

GAO

Report to the Ranking Minority  
Member, Committee on Governmental  
Affairs, U.S. Senate

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June 2001

# NUCLEAR REGULATORY COMMISSION

## Status of Achieving Key Outcomes and Addressing Major Management Challenges



G A O

Accountability \* Integrity \* Reliability

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## Abbreviations

ADAMS	Agencywide Documents Access and Management System
EPA	Environmental Protection Agency
GAO	General Accounting Office
GPRA	Government Performance and Results Act
NRC	Nuclear Regulatory Commission
OIG	Office of the Inspector General
OMB	Office of Management and Budget



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United States General Accounting Office  
Washington, DC 20548

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June 29, 2001

The Honorable Fred Thompson  
Ranking Minority Member  
Committee on Governmental Affairs  
United States Senate

Dear Senator Thompson:

As you requested, we reviewed the Nuclear Regulatory Commission's (NRC) fiscal year 2000 performance report and fiscal year 2002 performance plan required by the Government Performance and Results Act of 1993 (GPRA) to assess its progress in achieving selected key outcomes that you identified as important mission areas for the agency.<sup>1</sup> These are generally the same outcomes we addressed in our June 2000 review of NRC's fiscal year 1999 performance report and fiscal year 2001 performance plan to provide a baseline by which to measure its performance from year-to-year.<sup>2</sup> These selected key outcomes are:

- prevent radiation-related deaths or illnesses due to civilian nuclear reactors,
- prevent radiation-related deaths or illnesses due to the civilian use of nuclear material, and
- prevent adverse impacts from radioactive waste to public health and safety.

As agreed, using the selected key outcomes for NRC as a framework, we (1) assessed the progress NRC has made in achieving these outcomes and the strategies in place to achieve them and (2) compared NRC's fiscal year 2000 performance report and fiscal year 2002 performance plan with its prior year performance report and plan for these outcomes. In addition, we agreed to analyze how NRC addressed its major management challenges, including the governmentwide high-risk areas of strategic human capital management and information security, that we and NRC's Office of the Inspector General identified. Appendix I provides detailed

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<sup>1</sup>This report is one of a series of reports on the 24 Chief Financial Officers (CFO) Act agencies' fiscal year 2000 performance reports and fiscal year 2002 performance plans.

<sup>2</sup>*Observations on the Nuclear Regulatory Commission's Fiscal Year 1999 Performance Report and Fiscal Year 2001 Performance Plan* (GAO/RCED-00-200R, June 30, 2000).

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information on how NRC addressed these challenges; appendix II contains NRC's comments on a draft of our report.

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## Results in Brief

NRC demonstrated mixed progress in achieving the key outcomes. To measure performance for the three outcomes, NRC established the same four goals: one relates to safety and three relate to such nonsafety issues as public confidence, regulatory burden, and organizational enhancements. Although NRC's strategies for the safety-related performance outcomes seem clear and reasonable, we could not assess NRC's performance for the three nonsafety performance goals because NRC only recently reported measures to achieve them in its fiscal year 2002 performance plan. Since NRC has had limited experience in applying the strategies and measures for the three nonsafety goals, it may need to revise them after it completes various planned evaluations over the next 3 years. The following are specific observations about each outcome.

Planned outcome: Prevent radiation-related deaths or illnesses due to civilian nuclear reactors. Because it is regulating a mature industry, NRC has strategies, measures, and targets to maintain the status quo rather than to demonstrate progress related to safety for this key outcome. NRC reported that it met its targets in fiscal year 2000. However, human capital challenges could affect NRC's ability to meet its performance goals in the future. This is because NRC's office responsible for achieving this outcome is facing the loss of a large percentage of its senior managers and technical staff—about 16 percent and 22 percent, respectively, are eligible to retire now. Because similar human capital challenges could affect meeting all of its key outcomes, NRC has developed a 5-year plan to address human capital concerns across the agency. Furthermore, NRC may find it difficult to meet its performance goal for increasing public confidence because it has not defined the public that it wants to target or developed a baseline from which to measure the increase. NRC's expected actions to meet this goal, like assessing feedback from public meetings, will be of limited use since they focus on selected segments of the public.

Planned outcome: Prevent radiation-related deaths or illnesses due to the civilian use of nuclear material. NRC reported that it improved its performance in fiscal year 2000 compared with its performance in fiscal year 1999 related to safety for this key outcome. Unlike last year, this year NRC says that it has met all of the performance goals. However, NRC has concerns about the quality of its performance data for 10 measures related to this key outcome and noted that the actual data reported for some of the safety performance goal measures are subject to change on the basis

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of further analysis and the receipt of newly reported information. In addition, although NRC developed more realistic performance targets for fiscal year 2002, some are easily achievable and do not challenge or stretch staff to improve their performance.

