

Self-Assessment of the NRC High-Level Waste Repository Program in preparation for the planned FY2007 OMB PART Review

Introduction

This report presents results from an evaluation of the NRC High-Level Waste (HLW) Repository Program, undertaken during FY2005 as directed in the *NRC Strategic Plan, FY2004-2009* (Appendix B). The evaluation was performed as a self-assessment from the perspective of the Office of Management and Budget (OMB) Program Assessment Rating Tool (PART), to help prepare for a PART review of the program scheduled for FY2007. The self-assessment was led by the Division of High-Level Waste Repository Safety (HLWRS), and served to: (1) develop a set of draft responses to the PART questions, and (2) identify any possible issues that come from these draft responses and make recommendations for actions that will better prepare the program for the PART review. Overall, the self-assessment finds that the program is well positioned to accomplish its objectives. Support for this conclusion is found in the draft responses to the PART questions, and in the recommendations for actions to improve preparation for the PART review, as detailed in this report.

The report begins with brief overviews of the OMB PART process and the NRC HLW program. A summary table of the organizations involved in the program is given in Attachment 1. The identified issues and recommendations are presented in the next section. Draft responses to the PART questions are in Attachment 2. Attachment 3 gives a list of acronyms used.

The draft responses included here are for the FY2005 questions distributed by OMB. OMB may propose new questions or change the specific wording of the questions in future years, but significant changes are not expected. OMB also issues a new guidance document for each year's PART reviews that varies slightly from previous guidance. The guidance issued in March 2005 was used in preparing the draft responses. A principal reference used for many of the PART responses is the *NRC Performance Budget* for the fiscal year ("Green Book"). The draft responses were prepared referencing the FY2006 Green Book. For a PART review done during FY2007, the FY2007 Green Book, now being prepared for issuance in mid-FY2006, will play a key role. Any new program performance measures for the program must be defined in the FY2007 Green Book in order for results to be available at the time of the FY2007 review (draft PART responses are due to OMB April 15, and final responses June 30).

Overview of OMB's Program Assessment Rating Tool

The Program Assessment Rating Tool was developed by OMB in order to:

assess and improve program performance so that the Federal government can achieve better results. A PART review helps identify a program's strengths and weaknesses to inform funding and management decisions aimed at making the program more effective.

(from the PART website: <http://www.whitehouse.gov/omb/part/index.html>)

PART reviews look at government activity at the program level. NRC is thus reviewed through its seven Tier 2 programs: Reactor Licensing, Reactor Inspection, Fuel Facilities, Nuclear Material Users, Spent Fuel Storage and Transportation, Decommissioning and Low-Level

Waste, and High-Level Waste Repository. The initial PART reviews of the first five of these programs are now done, with Spent Fuel Storage and Transportation and Reactor Licensing completed in FY2005. Decommissioning and Low-Level Waste is scheduled for FY2006. PART reviews are intended to be periodic, with programs re-evaluated on a five-year cycle.

The actual PART review consists of a set of 31 questions, with responses and supporting evidence prepared by the program and evaluated by the OMB examiner. The questions are arranged in four sections, covering program purpose and design; performance measurement, evaluations, and strategic planning; program management; and program results. Six of the questions are specific for regulatory programs; the remainder are common to all PART reviews. The response format includes an explicit answer (yes/no for the first three sections; a four-level "effectiveness" scale for the last section on results; "not applicable" is allowed for certain questions, with justification), a brief explanation, and the detailed supporting evidence. All documents used as supporting evidence should be publically available. OMB calculates a numerical score, with unequal weighting for the questions (20% of the total for the 5 questions of section I, 10% for 9 questions in section II, 20% for 11 questions in section III, and 50% for 6 questions in section IV). The OMB examiner has some discretion in weighting the individual questions and in determining the final numerical score. The examiner also determines the final text of the responses. From the PART results, OMB makes specific program recommendations.

The numerical scores translate into categorical program ratings: effective (85), moderately effective (70-84), adequate (50-69), and ineffective (<50). A fifth category of "results not demonstrated" can be given for those programs "without sufficient performance measurement or performance information to show results, and therefore it is not possible to assess whether it has achieved its goals" (from the FAQ at the PART website). The PART responses and categorical rating for each program, but not the total numerical score, are posted on the public OMB PART website.

Of the five NRC programs rated to date, four received "effective" and one "moderately effective" ratings. This compares favorably with the overall results for all reviewed government programs, where 15% ranked "effective" and 26% "moderately effective" for FY2004 reviews (overall FY 2005 have not yet been posted). In FY2004, 29% of the reviewed programs were classed as "results not demonstrated," down from 50% in FY2002.

Within the NRC, PART reviews are handled by the Offices and Divisions directly responsible for the program. The Office of the Chief Financial Officer (OCFO) serves as coordinator, but the individual program "owns" its PART review, including developing the responses and meeting with the OMB examiner. In recent years, each review has required at least two extended meetings with the examiner.

Although PART is a relatively new initiative, it is being strongly championed by OMB as a way of comparing effectiveness of widely differing programs across the Federal landscape. There appears to be increasing awareness of PART results in Congress as well. NRC continues to provide updates of previous PART program recommendations in its Performance Budgets (Blue Book and Green Book).

Overview of the NRC HLW Program

The NRC HLW program differs in many ways from other Federal programs, and from the other Tier 2 programs at the NRC. This brief overview is included to highlight some of those differences and their implications for a PART review.

Regulatory Process for a National Geologic Repository for High-Level Waste

The regulatory role of the NRC High-Level Waste program is defined by the Nuclear Waste Policy Act of 1982, as amended (NWPA). The NWPA and Energy Policy Act of 1992 (EnPA) set out specific roles and responsibilities for Federal agencies in the siting, design, construction, operation, and closure of a geologic repository for HLW. NRC has authority to regulate the activities of the Department of Energy (DOE) as repository developer and operator, and to implement the performance standards defined by the Environmental Protection Agency (EPA). Under the NWPA and NRC's implementing regulations, DOE is required to submit a License Application for the repository for review by NRC. As part of its review, the NRC will first decide whether to grant a Construction Authorization for the repository. Subsequently, upon a finding that, among other things, construction of the geologic repository operations area is substantially complete, the NRC may grant a license to DOE to receive and possess HLW. NRC oversight thus encompasses the construction, operation, and permanent closure of the repository. The time frame for permanent closure of a repository and termination of an NRC license is potentially on the order of 100-300 years after initial licensing. This long time horizon can be divided into several distinct regulatory phases. The initial two phases of the process for NRC are:

- (1) Activities prior to, and in anticipation of, the docketing of a License Application (LA) by DOE. These activities encompass precicensing interactions with DOE, that aim to obtain a high-quality LA, and preparation by NRC for its licensing review. These precicensing activities have been ongoing for several years, and will end when the LA is submitted. The date of LA submittal is at the discretion of DOE and thus the duration of precicensing is not controlled by NRC. During precicensing, the HLW program has no licensee. This is significant since many NRC HLW functions apply only to the licensee or applicant.
- (2) Activities during the LA review, that include preparation of the Safety Evaluation Report (SER), public hearings, and the initial regulatory decision on granting a Construction Authorization. During this period, NRC will begin some formal oversight of DOE activities, through inspections and implementation of NRC's allegation, investigation, and enforcement programs. The license review phase, from docketing of the LA to completion of hearings and the Construction Authorization decision, has a statutory 3-year goal, with opportunity for an additional 12-month extension. The procedures and schedule for adjudicatory proceedings during this phase are given in 10 CFR Part 2.

If a Construction Authorization is granted, the subsequent phases of the regulatory process are defined by construction, the decision to allow receipt and possession of radioactive material, the operational period of the surface facility and subsurface emplacement, decommissioning of the surface facility, and final closure of the repository and license termination.

The HLW program is currently in the first phase. DOE's planned submittal of an LA has been subject to delay and uncertainty. Without committing to a specific date, DOE has indicated that it may be ready to submit its LA during FY2006. This means that the program may be in the early stage of the second regulatory phase (LA review) during a PART review in mid FY2007, or possibly still in the prelicensing phase if the LA is not forthcoming in the next 18 months.

Implementation of the HLW Program within NRC

The NWPA provides for fees from nuclear utilities to support the National HLW Program, through the Nuclear Waste Fund (NWF), for the disposal of CSNF (additional funds are appropriated by Congress in support of disposal of HLW owned by DOE and from the Naval Nuclear Propulsion Program). Within the NRC, sixteen separate organizational units conduct activities funded under the NWF to help fulfill NRC's HLW mission. The table in Attachment 1 summarizes the responsibilities of each unit in the NRC HLW program.

The NRC HLW Program is unlike most regulatory programs

Several aspects of the NRC HLW program set it apart from other regulatory activities within the NRC, and from other Federal programs:

- The program currently has no applicant or licensee, and has been in operation with no applicant or licensee for more than two decades, in part by design of the national policy for handling of HLW.
- The program will have a single license applicant, another Federal agency, DOE.
- Extensive public prelicensing interactions with the potential applicant have occurred and continue.
- The period for completion of the license application review, including adjudicatory hearings on the initial decision on a construction authorization, is set by statute to 3 to 4 years. Statutory time limits on licensing proceedings are not common.
- The proposed facility to be licensed will effectively be a first of its kind, not only in the U.S., but quite possibly world-wide.
- The duration of the license, if granted, is expected to be for at least 100 years, and possibly 300 years or more.
- The regulatory period of interest extends far beyond the license period, with performance of the repository for up to 1 million years to be considered.

