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**BUDGET  
ESTIMATES  
AND  
PERFORMANCE  
PLAN  
FISCAL YEAR  
2002**

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April 2001  
U.S. Nuclear Regulatory Commission

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## NUCLEAR WASTE SAFETY

### *High-Level Waste Regulation*

|   | FY 2000<br>Enacted | FY 2001<br>Enacted | FY 2002 Estimate |                        |
|---|--------------------|--------------------|------------------|------------------------|
|   |                    |                    | Request          | Change from<br>FY 2001 |
| <b>Budget Authority by Function (\$K)</b> |                    |                    |                  |                        |
| Salaries and Benefits                     | 5,274              | 6,686              | 7,641            | 955                    |
| Contract Support and Travel               | 13,876             | 14,866             | 16,009           | 1,143                  |
| <b>Total Budget Authority</b>             | <b>19,150</b>      | <b>21,552</b>      | <b>23,650</b>    | <b>2,098</b>           |
| FTE                                       | 55                 | 60                 | 69               | 9                      |

The resource increase in FY 2002 for High-Level Waste Regulation includes:

- Salaries and benefits increase resulting from the increase in FTE and the governmentwide FY 2002 pay raise.
- Contract support and travel increase to fund the shift in activities associated with receipt of the DOE's proposed license application<sup>1</sup> and preparation of a safety evaluation report (SER).
- FTE increase to support the review of the proposed license application<sup>1</sup> and preparation of SER, provide assistance in the hearing process, increase public outreach efforts, and implement the inspection program and performance confirmation oversight.

The NRC's HLW licensing program is conducted in accordance with the Nuclear Waste Policy Act, as amended, and the Energy Policy Act of 1992. This legislation specifies an integrated approach and a long-range plan for HLW storage, transportation, and disposal and prescribes the respective roles of the NRC, DOE, and the U.S. Environmental Protection Agency (EPA) in the HLW program. The DOE has the responsibility for the actual disposal of the nation's HLW commencing with site characterization and repository design, and continuing through development, operation, and ultimate closure of a deep geologic repository. The EPA has been charged with developing Yucca Mountain specific environmental standards, consistent with the recommendations of the National Academy of Sciences, that will be used to evaluate the safety of the potential geologic repository developed by DOE. The NRC has extensive pre-licensing responsibilities and is the regulatory authority to issue a license, if appropriate, after

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determining whether the DOE license application<sup>1</sup> for a potential geologic repository at Yucca Mountain, Nevada, complies with the applicable regulatory standards.

During FY 1999–FY 2000, NRC re-evaluated the program using its strategic planning process to sharpen the program's goals, measures, and targets. As a result, the NRC's HLW program now is focused on three activities: Public Outreach, HLW Repository Pre-Licensing Issue Resolution, and proposed HLW Licensing Application (LA). By directing effort in this manner, the NRC expects to most effectively achieve its goals.

Progress toward resolution of the KTIs has been the focus of the NRC's HLW program since FY 1996. In FY 2002, NRC will continue to focus on resolution of the nine KTIs most important to potential repository licensing. Activities will be structured to resolve the KTIs at the staff level prior to NRC's receipt of the DOE proposed HLW LA in FY 2002. Resolution at the staff level is achieved when the staff has no further questions regarding how the DOE is addressing a particular subissue. Resolution of the KTIs is important in that it permits effective review of the DOE's proposed LA and early preparation of the potential Safety Evaluation Report by the NRC staff; however, it does not preclude the issue being raised and considered during the potential licensing proceeding. The path to KTI resolution includes the following activities: development of tools, including a total-system performance assessment (TSPA) computer code, and a Yucca Mountain Review Plan (YMRP) for conducting an independent review of the DOE proposed LA; limited independent laboratory and field testing; data analysis and interpretation; process model and code development, enhancement and updating; reviews of relevant DOE documents; interactions with DOE and other parties; and documentation of resolution status.

The YMRP, which will be completed by mid-FY 2002, will be a highly focused, site-specific document that will provide guidance to the DOE regarding staff expectations for the pre-closure and post-closure safety analyses that must be presented in the LA. It will be used by the NRC staff to support the review of DOE's Site Recommendation Consideration Report, provide sufficiency comments, assess the data and analyses related to at-depth site characterization, and evaluate waste form proposal in FY 2001, and in conducting its review of the LA in FY 2002. In FY 2001–FY 2002, resources will be used to conduct, coordinate and integrate YMRP activities necessary to ensure timely YMRP publication. NRC will complete the YMRP such that: (1) it is consistent with the risk-informed, performance-based 10 CFR Part 63; (2) it integrates review methods and acceptance criteria for the KTIs developed in issue resolution status reports; (3) it incorporates the probabilistic safety assessment methodology and acceptance criteria for pre-closure radiological safety; and (4) it utilizes the sensitivity, uncertainty, and importance analysis results from DOE and NRC TSPAs.