Planned outcome: Prevent adverse impacts from radioactive waste to public health and safety. As with its outcome for civilian nuclear reactors, NRC has strategies, measures, and targets to maintain the status quo rather than to demonstrate progress related to safety for this key outcome. NRC reported that it met its targets in fiscal year 2000. However, NRC's ability to achieve its performance measures in the future could be affected by external factors. For example, the Environmental Protection Agency may issue more stringent standards for the level of radiation that can safely remain at a nuclear power plant site after licensees complete their decommissioning activities than NRC is currently using.

NRC made a number of improvements to its fiscal year 2000 performance report and fiscal year 2002 performance plan. For example, NRC developed measures for three performance goals and provided additional information to ensure the credibility of its performance data—an issue that has concerned us for several years. In addition, NRC's fiscal year 2002 performance plan describes ongoing and planned actions to address the management challenges that we and its Office of the Inspector General identified and relates each challenge to the strategic and performance goals for the three key outcomes. NRC did not include comparable information in its fiscal year 2001 performance plan.

NRC's fiscal year 2000 performance report does not explain its progress in resolving the challenges related to strategic human capital management or information security, and its performance plan for fiscal year 2002 does not have performance goals or measures related to them. However, NRC's fiscal year 2002 performance plan included a management strategy to sustain a high-performing, diverse workforce. To attain this goal, NRC says that it will base human resource decisions on sound workforce planning and analysis. In this regard, in January 2001, the staff provided the Commission with a suggested action plan—a 5-year, \$2.4 million effort for maintaining core competencies, knowledge, and skills needed by NRC. Concerning other management challenges, NRC does have performance measures or strategies that specifically address two of the management challenges that we identified: (1) resolving numerous issues to implement a risk-informed approach for commercial nuclear power plants and (2) overcoming inherent difficulties to apply a risk-informed approach to nuclear material licensees. Although NRC does not have a performance

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goal or measure for the third challenge related to managing the agency—coping with its strategic human capital management crisis, improving its financial management by developing and implementing a cost accounting system, and ensuring that information technology acquisitions are developed and implemented as intended—it has management strategies to address the challenge. For example, NRC says it will provide proactive information management and information technology services by working with its program and support offices and by providing a reliable and user friendly infrastructure for internal and external stakeholders. Although its management strategies show NRC’s commitment to address this challenge, it is early in their implementation and continued attention and oversight will be needed to ensure that NRC’s actions are effective in resolving this challenge.

Although NRC generally agreed with the information presented in the report, it does not agree that its fiscal year 2000 performance report showed mixed progress in achieving the three key outcomes. We revised the report to make it clear that we concluded that NRC's performance was mixed because it had not established measures for three performance goals until it issued its fiscal year 2002 performance plan. Therefore, we could not fully assess NRC's progress in meeting the three key outcomes. NRC also provided technical clarifications, which we incorporated as appropriate.

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## Background

GPRA is intended to shift the focus of government decisionmaking, management, and accountability from activities and processes to the results and outcomes achieved by federal programs. New and valuable information on the plans, goals, and strategies of federal agencies has been provided since federal agencies began implementing GPRA. Under GPRA, annual performance plans are to clearly inform the Congress and the public of (1) the annual performance goals for agencies’ major programs and activities, (2) the measures that will be used to gauge performance, (3) the strategies and resources required to achieve the performance goals, and (4) the procedures that will be used to verify and validate performance information. These annual plans, which are issued soon after transmittal of the president’s budget, provide a direct linkage between an agency’s longer-term goals and mission and day-to-day activities.<sup>3</sup> Subsequent annual performance reports show the degree to which

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<sup>3</sup>The fiscal year 2002 performance plan is the fourth of these annual plans under GPRA.

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performance goals were met. The issuance of the agencies' performance reports, due by March 31, represents a new and potentially more substantive phase in the implementation of GPRA—the opportunity to assess federal agencies' actual performance for the prior fiscal year and to consider what steps are needed to improve performance and to reduce costs in the future.<sup>4</sup>

NRC is responsible for ensuring that those who use radioactive material in the generation of electricity, for experiments in universities, and for such medical uses as treating cancer do so in a manner that protects the public, the environment, and workers. NRC has issued licenses to 103 operating commercial nuclear power plants and 10 facilities that produce fuel for these plants. In addition, NRC or the 32 states that have agreements with NRC regulate almost 21,000 entities. In the medical field alone, licensees annually perform an estimated 10 million to 12 million procedures that involve radioactive material in the diagnosis or treatment of diseases. NRC is confronting a number of challenges to ensure the safe operation of commercial nuclear power plants, safe use of nuclear material, and safe disposal of radioactive waste.