Issues Identified in the Self-Assessment and Recommendations for Further Preparation

The following nine issues have been identified in the course of preparing the draft responses to the PART questions. Recommended actions to address the issues are proposed as appropriate. Implementation of the recommendations will involve coordination among the HLW program participants and the OCFO. Actions on the recommendations should be tracked at the Waste Program leadership level operating plan over FY2006, in preparation for the scheduled FY2007 PART review.

1. **Scope of HLW program for PART review will guide preparations.** A broad scope for the HLW program was defined for the self assessment, encompassing all those activities and organizational units that are funded by the Nuclear Waste Fund. It may be appropriate to take a more restricted view of the program that considers only those aspects that concern regulation of the repository and site (the program is commonly referred to as "HLW

Repository”). Excluding HLW transportation-related areas would effectively remove the SFPO and RES (Package Performance Study) components. The FY2005 PART review of the Spent Fuel program did not include HLW topics.

Recommendation: The scope of the program for review should be clearly defined. Advantages gained by limiting the scope (i.e., a more focused review) may be offset by the benefits gained by a more comprehensive review. The broad scope used in this self-assessment is recommended.

2. **Independent evaluations need to satisfy OMB expectations.** Two PART questions (2.6, 4.5) address external evaluations that should be of “high quality, sufficient scope, unbiased and independent, and conducted on a regular basis.” Recent PART reviews of NRC programs have raised concerns from OMB that program audits performed by NRC’s Office of the Inspector General (OIG) do not meet all of their external evaluation criteria, especially as to scope and frequency. This is an agency-wide issue for PART, and not limited to the HLW program. OCFO has requested that OIG perform an assessment of the HLW program in FY2006, in support of the planned PART review.

Recommendation: Complete an external evaluation of the program during FY2006 that should be acceptable to OMB. Alternatively, the program should be prepared for possible low scores on these questions. An evaluation as to whether an OIG assessment will satisfy OMB should be done early in FY2006.

3. **The FY2007 Green Book will be a key document.** Many of the PART questions, especially in the last three sections, use the NRC Green Book as primary evidence. PART asks for both “long-term” and “annual” performance measures, and assesses progress and results towards meeting the defined measures. In the FY2005 and earlier PART reviews of NRC programs, OMB accepted that “long-term performance measures” could correspond to the agency-wide measures in the Green Book (e.g., those in chapter 5 of the FY2006 Green Book), while “annual performance measures” are represented by the program-specific Green Book measures (e.g., in chapter 4 of the FY2006 Green Book). OMB seemed less inclined to allow credit for measures tracked in Division-level Operations Plans. Elevating many Division-level measures, or adding measures to cover every aspect of the HLW program is not desirable, since OMB guidance stresses “two or three” long-term and “a limited number” of annual measures.

Recommendation: Ensure that the proper measures for PART are in the FY2007 Green Book, following the two-level structure accepted by OMB. This includes providing a means by which the HLW program can take proper credit for meeting long-term, agency-wide performance measures. The Green Book production schedule requires that measures be put in place early in FY2006 (mid-November 2005). The next two points address specific measures.

4. **Green Book Performance Measures should cover both the prelicensing and LA review phases.** Since it is uncertain in which review phase the project will be during the PART review, measures for both phases should be in the Green Book. PART places much emphasis on the “results” questions in section IV. As currently written, program-level performance measures in the Green Book can be improved. Detailed measures are

included for OI and OE activities during LA review. Measures for Commission Adjudicatory Technical Support (CATS) and for IT/IM systems are specific for prelicensing, but less so for post-LA submittal. Prelicensing measures for DOE interactions (KTI agreement resolution) are specific but baseline and target values for success need to be transparent. The measure for decisions during LA review needs improved transparency, and baselines and targets.

Recommendation: Performance measures should be crafted to capture important program activities and so that results can be clearly demonstrated, especially for prelicensing. Measures for the second phase should be in place that allow credit for early actions (e.g., acceptance review, FEIS adoption decision) if the LA review has begun. Results should be explicitly documented in the Green Book.

5. **PART emphasizes annual measures of program efficiency.** OMB is explicit in their 2005 PART guidance that at least one of the annual performance measures address gains in program efficiency. Timeliness measures may satisfy this requirement, although OMB guidance suggests that a timing target without “regular benchmarks against other similar programs” may not be sufficient. PART also seeks evidence for improvements in efficiency over time.

Recommendation: Determine if benchmark data for timeliness measures can be developed to clearly demonstrate measurement of efficiency, and efficiency improvement. Provide measures of other efficiencies that have been gained through business process improvements (e.g., streamlined document handling procedures).

6. **Once an LA is submitted, communications between some of the organizational units in the HLW program may become difficult.** Separation of functions considerations come into play during the LA review and hearing phase. The review staff will be effectively “walled off” from the Commission advisory units (CATS, ACNW, OCAA), and will interact with ASLBP only through the formal hearing process. Coordination of responses for the PART review may be more difficult while an LA review is in progress. .

Recommendation: Ensure that all participants involved in the PART review are aware of the separation of functions and the types of communications permissible under the regulation. Provide that appropriate and sufficient information for a complete PART response can be gathered from all units of the NRC HLW program.

7. **The public hearings on a HLW repository indicate a likely need for early OGC involvement in the HLW program PART preparations, compared to previous NRC PART evaluations.** Stakeholder and public interest in HLW program activities is expected to remain high during the time of the scheduled PART review.

Recommendation: Provide for OGC participation in developing responses for the PART review.

8. **Some documents that could be used to support PART responses are not publically available.** OMB requires that all documents used as evidence in support of responses be available to the public. In many cases, internal NRC planning documents are not routinely

made public. Potentially useful information is thus not accessible for the PART review.

Recommendation: Identify internal, non-public documents that may be supportive of PART responses and review whether they can be made available for use.

9. **Experience indicates that PART reviews require significant preparation and are labor intensive.** PART reviews in FY2005 used >1 FTE per program and involved multiple individuals. PART teams should be organized and begin work early in the review cycle. Coordination with OCFO is important. A large team does not appear to offer much advantage over a smaller team that uses other staff as consultants when needed.

Recommendation: A PART team for the HLW program should be established early in FY2006, composed of 2-3 staff members plus an SES “champion.” As recommended above (issue 7), the team should coordinate its work with OGC. OCFO staff should continue to participate in the PART review and serve as liaison to OMB. Each organizational unit involved in the HLW program should designate a point of contact available to provide information and work with the PART team as needed. Resources to support PART, both contract dollars and FTE, should be made available for FY2006 and FY2007. As previously noted, resources will be needed early in FY2006 for developing performance measures and possibly for external evaluation.

Attachment 1–NRC Organizations Comprising the NRC High-Level Waste Program

Attachment 2--Draft Responses to the PART Questions

Attachment 3–List of Acronyms

Attachment 1: NRC Organizations Comprising the NRC High-Level Waste Program

| Organization | HLW Responsibilities [licensing phase] |
|--|--|
| Office of Nuclear Material Safety and Safeguards/Division of High-level Waste Repository Safety (NMSS/HLWRS) | Lead for review of LA; LA review preparation and DOE interactions [prelicensing] |
| NMSS/Spent Fuel Project Office (NMSS/SFPO) | Storage and transportation cask certification |
| NMSS/Division of Industrial and Medical Nuclear Safety (NMSS/IMNS) | Rulemaking; Allegations |
| Office of General Counsel (OGC) | Legal support to staff |
| OGC/Commission Adjudicatory Technical Support (OGC/CATS) | Independent technical support to Commission (OCM) |
| Atomic Safety and Licensing Board Panel (ASLBP) | Adjudicatory review; Licensing Support Network (LSN) |
| Office of Information Services (OIS) | Information meta-system; IT for Las Vegas hearing facility |
| Office of the Secretary of the Commission (SECY) | Maintain Electronic Hearing Docket |
| Region IV | Onsite Representatives; Inspections & field reviews [LA review] |
| Office of Nuclear Regulatory Research (RES) | Package Performance Study |
| Office of Administration (ADM) | CNWRA contract; Las Vegas hearing facility administration |
| Office of Nuclear Security and Incident Response (NSIR) | Licensing and litigation support on security aspects |
| Office of Investigations (OI) | Investigations [begins during LA review] |
| Office of Enforcement (OE) | Enforcement and Allegations [begins during LA review] |
| Advisory Committee on Nuclear Waste (ACNW) | Independent review [prelicensing]; Independent advice to OCM |
| Office of Commission Adjudicatory Advice (OCAA) | Independent legal support to OCM |

Attachment 2--Draft Responses to PART Questions for the HLW Program

Note: Only citations are provided in the “Evidence” sections. In the full PART review, actual text of the cited references is provided.

I. PROGRAM PURPOSE & DESIGN

1.1 Is the program purpose clear?

Purpose of the question: *to determine whether the program has a focused and well-defined mission. Determining this purpose is critical to determination of useful performance measures and targets.*

Answer: Yes

Explanation

The U.S. Nuclear Regulatory Commission (NRC) regulates the Nation’s civilian use of byproduct, source, and special nuclear material to ensure adequate protection of public health and safety, to promote the common defense and security, and to protect the environment. Commercial generation of electricity in nuclear power plants produces spent fuel that remains radioactive for an extended time. The national policy of the United States is that this commercial spent nuclear fuel (CSNF) and other high-level radioactive waste (HLW) be isolated in a geologic repository. The Nuclear Waste Policy Act of 1982 (NWPA) and the Energy Policy Act of 1992 (EnPA) provide that NRC serve as an independent regulator to ensure that any licensed geologic repository adequately protects the public health and safety, the environment, and common defense and security. The unique mission of the NRC HLW program is to implement NRC’s responsibilities in the national HLW repository policy.

