.

Strategic and Performance Goals and Measures

Strategic Goal: Prevent significant adverse impacts from radioactive waste to the current and future public health and safety and the environment and promote the common defense and security.

MEASURES

1. No deaths resulting from acute radiation exposure from radioactive waste.²⁸
2. No events resulting in significant radiation exposure²⁹ from radioactive waste.
3. No release of radioactive waste causing an adverse impact on the environment.³⁰
4. No losses, thefts, diversion, or radiological sabotages³¹ of special nuclear material or radioactive waste.



RESULTS

All measures were met each year in FY 1997 through 2001.

The first measure identifies death to an individual as a result of short term exposure to radiation. Events meeting this threshold are reported to the NRC and/or Agreement States primarily through required licensee notifications, though other sources may also report events. The second measure identifies significant radiation exposures that result in unintended permanent functional damage to an organ or a physiological system as determined by a physician. Events meeting this threshold are reported to the NRC and/or Agreement States primarily through required licensee notifications, though other sources may also report events. The third measure identifies re-

leases that have the potential to cause "adverse impact." Such releases are currently undefined; as a surrogate, NRC will use those that exceed the limits for reporting abnormal occurrences. Events meeting this threshold are also reported to NRC and/or Agreement States primarily through required licensee notifications, though other sources may also report events. The fourth measure identifies any losses, theft, diversion, or radiological sabotages of radioactive waste being stored at a nuclear facility or while in transit. Licensees report events which entail losses, thefts, diversions, or radiological sabotages of special nuclear material or radioactive waste within one hour of their occurrence to the NRC Headquarters Operations Center.



Performance Goals

In addition to our strategic goals, the NRC also has a set of four performance goals and associated performance measures for the nuclear waste safety arena. The performance goals are:

- Maintain safety, protection of the environment, and the common defense and security.
- Increase public confidence.
- Make NRC activities and decisions more effective, efficient, and realistic.
- Reduce unnecessary burden on stakeholders.

Performance Goal Results

Performance Goal: Maintain safety, protection of the environment, and the common defense and security

MEASURES

1. No events resulting in radiation overexposures³² from radioactive waste that exceed applicable regulatory limits³³
2. No breakdowns of physical protection resulting in a vulnerability to radiological sabotage, theft, diversion, or loss of special nuclear materials or radioactive waste.^{34 35}
3. No radiological releases³⁶ to the environment from operational activities that exceed the regulatory limits³⁷
4. No instances where radioactive waste and materials under the NRC's regulatory jurisdiction cannot be handled, transported, stored, or disposed of safely now or in the future^{38 39}

RESULTS

All measures were met each year in FY 1997 through 2001.

For the first measure, there were no radiation overexposures from radioactive waste that exceeded regulatory limits in FY 2001 or in any year since GPRA related data collection began in FY 1997. Radiation over-exposures are those events that exceed limits provided by NRC regulation 10 CFR 20.2203(a)(2). This measure focuses on events which could result in public or worker overexposures. The events captured by this measure were chosen to identify processes or procedures that could be indicators of potential weaknesses in the regulatory program which need to be addressed.

For the second measure, there were no breakdowns of physical protection resulting in a vulnerability to radiological sabotage, theft, diversion,

or loss of special nuclear materials or radioactive waste in FY 2001, or in any year since GPRA related data collection began in FY 1997. Events collected under this performance measure are those that may indicate a vulnerability to radiological sabotage, theft, diversion, or loss of special nuclear materials or radioactive waste, thereby compromising public health and safety.

For the third measure, there were no radiological releases to the environment from operational activities that exceeded the regulatory limits in FY 2001 or in any year since GPRA related data collection began in FY 1997.

For the fourth measure, there were no instances where the NRC did not provide an ad-



equate regulatory framework for radioactive waste and materials under the NRC's regulatory jurisdiction to be handled, transported, stored, or disposed of safely in FY 2001 or in any year since GPRA related data collection began in FY 1997. NRC monitors the needs for transportation of materials and waste within its regulatory authority. The NRC also monitors the needs for storage and disposal of nuclear wastes under its regulatory authority. For the majority of radioactive waste or materials, there are no expected in-

stances where they cannot be handled, transported, or disposed of safely now or in the future. However, there may be a potential that sites that were thought to be previously cleaned up and NRC's licenses terminated may require additional cleanup. To address this issue, NRC evaluated all terminated licenses and, in FY 2001, identified two facilities that could require additional cleanup. Appropriate follow-up actions are underway for these few facilities.