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Upon receipt of the proposed LA in FY 2002<sup>1</sup>, the staff will complete the acceptance review of the proposed LA for docketing and use the results of the pre-licensing issue resolution and YMRP development process to review the proposed LA<sup>1</sup> and prepare a safety evaluation report in accordance with NRC regulations.

During FY 2001–FY 2002, the NRC staff will undertake a number of regulatory initiatives to further implement the NRC's Strategic Plan goals. In FY 2001, the staff will develop a communications plan which will integrate and complement specific public confidence strategies, and will expand outreach efforts during FY 2002 to effectively communicate with stakeholders on NRC's application of risk assessment and risk management.

The Office of the General Counsel (OGC) provides legal advice and assistance to the technical staff on proposed amendments to regulations on the transportation, storage and disposal of HLW and spent fuel; on the rulemaking to develop implementing regulations after promulgation of final EPA standards; on NRC issue resolution status reports; on NRC review of DOE's submittals, such as its draft Environmental Impact Statement for the Yucca Mountain site; and on development of a repository licensing standard review plan. The OGC will also represent the NRC in all proceedings on the proposed HLW repository license application<sup>1</sup>. These activities support staff efforts to maintain safety by determining that proposed activities are consistent with the regulatory framework; contribute to efficiency and effectiveness of the regulatory program by identifying legally defensible actions which meet pre-licensing and statutory milestones; and enhance public confidence in the staff's work-product and the agency's decisionmaking processes.

The Office of the Secretary, pursuant to 10 CFR Part 2, Subpart J, is responsible for establishing and maintaining an official hearing docket for the HLW proceeding. As required by Subpart J, the docket will be maintained as an electronic docket. Filings in the docket will be received and made available to participants and the public electronically.

The Advisory Committee on Nuclear Waste (ACNW) was established by the Commission in June 1988 to provide independent technical advice on agency activities, programs, and key technical issues associated with regulation, management, and safe disposal of radioactive waste. The bases of this advice include regulations governing high-level waste disposal and other applicable regulations and legislative mandates. The ACNW is involved in reviewing several HLW matters, including 10 CFR Part 63, the proposed site-specific regulation for disposal of HLW at Yucca Mountain, and the draft YMRP for review of a proposed license application<sup>1</sup> for disposal of HLW at Yucca Mountain; the NRC staff's sufficiency review of the DOE's at-depth site characterization and waste form proposal related to DOE's potential site suitability determination for Yucca Mountain; the staff's progress in resolution of key technical issues; risk-informing non-reactor regulations; and the HLW research program.

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In performing its work, the ACNW examines and reports on areas of concern as requested by the Commission and may undertake studies and activities on its own initiative, as appropriate. The ACNW's advice will be responsive to Commission needs, expectations, and requests, and will be issued in a timely manner to support Commission decisionmaking. The Committee interacts with representatives of the NRC, Advisory Committee on Reactor Safeguards (ACRS), other Federal, State, and local agencies, Indian tribes, the public, and other stakeholders, as appropriate, to fulfill its responsibilities. Advisory committees by design are structured to offer the public a forum to participate in matters of strong public interest. The independent expert nature of the ACNW lends itself in the facilitation of increased public confidence and increased safety related to matters involving the regulation of the safe use and disposal of nuclear waste materials.

The Atomic Safety and Licensing Board Panel (ASLBP), a statutorily-authorized office of the NRC, conducts hearings as independent adjudicatory tribunals, usually at or near the site at which the dispute arose. These hearings help assure that health, safety, and the environment are protected, as well as increase public confidence in the agency's nuclear waste licensing process, by allowing public participation to adjudicate claims made by interested persons. In FY 2002, ASLBP judges will hear and decide petitions for hearing by interveners and applicants concerning public health, safety, and environmental issues arising out of applications to construct and operate independent spent fuel storage installations and are preparing for litigation concerning the proposed application for a construction authorization and a license to receive and possess nuclear materials in a high-level waste repository. In accordance with 10 CFR Part 2, Subpart J, FY 2002 resources will be used for the operation and maintenance of a Licensing Support Network (LSN) electronic document discovery database for the upcoming licensing proceeding on the potential high-level geologic radioactive waste repository. Pursuant to the Federal Advisory Committee Act, the Licensing Support Network Advisory Review Panel, which is chaired by an individual appointed by the Commission Secretary, interacts with the LSN Administrator to provide advice and recommendations on the functioning of the LSN for the HLW licensing proceeding.