Evidence

Atomic Energy Act of 1954, as amended; Energy Reorganization Act of 1974; Nuclear Waste Policy Act of 1982, as amended; Energy Policy Act of 1992.

1.2 Does the program address a specific and existing problem, interest, or need?

Purpose of the question: *to determine whether the program addresses a specific problem, interest, or need that can be clearly defined and that currently exists.*

Answer: Yes

Explanation

The need to isolate the long-lived radioactivity of HLW from the environment for a very long time has been recognized since the beginning of the Atomic Age more than 50 years ago. The potential for isolated disposal in a deep geologic repository was also recognized at an early stage. Currently, an estimated 52,000 metric tons of CSNF are in storage at operating commercial nuclear power plants and licensed Independent Spent Fuel Storage Installations (ISFSIs) in the U.S. The Department of Energy (DOE) has additional inventory of HLW, from reprocessing of SNF and from the U.S. Naval Nuclear Propulsion Program. The Federal government has committed to develop a geologic repository for permanent disposal of HLW, in a manner that will provide reasonable assurance of adequate protection of the public health and

safety and the environment. In 2002, Congress approved the President's recommendation of Yucca Mountain, Nevada, as the site of the Nation's first geologic repository for HLW.

Evidence

Atomic Energy Act of 1954, as amended; Energy Reorganization Act of 1974; Nuclear Waste Policy Act of 1982, as amended; Energy Policy Act of 1992; NRC Information Digest, 2004-2005, NUREG-1350, vol. 16.

- 1.3 Is the program designed so that it is not redundant or duplicative of any other Federal, State, local or private effort?

Purpose of the question: *to determine whether the program is designed to fill a unique role or whether it instead unnecessarily duplicates or even competes with other Federal or non-federal programs.*

Answer: Yes

Explanation

The Federal government has taken sole responsibility for the disposal of CSNF and other HLW. The roles and responsibilities of Federal agencies for implementing this policy are defined in the Energy Reorganization Act (ERA), NWPA and EnPA. The NRC HLW program embodies those specific regulatory functions uniquely assigned to the NRC. The NRC regulatory function is complementary to the roles defined for other Federal agencies, such as the DOE, Environmental Protection Agency (EPA), and Department of Transportation (DOT). For example, the NRC regulations for a repository at Yucca Mountain are consistent with the release standards set by EPA, and NRC must, to the extent practicable, adopt the Final Environmental Impact Statement prepared by DOE.

Evidence

Atomic Energy Act of 1954, as amended; Energy Reorganization Act of 1974; Nuclear Waste Policy Act of 1982, as amended; Energy Policy Act of 1992.

- 1.4 Is the program design free of major flaws that would limit the program's effectiveness or efficiency?

Purpose of the question: *to determine whether there are major design flaws in the program that limit its efficiency.*

Answer: Yes

Explanation

As designed, the NRC HLW program is free of major flaws that limit its effectiveness. Its principal activities thus far have been in developing its regulatory framework, promulgating regulations, preparing for a license application review, and interacting with DOE, the potential applicant, in anticipation of an application. As a regulatory program that does not yet have a licensee or formal applicant, many of its actions are dependent on those of DOE. DOE is charged with the design and operation of the geologic repository, and with preparation and submittal of a License Application (LA) in accord with the NRC regulations. Uncertainty in when the LA will be submitted and what it will contain present challenges in planning and scheduling

for the NRC program. Given the complexity of the project, the statutory time limit of 3-4 years for completion of LA review and adjudicatory hearings for the regulatory decision on issuance of a Construction Authorization is also challenging. Program activities during prelicensing have helped to alleviate these uncertainties, through extensive planning, development of review guidance, and interactions with DOE aimed at assuring a high-quality LA.

Evidence

Atomic Energy Act of 1954, as amended; Energy Reorganization Act of 1974; Nuclear Waste Policy Act of 1982, as amended; Yucca Mountain Review Plan (NUREG-1804, Rev. 2); Integrated Issue Resolution Status Report (NUREG-1762, Rev. 1).

- 1.5 Is the program design effectively targeted, so that resources will reach intended beneficiaries and/or otherwise address the program's purpose directly?

Purpose of the question: to determine whether the program is designed so that program resources will reach the intended beneficiaries efficiently and to avoid unintended subsidies. "Beneficiaries" refers to those who benefit from the favorable outcome of the program. "Reach" refers to the distribution of benefits.

The program benefits the general public, through protection of their health and safety and the environment, and the nuclear power utilities by providing for the safe disposal of CSNF and other HLW that they own or have generated. The general public and stakeholders are kept informed of program activities through numerous public outreach meetings and public interactions with DOE. Exchanges with DOE are governed under an inter-agency agreement on prelicensing interactions.

There are no unintended subsidies, as the program is supported by nuclear utilities through the Nuclear Waste Fund, and by appropriations for HLW generated by DOE and the Naval Nuclear Propulsion Program. These funds are directed only toward federal HLW program activities for a geologic repository, and do not support current interim storage of CSNF.

Evidence

Atomic Energy Act of 1954, as amended; Energy Reorganization Act of 1974; Nuclear Waste Policy Act of 1982, as amended; Energy Policy Act of 1992; Agreement Between DOE/OCRWM and NRC/NMSS Regarding Prelicensing Interactions; NRC public meeting notices (<http://www.nrc.gov/public-involve/public-meetings/index.cfm>).

II. STRATEGIC PLANNING

- 2.1 Does the program have a limited number of specific long-term performance measures that focus on outcomes and meaningfully reflect the purpose of the program?

Purpose of the question: *to determine if the program has long-term performance measures to guide program management and budgeting and promote results and accountability. This question seeks to assess whether the program measures are salient, meaningful, and capture the most important aspects of program purpose and appropriate strategic goals.*

Answer: Yes

Explanation

The long-term goals of the NRC HLW program are to meet the licensing milestones defined in the NWPA and in 10 CFR Part 2 (Appendix D) for evaluating and issuing decisions on a potential HLW geologic repository at Yucca Mountain. For the initial phases of the process, these include commenting on DOE's Site Recommendation, evaluating the completeness of a submitted LA for technical review (docketing decision), deciding if NRC can adopt DOE's Final Environmental Impact Statement, issuing a Safety Evaluation Report for a docketed LA, completing adjudicatory hearings, and issuing a decision on a Construction Authorization. All but the first of these (Site Recommendation comments) follow submittal of an LA by DOE.

The broad goals are manifest in the NRC Strategic Plan. The NRC Performance Budget for 2006 ("Green Book") outlines a set of long-term performance measures for the Agency, tied to outcomes defined in the NRC Strategic Plan for FY2004-FY2009. Ten of the Green Book long-term measures apply to the HLW program, covering the five Agency goals of safety, security, openness, effectiveness, and sound management. Not all of these measures are relevant during the initial regulatory phases of the HLW program. For example, measures concerning radiological releases by a licensee will not apply until a license is issued to DOE to receive and possess radioactive material at the site (at present, HLW waste is regulated through the current licensee, e.g., the reactor operator for CSNF). Most other measures now apply to the HLW program and will continue throughout the process. These include measures on information security, openness of the regulatory process, and effectiveness of regulations and management programs and processes.

More specific goals and performance measures are included in the Operations Plans of the various Offices and Divisions that make up the NRC HLW program. These Ops Plans are reviewed and evaluated quarterly.

Evidence

NWPA; 10 CFR Part 2, Appendix D; NRC Strategic Plan, FY2004-2009 (NUREG-1614, Vol. 3); NRC Performance Budget, FY2006 (NUREG-1100, Vol. 21, pp. 72-92).

- 2.2 Does the program have ambitious targets and time frames for its long-term measures?

Purpose of the question: *to determine if the program has challenging but realistic quantifiable targets and time frames for the long-term measures.*

Answer: Yes

Explanation

The goal of completing the LA review and hearings within the mandated 3-4 year period is extremely ambitious, given prior licensing experience, the anticipated size and complexity of the LA, and the expected number of issues that may be raised in the hearing. Uncertainties about the timing and content of the LA, issues beyond the direct control of the NRC program, add further pressure to the review goal.

For the specific long-term performance measures in the Green Book, target values of zero for several measures (radiation exposure and release, disclosure of classified or safeguards information) are strict and ambitious, and have a strong positive influence on promoting safety and security across the nuclear industry. Other measures for openness and effectiveness have high thresholds for success. For example, a management measure for efficiency improvements delivered by support processes ramps up from 70% of those selected for monitoring in FY2006, to 90% in FY2008.

Evidence

NRC Strategic Plan, FY2004-2009 (NUREG-1614, Vol. 3); NRC Performance Budget, FY2006 (NUREG-1100, Vol. 21, pp. 72-92).

- 2.3 Does the program have a limited number of specific annual performance measures that can demonstrate progress toward achieving the program's long-term goals?