Performance Goal: Increase public confidence.

MEASURES

1. Complete milestones relating to collecting, analyzing, and trending information for measuring public confidence.
2. Complete all the public outreaches.⁴⁰
3. Complete the milestones specific to the agency allegation program effectiveness assessment plan.
4. Issue Director's Decisions for petitions filed to modify, suspend, or revoke a license under 10 CFR 2.206⁴¹ within an average of 120 days.⁴²

RESULTS

The first three performance measure goal targets were met in FY 2001. Performance measure 4 was not applicable in FY 2001 because no petitions were filed in the nuclear materials safety arena in FY 2001.

The first milestone to conduct semi-annual evaluations of public meeting feedback forms was met for FY 2001. These forms have been evaluated to determine their usefulness in assessing public confidence. NRC compiled and analyzed the results of all the feedback forms received from the public for the period March 31 to September 1, 2001. NRC has analyzed 182 public meeting feedback forms sent in by the Offices and Regions, representing 33 meetings. Trending information was included in the semi-annual evaluation. (See the Nuclear Reactor Safety arena for discussion of trend analysis)

NRC staff will be terminating the pilot program in February 2002 and will make a final recommendation to the Commission regarding further use of the forms.

The second measure to holding public outreach meetings is a method to provide the public with information on NRC activities. Four of the scheduled public outreach meetings were held.

The FY 2001 milestone for performance measure three was to start distributing a survey to stakeholders bringing safety and non-compliance regulatory allegation issues to NRC's attention. The purpose of the survey is to ascertain how NRC did in responding and addressing the allegers issues. The survey results are currently being analyzed.

The fourth measure assesses the timeliness by which Director's Decisions for petitions filed to modify, suspend, or revoke a license under 10 CFR 2.206 are issued. There were no petitions filed under 10 CFR 2.206 in the Nuclear Waste Safety arena in FY 2001.



Performance Goal: Make NRC activities and decisions more effective, efficient, and realistic.

MEASURES

1. Complete those specific waste milestones in the Risk-Informed Regulation Implementation Plan.
2. Complete at least two key process improvements per year in selected program and support areas that increase efficiency, effectiveness, and realism.
3. Complete all major prelicensing milestones needed to prepare for a licensing review of the potential Yucca Mountain repository, consistent with DOE's schedules and before DOE submits its license application.⁴³

RESULTS

All of the performance goal measure targets were met in FY 2001, except two milestones in measure number three over which the NRC did not have control.

The first measure focuses on progress in developing a coordinated approach to implementing risk-informed decisions throughout the agency's regulatory processes. The milestones towards developing a risk-informed regulation implementation plan (RIP-IP) were completed on schedule. These included sending the RIP-IP to the Commission and briefing them on the contents (October-November 2000) and developing final criteria and milestones for Commission approval (August 2001).

For the second measure, five process improvements were completed in FY 2001. The nuclear waste safety arena developed and implemented a more efficient and focused regional decommissioning inspection program; developed and implemented a phased review of decommissioning plans for restricted release sites; developed guidance for changing Licensing Termination Plans without requiring a license amendment; conducted annual self-assessment of the process for resolving the key technical issues for licensing a potential high-level repository at Yucca Moun-

tain Nevada site; and issued generic guidance for implementing revisions to 10 CFR 72.48, "Changes, Tests and Experiments," which were designed to improve the flexibility of the regulation.

For the third measure, three of the five milestones were completed in FY 2001. The issuance of the Yucca Mountain Review Plan document could not be completed in FY 2001. 10 CFR Part 63 Disposal of High-Level Radioactive Waste in a Proposed Geologic Repository at Yucca Mountain Nevada," formed the basis to complete the document, and the final rule was approved by the Commission on September 7, 2001, after resolution of complex issues concerning Yucca Mountain standards. NRC published the final 10 CFR Part 63, revised to conform to the final EPA standards, on November 2, 2001. The Site Characterization Sufficiency Comments were not completed in FY 2001 because in July 2001, DOE requested that NRC include an additional document in its review and that request extended the time needed by NRC to complete its review to November, 2001.