The NRC will continue the contract management and administrative activities of the Center for Nuclear Waste Regulatory Analyses (CNWRA) in accordance with all applicable laws and regulations and the provisions of the NRC contract. This includes, but is not limited to, the quality assurance function that ensures CNWRA compliance with NRC's quality assurance requirements in 10 CFR Part 50, Appendix B; selection, recruitment, and/or retention of high-quality technical skills; implementation of management procedures and administrative practices; planning activities; maintaining staff capabilities; providing appropriate computer support and associated security systems; and production of periodic CNWRA management and fiscal reports.

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### Program Outputs

The following budget outputs have been identified for the HLW Regulation program.

| OUTPUT MEASURES  |   |  |   |  |
|--|---|--|---|--|
| Output   | FY 1999 Actual  | FY 2000 Actual   | FY 2001 Target  | FY 2002 Target   |
| Resolve KTI subissues.<br>(FY 1998: No output data available.) | Target: Resolve at least 5 of the KTI subissues.<br><br>Actual: Staff resolved 5 of the KTI subissues targeted.                         | Target: Resolve at least 5 of the KTI subissues targeted at the staff level.<br><br>Actual: Staff has resolved 12 of the KTI subissues targeted.   | Continue to resolve the KTI's at the staff level.   | Complete KTI resolution at the staff level prior to receipt of the DOE proposed license application <sup>1</sup> . |
| Development of the YMRP.<br>(FY 1998: Not applicable.)         | Target: Develop an initial YMRP format and content.<br><br>Actual: Completed development of initial YMRP format and content on 5/26/99. | Target: Publish a draft YMRP.<br><br>Actual: Target was not met due to a lack of resolution of complex issues concerning Yucca Mountain standards. | Publish a draft YMRP. (Note: this target is from FY 2000).<br><br>Revise YMRP based on public comments. | Complete final YMRP.   |

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| OUTPUT MEASURES   |  |   |  |   |
|---|--|---|--|---|
| Output  | FY 1999 Actual   | FY 2000 Actual  | FY 2001 Target   | FY 2002 Target  |
| <p>Establish a site-specific, performance-based regulation applicable to the proposed repository at Yucca Mountain.</p> <p>(FY 1998: Not applicable.)</p> | <p>Target: Publish a <u>proposed</u> site-specific, performance-based regulation applicable to the proposed repository at Yucca Mountain.</p> <p>Actual: The proposed regulation was published on 2/22/99.</p> | <p>Target: Publish a <u>final</u> site-specific, performance-based regulation applicable to the proposed repository at Yucca Mountain.</p> <p>Actual: Target was not met due to a lack of resolution of complex issues concerning Yucca Mountain standards.</p> | <p>Publish a final site-specific, performance-based regulation applicable to the proposed repository at Yucca Mountain. (Note: this target is from FY 2000).</p> <p>If a final EPA standard is issued, conform Part 63 to EPA's site specific environmental protection standard.</p> | <p>None.</p>  |
| <p>Comment on DOE's program.</p> <p>(FY 1998: Not applicable.)</p>  | <p>Target: Comment on DOE's Viability Assessment.</p> <p>Actual: Provided comments to DOE on the Viability Assessment on 6/2/99.</p>   | <p>Target: Comment on DOE's draft Environmental Impact Statement.</p> <p>Actual: Completed comment on DOE's draft Environmental Impact Statement on 2/22/00.</p>  | <p>If requested by DOE, provide DOE with preliminary site sufficiency comments.</p>  | <p>If license application is provided in FY 2002' complete acceptance review of license application within 90 days and if acceptable, docket.</p> |

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| OUTPUT MEASURES  |   |  |   |   |
|--|---|--|---|---|
| Output   | FY 1999 Actual  | FY 2000 Actual   | FY 2001 Target  | FY 2002 Target  |
| <p>The activities necessary to make a decision on DOE's repository license application will be planned and executed such that the decision can be made on time or ahead of schedule and within requested budget resources.</p> | <p>This output measure was not explicitly stated as a measure of performance for FY 1999.</p> <p>There is no FY 1999 target for this measure.</p> | <p>Target: Major milestones that are needed to evaluate and determine whether DOE's potential repository license application<sup>1</sup> meets NRC's repository performance standard will be met within 90 days of each of their due dates.</p> <p>Actual:</p> <p>(1) Provided comments on DOE's Part 963 within 90 days of the due date.</p> <p>(2) Completed revisions 0 and 1 of Yucca Mountain Review Plan which will guide staff's review of any application within 90 days of the due date.<sup>12</sup></p> <p>(3) Completed total safety performance assessment code to verify staff review findings in any licensing decision within 90 days of the due date.</p> | <p>Major milestones that are needed to evaluate and determine whether DOE's potential repository license application<sup>1</sup> meets NRC's repository performance standard will be met within 90 days of each of their due dates.</p> | <p>Major milestones that are needed to evaluate and determine whether DOE's potential repository license application<sup>1</sup> meets NRC's repository performance standard will be met within 90 days of each of their due dates.</p> |