Purpose of the question: *to determine whether a limited number of annual performance measures have been identified that directly support the long-term goals evaluated in Questions 2.1 and 2.2. The measures should be logically linked to the long-term goals in a manner that enables them to demonstrate progress toward achieving those long-term goals.*

Answer: Yes

Explanation

Annual performance measures for the HLW program support long-term measures, and closely follow the phased regulatory process for a potential geologic repository. Measures for the prelicensing phase concern preparation for license review and interactions with DOE. Measures for the LA review phase are directed towards the review process itself, and to areas of NRC concern that apply to DOE once it becomes an applicant. Both sets of measures support the long-term goals of the program.

Four specific annual performance measures for the current phase of the HLW program are in the FY2006 Green Book. Prelicensing interactions with DOE to support a high-quality LA are measured through disposition of 293 agreements on Key Technical Issues (KTI) on technical aspects of the potential repository. These agreements were identified by NRC and DOE staff as areas where more refined information and analysis could contribute to a high quality LA. The annual output of this measure is the number of agreements that are successfully resolved, with a shared understanding of what information should be included in a high-quality LA. The positive outcome for this measure is an LA that can be docketed for review by NRC, with a limited number of requests for additional information during the detailed review. This outcome

cannot be assessed until LA submittal.

Preparation by NRC for LA submittal is captured in three measures, involving project planning and development of review capacity, preparation of technology/information management systems and business processes to keep pace with the DOE program and support public hearings, and development of independent technical advice on adjudicatory and non-adjudicatory matters (separation of function considerations of the hearing require Commission support independent of the staff involved in the LA review). The HLW Meta-System, an integrated IT/IM system that directly supports the hearing process, showed its capability in the successful certification of NRC's collection in the Licensing Support Network (LSN) in July 2004, and in subsequent monthly supplements of the NRC collection. Outcomes for these measures will be further evaluated as these processes and functions are exercised prior to LA submittal and during the review process.

The FY2006 Green Book includes annual performance measures for the second phase of the licensing process. These cover timeliness of enforcement actions, review of technical allegations, and timeliness and quality of investigations.

More specific annual performance measures are included in the Operations Plans of the various Offices and Divisions that make up the NRC HLW program. These focus on specific program outputs, and are reviewed and evaluated quarterly.

Evidence

NRC Performance Budget, FY2006 (NUREG-1100, Vol. 21, pp. 52-61); NRC Certification of Compliance of Availability of Documentary Material (NRC LSN Certification); HLW Electronic Hearing Docket (http://hlwehd.nrc.gov/Public_HLW-EHD/home.asp).

2.4 Does the program have baselines and ambitious targets for its annual measures?

Purpose of the question: *to determine if the program has baselines and challenging but realistic quantified targets for the annual measures.*

Answer: Yes

Explanation

The evolving nature of the HLW program makes clear, recurring baseline activities more difficult to define than in other regulatory programs with recurring activities. Even specific performance measures during a given licensing phase can change dramatically from year to year. Ambitious targets are defined for annual performance measures in the HLW program nonetheless. For example, the measure for precertification interactions with DOE requires completion of all 293 KTI agreements.

Other preparatory metrics have ambitious targets, to ensure that support systems and organizations are in place prior to DOE's planned submission of its LA (expected in early FY2005, but since delayed). As noted in the response to question 2.3, the NRC HLW Meta-system was established in part to help provide electronic access to NRC HLW documents, through the LSN. The LSN has met its ambitious performance measure of being able to provide full accessibility to the millions of pages of documents provided by participants thus far. NRC also set as a measure that it would certify as complete its collection of documents within 30 days of DOE's certification. NRC certification was completed on schedule; even though

DOE's initial 2004 certification was overturned by the Pre-license Application Presiding Officer, NRC's certification was not challenged. NRC is now certifying supplementation of its document collection monthly.

In addition to the LSN, other preparatory activities with ambitious targets included implementation of the first-of-its-kind IT/IM Meta-System for hearing support, and establishment of a new Commission Adjudicatory Technical Support (CATS) program, to provide independent technical advice to the Commission during LA review and hearings.

The measures for investigation, allegation, and enforcement activities include timeliness metrics that directly track efficiency. The targets for the HLW program are those used across all NRC programs for these activities. Experience shows that these targets are most challenging for more complex issues. HLW program activities are expected to address very complex issues and make these targets very ambitious.

Evidence

NRC Performance Budget, FY2006 (NUREG-1100, Vol. 21, pp. 52-61); NRC Certification of Availability of Documentary Material (NRC LSN Certification); HLW Electronic Hearing Docket (http://hlwehd.nrc.gov/Public_HLW-EHD/home.asp).

- 2.5 Do all partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) commit to and work toward the annual and/or long-term goals of the program?

Purpose of the question: *to determine whether program efforts carried out by program partners also support the annual and long-term performance goals of the program.*

Answer: Yes

Explanation

NRC has the sole regulatory authority over a geologic HLW repository. Its principal partner is its primary contractor, the Center for Nuclear Waste Regulatory Analyses (CNWRA), a Federally-Funded Research and Development Center (FFRDC) at the Southwest Research Institute in San Antonio, Texas. CNWRA was founded in 1987 specifically to provide NRC with independent technical assistance, free of conflict of interest, on issues related to HLW. The long-term performance goals of the HLW program are delineated in the scope of work of the contract document and in the charter, which addresses the mission of the Center and is an attachment to the contract. The annual performance measures of the program are reflected in the annual guidance from NRC for preparation of CNWRA's annual Operations Plan. The Operations Plan describes how CNWRA will accomplish the work described in the guidance document.

NRC indirectly shares some regulatory authority with EPA, in that EPA is required to set the public health and environmental protection standards for a geologic HLW repository at Yucca Mountain. NRC is directed by the NWPA to incorporate these standards in its regulations. Both agencies share the long-term goals of protecting public health and safety and the environment.

Some regulatory responsibility for HLW, in the area of transportation safety and security, is also shared by NRC with the U. S. Department of Transportation (DOT). NRC, through its Spent

Fuel Projects Office, certifies casks used for HLW transportation. DOT regulates the HLW transport under its hazardous materials program. Cooperation is codified in an a Memorandum of Understanding between the two agencies, which reflects their shared goals.

Evidence

NRC Performance Budget, FY2006 (NUREG-1100, Vol. 21, pp. 52-61); CNWRA Annual Operations Plans for the High-Level Waste Repository Safety Program; Southwest Research Institute Management Plan for the Geosciences and Engineering Divisions; Memorandum of Understanding between NRC and DOT.

- 2.6 Are independent evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need?

Purpose of the question: *to ensure that the program (or agency) conducts non-biased evaluations on a regular or as-needed basis to fill gaps in performance information. These evaluations should be of sufficient scope to improve planning with respect to the effectiveness of the program. (For R&D programs, this question is central to prospective planning to address all of the R&D investment criteria (see Attachment A).)*

Answer: Yes

Explanation

Independent evaluations are conducted regularly of the NRC HLW program and its components. The NRC Office of the Inspector General (OIG) performed an audit in FY2005 to determine if the NRC is properly prepared to meet its NWSA prelicensing statutory requirements. Another comprehensive audit has been requested for FY2006.

The NRC Advisory Committee on Nuclear Waste (ACNW), composed of outside technical experts, was established in 1988 specifically to offer independent advice and consultation on the HLW program. During the prelicensing phase, the ACNW regularly reviews the NRC staff technical preparations for license application review and interactions with DOE, and provides the Commission with regular assessments through letter reports and an annual briefing. NRC and ACNW staff continue to work to improve coordination during prelicensing. During the license review phase, the role of ACNW will become more limited, as interactions with NRC staff will cease under the rules for separation of functions (during licensing proceedings, the Commission and its advisors are separated from staff who are performing the technical review).

Activities of the CNWRA are assessed on a periodic basis. The Defense Contract Audit Agency (DCAA) performs an annual audit of SwRI's indirect cost rate proposal and related books and records for the reimbursement of incurred costs. The purpose of the audit is to determine the allowability of direct and indirect costs and establish audit-determined indirect cost rates for the fiscal year. CNWRA performance is reviewed each year to determine its award fee by the NRC Center Review Group. The OIG reviews CNWRA activities every five years, as part of the FFRDC contract renewal. Regular audits are also performed for specific purposes at CNWRA, on such areas as its quality assurance program and information technology security program.

Evidence

Audit of NRC's High-Level Waste Program (OIG-5-A-10); ACNW reports and letters (<http://www.nrc.gov/reading-rm/doc-collections/acnw/letters/>); Audit of NRC Oversight of its

Federally Funded Research and Development Center (OIG-2-A-11); Annual Performance Audits of the CNWRA.

- 2.7 Are Budget requests explicitly tied to accomplishment of the annual and long-term performance goals, and are the resource needs presented in a complete and transparent manner in the program's budget?

Purpose of the question: *to establish whether the performance-planning and budget-planning processes are integrated so that 1) resource allocation decisions reflect desired performance levels (given resource constraints) and 2) the effects of funding and other policy changes on results are clear.*

Answer: Yes

Explanation

The NRC budgeting process clearly links performance goals to budget requests for all aspects of the HLW program. Budget planning begins with identification of Key Planning Assumptions and Major Program Outputs for all programs, and proceeds through a Common Prioritization procedure to ensure that budget requests are integrated within programs and across the Agency. The explicit links between performance and budget are presented in the annual Performance Budget Green Book; (NUGEG-1100). A challenge for the HLW program budget process has been determining proper baselines and contingencies in the face of uncertainty driven by significant outside actions, specifically, the timing of DOE's LA submittal.