Performance Goal: Reduce unnecessary burden on stakeholders.

MEASURE

1. Complete specific milestones to reduce unnecessary regulatory burden

RESULTS

This performance measure target was met in FY 2001.

The milestone to reduce unnecessary regulatory burden for the Nuclear Waste Safety Arena was completed. NRC reviewed and made recommendations for improving the

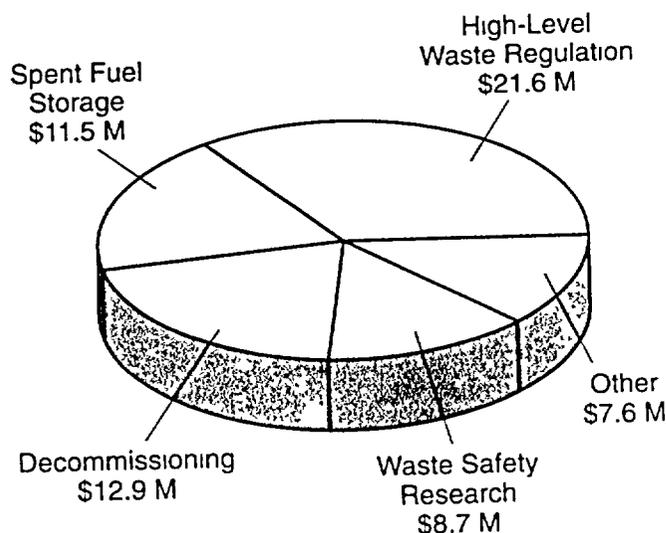
10 CFR Part 72 Cask Certification Process. Improvements included using the direct final rulemaking process and implementing a streamlined rulemaking process to expedite approvals which reduced regulatory burden to our stakeholders.

Funding for Achieving Our Strategic and Performance Goals

The nuclear waste safety arena budget totaled \$62.3 million in FY 2001. The funding was allocated on four key program areas (see graph below). Each program area provides a specific

Budget Authority by Program (Millions)

Total Funding was \$62.3 Million



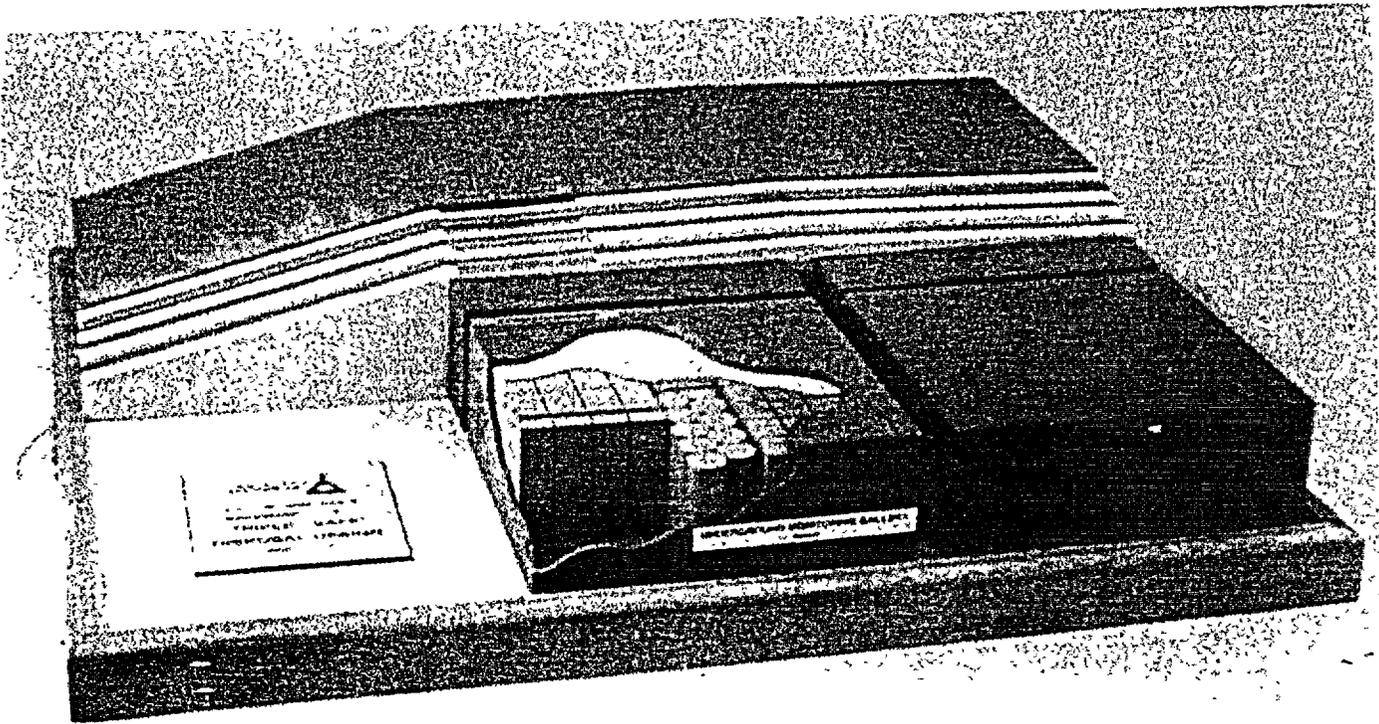
role to ensure safety and protection of the public and environment from radioactive waste. High level waste regulation accounted for approximately one third of the allocated funds. The regulation of decommissioning accounted for another 20 percent. Waste Safety Research, which accounted for approximately 13 percent of the allocated funds, supports the NRC's activities associated with decommissioning of nuclear reactors and other facilities, and the interim storage and transportation of spent nuclear fuel.