The FY 2007 Performance Budget to Congress includes improvements to further enhance budget and performance integration. These improvements include clarifying the linkage between the agency's performance measures, output measures, and the agency's strategic outcomes. In particular, the document will identify which performance measures are supported by each output measure, and identify which strategic outcomes are supported by the seven activities under the agency's two major programs of Nuclear Reactor Safety and Nuclear Materials and Waste Safety, including the HLW Repository program.

Evidence

NRC Performance Budget, FY2006 (NUREG-1100, Vol. 21).

- 2.8. Has the program taken meaningful steps to correct its strategic planning deficiencies?

Purpose of the question: *to determine whether the program is on track to correct any strategic planning deficiencies that have been identified.*

Answer: Yes

Explanation

As precicensing activities and planning for the LA review and hearings have progressed, apparent deficiencies have been identified and corrected. Most notable was the creation of a separate Division of High-Level Waste Repository Safety (HLWRS) within the Office of Nuclear Material Safety and Safeguards. The new Division subsumes what had been a branch within the former Division of Waste Management, and consolidates technical capabilities for preparation and review of a potential LA. Other steps include the formation of the CATS group, to address the Commission's need for independent review and advice while the staff is reviewing the LA, preparing its safety evaluation report (SER) and participating in the hearing

process. In the longer term, strategic planning for the HLW program led to several major NRC initiatives, including the establishment of the CNWRA and the ACNW in the mid-1980s.

The program also responded to integration and planning needs by creating the position of HLW Business Process Integrator, to coordinate activities that cross organizational boundaries. Cross-boundary coordination has been further strengthened by forming an IT/IM Systems Senior Management Team, which meets regularly. In addition, the program has responded to recommendations in a recent NRC OIG audit by better integrating the HLW communication efforts across the agency, and enhancing its public outreach team for HLW activities,

Evidence

NRC Performance Budget, 2006 (NUREG-1100, Vol. 21); NRC Strategic Plan, FY2004-2009 (NUREG-1614, Vol. 3); NRC Organizational Chart; Audit of NRC's High-Level Waste Program (OIG-5-A-10).

Regulatory Based Programs

2.RG1 Are all regulations issued by the program/agency necessary to meet the stated goals of the program, and do all regulations clearly indicate how the rules contribute to achievement of the goals?

Purpose of the question: to determine whether the program had developed regulations with clearly specified goal(s). It should be determined whether (1) the program is only issuing those rules absolutely necessary to achieve long-term program goals and is not over-regulating, (2) all of the rules necessary to meet the program goals have been issued, and (3) the regulations clearly indicate how they help to meet the program goals.

Answer: Yes

Explanation

The limited number of regulations for the NRC HLW program are contained within 10 CFR Part 2, 10 CFR Part 51, and 10 CFR Part 63. Part 2 covers procedures for the licensing proceedings for a geologic HLW repository, Part 51 addresses environmental protection regulations, while Part 63 defines the licensing process, the information required for review, and the risk-informed, performance-based criteria that an applicant must meet. 10 CFR Part 63 is specific to the Yucca Mountain, Nevada, site. It supercedes generic regulations for a geologic HLW repository in 10 CFR Part 60. The purpose of 10 CFR Part 63 in implementing NRC's regulatory mission for a geologic HLW repository is clearly laid out in the Statement of Considerations for the rule.

The performance standards in 10 CFR Part 63 are required by statute to be consistent with those defined by EPA. In July, 2004, the U.S. District Court of Appeals for the District of Columbia Circuit vacated in part the Yucca Mountain standards set forth by EPA in 40 CFR Part 197, and the incorporation of those standards in 10 CFR Part 63. Revision of the EPA standards in accord with the Court ruling is presently in process. EPA issued its proposed rule in August 2005. NRC will also revise 10 CFR Part 63 to incorporate the final revision of 40 CFR Part 197, as required under the EnPA. A proposed rule was published in September 2005.

Evidence

Statement of Considerations and Final Rules on Disposal High-Level Radioactive Waste in a Proposed Geologic Repository at Yucca Mountain, Nevada, Federal Register, vol. 66, no. 213,

pp. 55732-55816, November 2, 2001; 10 CFR Part 2 (Subpart J and Appendix D); 10 CFR Part 63; 40 CFR Part 197; Public Health and Environmental Radiation Protection Standards for Yucca Mountain, NV (Proposed Rule), Federal Register, vol. 70, no. 161, pp. 49014-49065, August 22, 2005; 10 CFR Part 63, Implementation of a Dose Standard After 10,000 Years (Proposed Rule), Federal Register, vol. 70, no. 173, pp. 53313-53320, September 8, 2005.

III. PROGRAM MANAGEMENT

- 3.1 Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance?

Purpose of the question: *to determine whether the program collects data on performance and the performance of its partners and uses the data to inform program management, resource decisions, and program performance.*

Answer: Yes

Explanation

Performance information is collected regularly, and used to actively manage the program. Division-level Operations Plans are reviewed quarterly by senior management at the Division, Office, and Deputy Executive Director level. These reviews include performance by the CNWRA, the principal program partner. Current operational and technical issues are assessed at biweekly meetings of the HLW Board, which is made up of management and senior technical staff from several of the different organizational units. A parallel group meets biweekly on IT/IM issues, and IT/IM activities and associated business processes are reviewed monthly by the Director of the Office of Information Services. Weekly meetings of the Yucca Mountain technical team also serve to collect performance information.

NRC's contract with SwRI for the CNWRA is a performance-based cost-plus-award-fee type of contract. NRC conducts evaluations of the Center's performance semiannually and formally rates the performance and awards an award fee on an annual basis. The award fee is provided to establish and maintain a high level of technical expertise to ensure effective performance of functions related to the NRC HLW program. Action items for CNWRA operations that come out of the performance reviews are tracked and resolved through the HLW Board.

Further performance information is gathered through regular interactions with DOE and program stakeholders, including members of the public, public interest groups, industry groups, affected units of local government, and the state of Nevada. These include quarterly NRC-DOE Management Meetings, and regular Technical Exchanges with DOE. All public meetings include time set aside for stakeholder comment, and NRC meeting feedback forms are provided for written comments.

Evidence

CNWRA contract information; Agendas and meeting reports of NRC-DOE Management Meetings and Technical Exchanges (<http://www.nrc.gov/public-involve/public-meetings/index.cfm>).

- 3.2 Are Federal managers and program partners (including grantees, sub-grantees, contractors, cost-sharing partners, and other government partners) held accountable for cost, schedule and performance results?

Purpose of the question: *to determine whether the program managers and partners are accountable for achieving program results.*

Answer: Yes

Explanation

All managers in the HLW program are responsible for developing, implementing, and managing their activities in accord with the NRC Strategic Plan, Management Directives, the program goals, and the Division-level Operations Plans. Manager effectiveness in achieving performance measures is directly reflected in supervisory and Senior Executive Service (SES) annual appraisals.

For the CNWRA, the principal partner in the HLW program, the performance based award fee contract was established to hold the contractor accountable for cost, schedule and technical performance and to stimulate management actions which will motivate CNWRA staff to strive for excellent overall performance. The criteria in the contract which the NRC uses to evaluate performance include: (1) Technical. The extent to which the contractor provides high quality technical assistance and research in support of NRC's HLW program, including, timeliness, quality and independence and initiative. (2) Management and Staffing. The extent to which the contractor develops, equips, staffs and operates a Center capable of meeting NRC's long-term and short-term needs, establishes appropriate priorities, and utilizes available resources efficiently and effectively. (3) Cost Control and Contract Administration. The extent to which the contractor conducts its work in a cost-effective manner and has controls necessary to ensure that technical work products are completed within established cost limitations.

Evidence

NRC Strategic Plan, FY2004-2009 (NUREG-1614, Vol. 3); NRC Performance Budget, FY2006 (NUREG-1100, Vol. 21, pp. 72-92); Management Directive 10.137 and NRC Form 351 (SES Performance Appraisals); CNWRA contract.

3.3 Are funds (Federal and partners') obligated in a timely manner and spent for the intended purpose?

Purpose of the question: *to determine whether funds are administered efficiently and obligated in accordance with planned schedules and spent for the intended purposes.*

Answer: Yes

Explanation

NRC systems for budget execution and the administrative control of funds comply with the requirements set forth in OMB circulars, the Antideficiency Act, the Impoundment Control Act of 1974, and Chief Financial Officers Act of 1990. Agency policies and procedures are documented in NRC MD, Vol. 4, "Financial Management." NRC Office of the Chief Financial Officer (OCFO) monitors commitments, obligations, and expenditures on a monthly basis and reports findings in the monthly Budget Execution Report. All managers of contract funds are required to complete formal training/certification requirements. Additionally, contract funds are tracked and reported at the Division (monthly), Office (quarterly), and executive (mid-year) levels of management to ensure rigorous accountability, agency-wide consistency, and to ensure targets are met. All NRC program managers have a target of 65% for fund obligations by mid-year, and an expenditure target of the total of the number of months remaining in the FY plus 4 additional months, to allow ongoing work to continue, uninterrupted into the next fiscal year. To ensure that funds are obligated consistent with program needs, funds are routinely incrementally obligated through the year, when final program requirements are more definite. For instance, if funding needs for a project have changed, subsequent obligations are revised, funds are reprogrammed to other projects or returned to the CFO. NRC tracks fund usage in computerized financial control systems that allow a forecast of spending through the FY.

Measures and/or targets are established for carryover of contract funding, training, and travel resources.

Funds for the CNWRA contract are obligated in a timely manner as tracked in the NMSS Operating plan. Funds obligated on the Center contract are spent for activities described in the contractor's annual Operations Plans which are reviewed and approved by the NRC staff.

Evidence

Management Directive (MD) 4.2, Acquisition Certification and Training program, April 30, 2004, memorandum to Office Directors and Regional Administrators from the Executive Director for Operations; NMSS Financial Control System (FCS); OCFO Budget Execution Reports.

- 3.4 Does the program have procedures (e.g., competitive sourcing/cost comparisons, IT improvements, appropriate incentives) to measure and achieve efficiencies and cost effectiveness in program execution?

Purpose of the question: *to determine whether the program has effective management procedures in place to ensure the most efficient use of each dollar spent on program execution.*

Answer: Yes

Explanation

The HLW program has a number of procedures and processes designed to measure and achieve efficiencies and cost effectiveness. For example, as discussed above, the award fee component of the CNWRA contract was established to provide an incentive for the Contractor to perform in an efficient and cost effective manner.

Preparation for LA review and hearings has involved several significant IT/IM initiatives. The HLW Meta-System, for example, is the collection of business processes, computer applications, and information technology infrastructure components that serve to integrate functions that directly support the hearing process, including the LSN, Electronic Hearing Docket (EHD), Electronic Information Exchange (EIE), and Digital Data Management System (DDMS). Planning and implementation of these initiatives involved staff from several organizational units, particularly the Division of High-Level Waste Repository Safety in the Office of Nuclear Materials Safety and Safeguards (HLWRS/NMSS), the Office of Information Services (OIS), the Office of General Counsel (OGC), the Office of the Secretary (SECY), and the Atomic Safety Licensing Board Panel (ASLBP). The position of HLW Business Process Integrator (BPI) was established to coordinate cross-organization activities such as these, to promote better efficiency and cost effectiveness. These initiatives used well-developed procurement plans for IT/IM equipment and services that included competitive sourcing and other efficiency procedures.

Evidence

CNWRA contract; Project Plan for HLW Meta-System.

- 3.5 Does the program collaborate and coordinate effectively with related programs?

Purpose of the question: *to determine whether a Federal program collaborates with other related program(s) in a meaningful way.*

Answer: Yes

Explanation

The HLW program collaborates effectively with other NRC programs by sharing of technical and regulatory expertise. In addition to those organizations with specific HLW program activities, other related NRC groups with valuable expertise include those involved with Low-Level Waste and Waste Incidental to Reprocessing in the Division of Waste Management and Environmental Protection, and other areas that deal with nuclear fuel, in the Division of Fuel Cycle Safety and Safeguards, the Spent Fuel Project Office, Office of Nuclear Reactor Regulation, and Office of Nuclear Regulatory Research. This includes staff rotations as well as technical consultation.

The NRC HLW program also coordinates effectively with other agencies that have responsibilities under the overall Federal HLW policy. These are primarily DOT, EPA, and, most significantly, DOE. As mentioned, transportation issues are coordinated through an MOU between NRC and DOT. NRC has coordinated with EPA on standards and regulations for Yucca Mountain, through the OMB rulemaking coordination process. The NRC HLW program has a unique relationship with DOE, through their Office of Civilian Radioactive Waste Management (OCRWM). DOE is the potential licensee, and intends to submit a LA to be reviewed by the NRC HLW program. The NWPA provides for prelicensing interactions between DOE and NRC, and procedures are defined in a formal agreement between the agencies. The aim of prelicensing interactions has been to help ensure a high-quality LA, that can be reviewed by NRC in accord with the strict time limits given in the NWPA.

The NRC HLW program also collaborates and coordinates with national HLW programs in other countries, through participation in international technical meetings and organizations (e.g., IAEA, NEA), and through staff visits and rotational assignments.

Evidence

Memorandum of Understanding between NRC and DOT; Agreement Between DOE/OCRWM and NRC/NMSS Regarding Prelicensing Interactions; Nuclear Waste Policy Act, 1982; 10 CFR Part 63, 40 CFR Part 197.

3.6 Does the program use strong financial management practices?

Purpose of the question: *to determine whether the program uses effective financial management practices in administering program funds.*

Answer: Yes

Explanation

NRC financial management practices governing control of funds and resource allocation are proceduralized and implemented by the Program. This ensures the use of funds for authorized purposes only, that funds are responsibly, economically, and efficiently used, that the level of funds being committed and obligated is available, and that funds are committed and obligated in the proper time frame. Funds control duties are assigned to a sufficient number of adequately trained program staff who are designated in writing. Staff responsible for fund certification are different from staff responsible for fund commitment and obligation, ensuring an appropriate check and balance in fund management. The effectiveness of these practices is reflected in the NRC financial statements that have earned unqualified opinions for 10 of the last 11 years, with no material weaknesses found in the FY 2004 audit impacting the program's

financial management. On-time payments of approximately 94% have been routinely observed; payments associated with this program are included in that figure. Similarly, the rate of improper payments is extremely low and involve only a very small fraction of the total funds, well below Improper Payments Information Act and OMB criteria for high risk; payments associated with this program are included in that figure. To improve cost accounting, NRC is planning to complete replacement of the License Fee Billing system in FY2006 and conducts semi annual financial management training seminars for all program staff. Staff involved in the program's contract management activities must attend acquisition training. Annually, the program certifies that there is reasonable assurance that management controls are achieving their intended results, that resources are being used consistent with the Agency mission, & that resources are protected from waste, fraud, and abuse. The programs' certification is reviewed as part of the Office of the Inspector General's annual review regarding the implementation of the Federal Managers' Financial Integrity Act. Through performance appraisals, each manager in the program is responsible for accomplishing performance measures to achieve performance goals. In FY 2004, the SES and SLS appraisals were modified to link individual performance to NRC goals. OPM/OMB provided provisional certification of this improvement in late 2004. As a result, managers are held to exacting standards for cost, schedule, and performance results, and must develop and implement strategies and measures to meet program level outputs and outcomes that roll up to the NRC Strategic Plan goals.

Evidence

NRC Performance and Accountability Report for FY 2004 (NUREG-1542, Vol. 10, pp. 60-76); NRC OIG 05 A 02, "Audit of the Nuclear Regulatory Commission's FY2004 Financial Statements," November 12, 2004; Monthly Budget Execution Reports (BER); NRC Management Directive 4.2, "Administrative Control of Funds"; NMSS reasonable assurance statement, September 29, 2004; NMSS FY2005 Management Control Plan, November 29, 2004; SES/SLS Performance Appraisal Memos 10/13/04, 5/13/03, and 4/23/04; 12/17/04 letter from OPM to NRC Chairman certifying NRC SES performance appraisals; NRC Management Directive 4.4, "Management Controls"; OMB Memorandum 03 13, "Improper Payments Information Act of 2002 (Public Law No. 107 300)," May 21, 2003; Memorandum Report: Review of NRC's Implementation of the Federal Manager's Financial Integrity Act for Fiscal Year 2004, December 22, 2004.

3.7 Has the program taken meaningful steps to address its management deficiencies?

Purpose of the question: to determine whether the program has developed a system of evaluating program management and correcting deficiencies when they are identified. This question should include, but is not limited to, financial management or other Presidential Management Agenda deficiencies. However, the focus of the question is program-level deficiencies, as opposed to agency-level deficiencies that may not directly affect the program.

Answer: Yes

Explanation

The HLW program has taken several steps to address management issues, particularly the challenge of managing a program that cuts across multiple organizational units. Many of these also addressed strategic planning issues, and are discussed in the response to question 2.8. A

significant step was the creation in 2004 of a distinct Division of High-Level Waste Repository Safety (HLWRS) within NMSS. This focused efforts on the HLW repository and elevated their visibility within the agency. The Division of HLWRS serves as the lead unit for the program's precicensing activities in NRC, and has primary responsibility for the LA review.

The position of HLW Business and Program Integrator was created within NMSS to coordinate IT/IM, project planning, and associated business processes among the 16 different units in the HLW program. These activities include the establishment of the LSN and HLW Meta-System, IT/IM coordination for a new hearing facility in Las Vegas, and other planning activities for review of an LA.

Separation of functions considerations of the NRC hearing process separate the NRC staff from the judges and Commission during the technical review and hearing process. The Commission recognized that adjudicatory hearings on the YM LA are expected to be technically complex and highly contentious. An independent technical advisory group has therefore been established to advise the Commission during this period, the Commission Adjudicatory Technical Support (CATS) group. CATS is based in the Office of General Counsel (OGC) and draws on NRC technical staff who are not primary participants in the LA review.

Evidence

NRC Strategic Plan, FY2004-2009 (NUREG-1614, Vol. 3); NRC Organizational Chart; HLW Electronic Hearing Docket (http://hlwehd.nrc.gov/Public_HLW-EHD/home.asp).

Regulatory Based Programs

3.RG1 Did the program seek and take into account the views of all affected parties (e.g., consumers; large and small businesses; State, local and tribal governments; beneficiaries; and the general public) when developing significant regulations?