Program Evaluation

Regulation of Decommissioning, Regional Laboratory Evaluations

In July 2001, NRC staff conducted a review of the NRC Region I and Region III laboratories to: (1) evaluate implementation of Regional corrective actions resulting from the annual audit conducted by the U.S. Department of Energy's (DOE's) Radiological and Environmental Sciences Laboratory (RESL); (2) determine the types and number of samples analyzed since the last audit; and, (3) evaluate results from independent test sample analyses.

In general, Region I and Region III have satisfactorily implemented the corrective actions resulting from the annual RESL audits. To ensure that radiological measurements performed by the laboratories were of acceptable precision and accuracy and also reflected actual conditions and licensee performance, the laboratories participated in independent sample analysis programs. The Region I and Region III laboratories produced acceptable results for all test samples



Modern disposal facility designs employ multiple barriers to contain radioactive waste. Waste is placed in canisters, which are stacked in concrete vaults. A multilayer cover allows rainout, prevents infiltration, and provides radiation shielding.

analyzed. The results from this limited scope surveillance indicate that the Region I and Region III laboratories had adequate controls in place during FY 2001 to produce credible, technically defensible analytical results.

High-Level Waste Regulation, Self-Assessment of the Key Technical Issue Resolution Process

Starting in August 2000, the NRC and DOE began a series of Technical Exchange and Management Meetings, specifically focusing on Key Technical Issues (KTIs). The goal of the KTI issue resolution meetings was to discuss and review the DOE progress on resolving specific KTI sub-issues and then reach agreement with the DOE on what additional information need to be provided and the schedule for providing that information.

Overall, this series of meetings was very successful in focusing the NRC staff in defining what additional information it believes is needed from the DOE to support any future license application. The

meetings also allowed the public to comment and ask questions on the individual issues, as well as to provide general comments regarding the potential Yucca Mountain site.

The NRC staff decided that following the completion of a number of these meetings, it would perform a self-assessment of the overall KTI issue resolution process. The self assessment was broken into five main areas: (1) technical exchange lessons learned; (2) issue resolution terminology; (3) communications with the DOE; (4) risk-ranking the KTI agreements; and (5) tracking of the agreements. Each individual area addressed one or more of the four NRC Strategic Plan performance goals. As a result of this self-assessment, the staff identified a number of lessons learned and has provided recommendations to NRC management to ensure that future meetings and activities are effective and efficient, and that the issue resolution process will increase the public's confidence regarding how the NRC will evaluate and review any future license application