Purpose of the question: *to determine the level of coordination, during the rulemaking process, with parties affected by the regulations.*

Answer: Yes

Explanation

NRC's rulemaking process proactively seeks and takes into account the views of the public and stakeholders through public notifications, public meetings, and petitions for rulemaking. An Advanced Notice of Proposed Rulemaking or an Issues Paper published in the Federal Register obtains comments on regulatory actions under consideration. All proposed rules are published for public comment. While only one entity, DOE, will be regulated under this program, a number of other stakeholders exist, and were involved in the rulemaking process. The draft rules were coordinated with the other Federal agencies (DOE and EPA) through the OMB process. Many different stakeholders, including DOE, EPA, the state of Nevada, the nuclear power industry (individually and through its advocacy group, the Nuclear Energy Institute), affected units of local government, public advocacy groups, and individuals, provided comments on the proposed regulations.

This process is demonstrated in rulemaking activities for the HLW program. For example, two

of these activities addressed the site-specific licensing criteria for the proposed Yucca Mountain repository, and the third concerned amendments to the Rules of Practice for Licensing Proceeding for a High-Level Radioactive Waste Geologic Repository.

The proposed regulations for a site-specific HLW repository at Yucca Mountain had an extended (120 day) public comment period, including five public meetings in Nevada. The primary regulations for the proposed Yucca Mountain repository are in 10 CFR 63. Comments and revisions were also included for portions of 10 CFR Parts 2, 19, 20, 51, 70, 72, 73, and 75 that were revised to reference 10 CFR Part 63. More than 700 discrete comments in about 160 individual letters were received, reviewed, and considered in preparing the final rule. An additional 193 comments from public meetings were also identified and evaluated. Comment responses were provided in the Statement of Considerations published with the final rules in the Federal Register.

NRC regulations under the National Environmental Policy Act (NEPA) are contained in 10 CFR Part 51, and were updated for licensing of a geologic HLW repository at Yucca Mountain in 2001, after an opportunity for public comment. The NRC is currently considering a petition from the state of Nevada for further revision.

Stakeholders were further involved in the amendment to 10 CFR Part 63, to specify the probability of unlikely features, events, and processes. Comments from five stakeholder organizations were received during a 75 day comment period; these were reviewed and addressed in the Federal Register.

A further rulemaking was completed in 2004 that amended the NRC Rules of Practice for Licensing Proceedings on disposal of HLW at a geologic repository. These amendments primarily concerned use of the LSN and EHD. Nine stakeholder comments on these procedural amendments were received, reviewed, and addressed in the Federal Register.

These are the only relevant completed rulemakings for the NRC HLW program. A revision to 10 CFR Part 63 has been proposed to be consistent with the revised EPA standard, and a public comment period is in progress.

Evidence

Statement of Considerations and Final Rules on Disposal High-Level Radioactive Waste in a Proposed Geologic Repository at Yucca Mountain, Nevada, Federal Register, vol. 66, no. 213, pp. 55732-55816, November 2, 2001; Statement of Considerations and Final Rule on specification of a Probability for Unlikely Features, Events and Processes, Federal Register, vol. 67, no. 195, pp. 62628-62634, October 8, 2002; Statement of Considerations and Final Rule on Licensing Proceeding for a High-Level Radioactive Waste Geologic Repository, Federal Register, vol. 69, no. 113, pp. 32836-32849, June 14, 2004; 10 CFR Part 63, Implementation of a Dose Standard After 10,000 Years, Federal Register, vol. 70, no. 173, pp. 53313-53320, September 8, 2005; 10 CFR Part 2; 10 CFR Part 51; 10 CFR Part 63.

3.RG2 Did the program prepare adequate regulatory impact analyses if required by Executive Order 12866, regulatory flexibility analyses if required by the Regulatory Flexibility Act and SBREFA, and cost-benefit analyses if required under the Unfunded Mandates Reform Act; and did those analyses comply with OMB guidelines?

Purpose of the question: *to determine whether the program, in justifying its rules, prepares sound analyses (i.e., cost-benefit analysis, risk analysis) that are rigorous, thorough, and based upon the best available data and consistent with OMB's economic analysis guidelines.*

Answer: Yes

Explanation

NRC is in full compliance with the requirements of SBREFA and the Regulatory Flexibility Act for applicable rulemakings. All rulemaking in NMSS is coordinated through its Rulemaking and Guidance Branch, which performs the regulatory analyses. This Branch handled the rulemaking for 10 CFR Part 63 and its amendment. The rulemaking for amendment to 10 CFR Part 2 was done through NRC's Office of General Counsel, which performed the regulatory analysis. All of these analyses were in accord with OMB guidelines.

As noted, 10 CFR Part 63 applies to one entity, DOE, which is not a "small entity" as defined by the Regulatory Flexibility Act or SBREFA. The amendments to 10 CFR Part 2 affect potential parties to a Yucca Mountain licensing hearing. Of these, DOE and the state of Nevada do not qualify as "small entities." Other potential parties that are or may be "small entities" are shown in the regulatory analysis to benefit from the amendments.

Evidence

Statement of Considerations and Final Rules on Disposal High-Level Radioactive Waste in a Proposed Geologic Repository at Yucca Mountain, Nevada, Federal Register, vol. 66, no. 213, pp. 55732-55816, November 2, 2001; Statement of Considerations and Final Rule on specification of a Probability for Unlikely Features, Events and Processes, Federal Register, vol. 67, no. 195, pp. 62628-62634, October 8, 2002; Statement of Considerations and Final Rule on Licensing Proceeding for a High-Level Radioactive Waste Geologic Repository, Federal Register, vol. 69, no. 113, pp. 32836-32849, June 14, 2005.

3.RG3 Does the program systematically review its current regulations to ensure consistency among all regulations in accomplishing program goals?

Purpose of the question: to determine whether the agency met the goal intended when developing the regulation. It should be clear that the program consists of only those regulations that are: (1) necessary in achieving its goals, (2) relevant to the current societal and economic situation, and (3) complementary and consistent with each other.

Answer: Yes

Explanation

The NRC HLW program has a very limited number of regulations to achieve its program goals. The site-specific licensing criteria in 10 CFR Part 63, issued in 2001, supercede the older generic rules for a geologic HLW repository contained in 10 CFR Part 60. The site specific rules are explicitly risk informed and performance based, to better address the potential risk from a repository. By statute, the public health and environmental protection standards in 10 CFR Part 63 are consistent with those promulgated by EPA in 40 CFR Part 197.

In response to the July, 2004, ruling by the U.S. District Court of Appeals for the District of Columbia Circuit, EPA has proposed a revision of 40 CFR Part 197 to include a compliance period greater than 10,000 years. NRC has proposed a revision of 10 CFR Part 63 to be consistent with the final EPA standards.

The 2005 amendment to 10 CFR Part 2 updates the NRC Rules of Practice for a HLW Repository Licensing Proceedings to better utilize improvements in information technology, and reduce unnecessary burden of loading duplicate documents on individual participant servers in the LSN. These amendments reflect the ongoing reviews by OGC of NRC Rules of Practice to help make the hearing process more effective and efficient.

Evidence

10 CFR Part 2; 10 CFR Part 63; Public Health and Environmental Radiation Protection Standards for Yucca Mountain, NV (Proposed Rule), Federal Register, vol. 70, no. 161, pp. 49014-49065, August 22, 2005; Statement of Considerations and Final Rule on Licensing Proceeding for a High-Level Radioactive Waste Geologic Repository, Federal Register, vol. 69, no. 113, pp. 32836-32849, June 14, 2005; 10 CFR Part 63, Implementation of a Dose Standard After 10,000 Years (Proposed Rule), Federal Register, vol. 70, no. 173, pp. 53313-53320, September 8, 2005.

3.RG4 Are the regulations designed to achieve program goals, to the extent practicable, by maximizing the net benefits of its regulatory activity?

Purpose of the question: *to determine whether the program, as it promulgates regulations, ensures that its regulatory requirements, in total, maximize net benefits. (Note that this question relates to the promulgation of regulations, as opposed to their implementation.)*

Answer: Yes

Explanation

As noted, the HLW program has a minimal number of regulations that are specifically designed to achieve the program goals. The regulations in 10 CFR Part 63 are risk informed and performance based.

Evidence

10 CFR Part 63.

IV. PROGRAM RESULTS/ACCOUNTABILITY

- 4.1 Has the program demonstrated adequate progress in achieving its long-term performance goals?

Purpose of the question: to determine whether the program is meeting or making measurable progress toward meeting the long-term performance goals evaluated in Questions 2.1 and 2.2. The question also seeks to determine whether the program's partners are meeting long-term goals evaluated in Question 2.5, if partner performance is critical to the program achieving its goals. Examples of partners can include grantees, participating financial institutions, regulated bodies, or suppliers.

Answer: Yes

Explanation

The NRC HLW program is progressing towards its overall long-term goal of providing independent oversight and regulation of a geologic repository for HLW. For the present prelicensing phase, it has met its statutory responsibility of providing comments, in a timely manner, to DOE and to Congress on DOE's Site Recommendation. Further significant achievements during prelicensing were the promulgation of regulations with site-specific licensing criteria for a repository at Yucca Mountain, and for the Rules of Practice for adjudicatory proceedings.

Evidence

NRC comments on DOE Site Recommendation for a High-Level Waste Repository at Yucca Mountain, Nevada, letters to Robert G. Card, DOE, and to Senator Harry Reid, November 13, 2001; 10 CFR Part 63; 10 CFR Part 2, Subpart J, Appendix D.

- 4.2 Does the program (including program partners) achieve its annual performance goals?

Purpose of the question: to determine whether the program is meeting the targets evaluated in Question 2.4. The question also seeks to determine whether the program's partners are meeting annual targets evaluated in Question 2.5, if partner performance is critical to the program achieving its overall targets. Examples of partners can include grantees, contractors, participating financial institutions, regulated bodies, or suppliers.

Answer: Yes

Explanation

Annual performance results are documented in the Green Book. For the current licensing phase, these cover interactions with DOE, and NRC preparations for LA review. Public meetings with DOE continue to be held on specific technical issues. The 293 KTI agreements near completion, with a few remaining open due to specific technical information needs or DOE programmatic delays. Most of these activities involved integral technical support from CNWRA, through deliverable work products and direct participation by CNWRA staff.

Several major documents that address both DOE interactions and staff preparation have been issued, including staff guidance for the LA review in the Yucca Mountain Review Plan, the

Integrated Issue Resolution Status Report (with a subsequent complete update), and the Risk Insights Baseline Report. As previously noted, NRC certified its document collection in LSN on schedule and without any challenge, and continues to provide monthly certification of supplements.

Further results for review and hearing preparation include the completion of the Operational Readiness Review for Release 1 of the HLW Meta-System, that integrates the various electronic document handling support tasks for the hearing process, including the LSN. The Meta-System in place meets the requirements in 10 CFR Part 2 for adjudicatory support, at the service loads identified by the ASLBP. The EHD is currently in operation supporting prehearing adjudicatory activities. A new NRC hearing facility in Las Vegas has also been constructed, equipped, and staffed. Beginning in July 2005, the facility is now being used for NRC-DOE public prelicensing interactions on Yucca Mountain.

Evidence

NRC Performance Budget, FY2006 (NUREG-1100, Vol. 21, pp. 52-61); Annual Commission Briefings on Waste Area Activities; Yucca Mountain Review Plan (NUREG-1804, 2003); Integrated Issue Resolution Status Report (NUREG-1762, 2002; Rev. 1, 2005); Risk Insights Baseline Report (NUREG-1762, Rev. 1, Appendix D, 2005); Licensing Support Network (<http://www.isnnet.gov/>); Electronic Hearing Docket (http://hlwehd.nrc.gov/Public_HLW-EHD/home.asp).

- 4.3 Does the program demonstrate improved efficiencies or cost effectiveness in achieving program goals each year?

Purpose of the question: *to determine whether management practices have resulted in efficiency gains over the past year.*

Answer: Yes

Explanation

Efficiencies are not simple to measure in a first-of-its-kind program like HLW, especially one where specific activities change from year to year. For those measures that can be compared over time during prelicensing, the process of completing the KTI agreements has shown increased efficiency in that more agreements were addressed each year as the anticipated date of LA submittal approached. Timeliness of NRC reviews of DOE issue responses has also improved, although direct comparison between agreements is complicated by the variable complexity of the issues addressed. In particular, the understanding of the significance of the KTI for waste isolation in a repository (as documented by NRC staff in the Risk Insights Baseline Report), was used to guide the priority of responses on the KTI agreements. The higher priority given to those issues with higher risk significance led to greater efficiency in completing responses. Measures of preparatory activities consistently showed that schedules were met. Integration of IT/IM system development into the HLW Meta-System has improved information-handling capabilities, and strongly positioned the program for an efficient license review phase. As part of the development of the HLW Meta-System, a business process re-engineering of document processing activities will result in savings of time and resources during the adjudicatory process. Efficiencies in many areas, however, are difficult to quantify, as individual milestones involve widely differing products each year.

Evidence

NRC Performance Budget, FY2006 (NUREG-1100, Vol. 21, pp. 52-61); Integrated Issue Resolution Status Report (NUREG-1762, 2002; Rev. 1, 2005); Risk Insights Baseline Report (NUREG-1762, Rev. 1, Appendix D, 2005).

- 4.4 Does the performance of this program compare favorably to other programs, including government, private, etc., with similar purpose and goals?

Purpose of the question: *to determine how well the program performs relative to other programs engaged in a similar activity.*

Answer: Not applicable

Explanation

No other government or private programs exist with similar purposes and goals. The HLW program for a geologic repository is the first of its kind. Programs for regulation of other types of waste disposal (e.g., low-level radioactive waste, other hazardous waste) have very different structure, statutory requirements, licensees, and development schedules.

Evidence

Nuclear Waste Policy Act of 1982, as amended; Energy Policy Act of 1992.

- 4.5 Do independent evaluations of sufficient scope and quality indicate that the program is effective and achieving results?

Purpose of the question: *to determine whether the program is effective based on independent and comprehensive evaluations. This question may be particularly important for programs that have substantial difficulty formulating quantitative performance measures.*

Answer: Yes

Explanation

The NRC OIG audit found that the HLW program satisfies the agency's NWPA responsibilities through promulgation and implementation of 10 CFR Part 63, and is carrying out its prelicensing functions. The audit report found that the program did not, however, have a "holistic" communications plan for internal and external stakeholders, especially given the complexity of the issues involved in the HLW program. In response to this finding and the audit recommendation, the program developed an integrated communications plan that addressed the issues, and enhanced its public outreach team.

In addition, the ACNW regularly reports to the Commission on the status of NRC's HLW program. These letters and reports document evaluations and recommendations by the Committee, and the steps taken by the program to correct apparent deficiencies. The ACNW have previously stated that, on balance, the program has the necessary capabilities and staff in place to review a potential DOE license application. The most recent Commission briefing by ACNW on all NRC waste programs stressed the overall high quality of NRC activities.

Evidence

Audit of NRC's High-Level Waste Program (OIG-5-A-10); ACNW reports and letters (<http://www.nrc.gov/reading-rm/doc-collections/acnw/letters/>).

Regulatory Based Programs

4.RG1 Were programmatic goals (and benefits) achieved at the least incremental societal cost and did the program maximize net benefits?

Purpose of the question: to determine whether the program met its goals in the most efficient way possible. It should be determined whether the program maximized net benefits through implementation of its regulatory actions (as opposed to regulatory development). In calculating the incremental costs of a new regulation, these costs should be compared to a baseline or, in a small number of cases, a less stringent alternative. This question deals with the actual implementation of the regulatory action, not just the conception and promulgation of the regulatory action.

Answer: Yes/Not applicable

Explanation

DOE has not yet submitted its LA, thus the implementation of the HLW program regulatory actions has been minimal. The risk-informed, performance-based regulations in 10 CFR Part 63, and guidance provide by NRC on those regulations, have greatly aided DOE in their continuing preparation of a high-quality LA.

Evidence

10 CFR Part 63; Yucca Mountain Review Plan (NUREG-1804, 2003).

Attachment 3: List of Acronyms

| | |
|-------|--|
| ACNW | Advisory Committee on Nuclear Waste (NRC) |
| ADM | Office of Administration (NRC) |
| ASLBP | Atomic Safety and Licensing Board Panel (NRC) |
| CATS | Commission Adjudicatory Technical Support (NRC) |
| CFR | Code of Federal Regulations |
| CNWRA | Center for Nuclear Waste Regulatory Analyses |
| CSNF | Commercial spent nuclear fuel |
| DDMS | Digital Data Management System |
| DOE | U. S. Department of Energy |
| DOT | U. S. Department of Transportation |
| EHD | Electronic Hearing Docket |
| EIE | Electronic Information Exchange |
| EnPA | Energy Policy Act of 1992 |
| EPA | U. S. Environmental Protection Agency |
| ERA | Energy Reorganization Act of 1974 |
| FEIS | Final Environmental Impact Statement |
| FFRDC | Federally-Funded Research and Development Center |
| HLW | High-level waste |
| HLWRS | Division of High-level Waste Repository Safety (NRC) |
| IAEA | International Atomic Energy Agency |
| IIRSR | Integrated Issue Resolution Status Report (NUREG-1762, Rev. 1) |
| IMNS | Division of Industrial and Medical Nuclear Safety (NRC) |
| IT/IM | Information technology/information management |

| | |
|-------|--|
| KTI | Key technical issues |
| LA | License Application (for a Yucca Mountain HLW repository) |
| LSN | Licensing Support Network |
| MOU | Memorandum of understanding |
| NEA | Nuclear Energy Association |
| NEPA | National Environmental Policy Act of 1971 |
| NMSS | Office of Nuclear Material Safety and Safeguards (NRC) |
| NRC | U. S. Nuclear Regulatory Commission |
| NSIR | Office of Nuclear Security and Incident Response (NRC) |
| NWF | Nuclear Waste Fund |
| NWPA | Nuclear Waste Policy Act of 1982, as amended |
| OCAA | Office of Commission Adjudicatory Advice (NRC) |
| OCFO | Office of the Chief Financial Officer (NRC) |
| OCRWM | Office of Civilian Radioactive Waste Management (DOE) |
| OE | Office of Enforcement (NRC) |
| OEDO | Office of Executive Director for Operations (NRC) |
| OGC | Office of General Counsel (NRC) |
| OI | Office of Investigations (NRC) |
| OIS | Office of Information Services (NRC) |
| OMB | Office of Management and Budget (Federal Executive Branch) |
| PART | Program Assessment Rating Tool |
| RES | Office of Nuclear Regulatory Research (NRC) |
| SECY | Office of the Secretary of the Commission (NRC) |
| SER | Safety Evaluation Report |

| | |
|------|---|
| SFPO | Spent Fuel Project Office (NRC) |
| SwRI | Southwest Research Institute |
| YM | Yucca Mountain, Nevada |
| YMRP | Yucca Mountain Review Plan (NUREG-1804) |