NRC has been moving from its traditional regulatory approach, which was largely developed without the benefit of quantitative estimates of risk, to a more risk-informed, performance-based approach. Under this approach, NRC will use risk assessment findings, engineering analysis, and performance history to focus attention on the most important safety-related activities, establish objective criteria to evaluate performance, develop measures to assess licensee's performance, and focus more on results as the primary basis for making regulatory decisions.

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<sup>4</sup>The fiscal year 2000 performance report is the second of these annual reports under GPRA.

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## Assessment of NRC's Progress and Strategies in Achieving Selected Key Outcomes

This section discusses our analysis of NRC's performance in achieving its selected key outcomes and existing strategies, particularly for strategic human capital management<sup>5</sup> and information technology, for achieving these outcomes. In discussing these outcomes, we have also provided information drawn from our prior work on the extent to which NRC provided assurances that the performance information it is reporting is credible.

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### Civilian Nuclear Reactor Safety

In its fiscal year 2000 performance report, NRC said that it had met its goal and targets for the safety-related performance outcomes related to civilian nuclear reactor safety. Although NRC's strategies to achieve its safety-related performance outcomes seem clear and reasonable, we could not assess its performance for the three nonsafety performance goals because NRC only recently reported measures to achieve them in its fiscal year 2002 performance plan. However, since NRC has had limited experience in applying the strategies and measures for the three nonsafety goals, it may need to revise them after it completes various planned program evaluations.

Like other federal agencies, NRC faces strategic human capital management and other challenges that could affect achieving its future goals. In a highly technical, complex industry, NRC is facing the loss of a significant percentage of its senior managers and technical staff. For example, within the Office of Nuclear Reactor Regulation, about 22 percent of the technical staff and 16 percent of senior executive service staff are eligible to retire now; and by 2005, the number eligible for some type of retirement is about 42 percent and 77 percent, respectively.<sup>6</sup> At the same time, NRC will need to rely on these staff to achieve its strategic and performance goals. To help resolve its strategic human capital management challenge, NRC identified such options as allowing it to rehire retired staff without jeopardizing their pension. In addition, for the nuclear reactor safety key outcome, NRC is implementing an intern

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<sup>5</sup>The key elements of modern human capital management include strategic human capital planning and organizational alignment; leadership continuity and succession planning; acquiring and developing staff whose size, skills, and deployment meet agency needs; and creating results-oriented organizational cultures.

<sup>6</sup>The Office of Nuclear Reactor Regulation is responsible for ensuring that commercial nuclear power plants operate safely and do not endanger the public or the environment.



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program to attract and retain individuals with scientific, engineering, and other technical competencies.

Another major challenge will be for NRC to demonstrate that it meets one of its four performance goals—increasing public confidence—for three reasons. First, to ensure its independence, NRC cannot promote nuclear power and must walk a fine line when communicating with the public. Second, NRC has not defined the public that it wants to target in achieving this goal. Third, NRC has not established a baseline to measure the “increase” in its performance goal. As we reported last year, the Commission did not approve a staff proposal to conduct a survey to establish a baseline. Instead, in October 2000, NRC began an 18-month pilot effort to use feedback at the conclusion of public meetings. NRC expects to semiannually evaluate the information received to enhance its public outreach efforts. NRC’s evaluation of feedback from public meetings will provide information on the extent of public awareness of the meeting and the clarity, completeness, and thoroughness of the information that NRC provided at the meetings. Over time, for a particular plant, NRC may find that the public better understands the issues of concern or interest. It is not clear, however, how this information will show that the public’s confidence in NRC as a regulator has increased.

In addition, the Office of Nuclear Reactor Regulation began a 1-year effort in October 2000 to assess the effectiveness of NRC’s program that verifies allegations concerning regulated activities and the impact of the program on public confidence. NRC has been asking whether an individual’s experience with the program has increased his/her confidence in NRC as a regulator. NRC believes that such information will provide it a baseline to judge the contribution that the allegation program makes to meeting its public confidence goal. Like the feedback from public meetings discussed above, the feedback from those who participate in the allegation program will be limited. For example, in fiscal year 2000, NRC received 468 reactor-related allegations and estimates receiving 370 in fiscal year 2001. Therefore, the baseline data that NRC accumulates will be limited to a very small percentage of the public.

Although program evaluations would help determine the validity and reasonableness of NRC’s key outcomes, goals, and strategies and identify the factors that are likely to affect their achievement, NRC did not complete any evaluations in the key outcome of nuclear reactor safety in fiscal year 2000. NRC would benefit from such evaluations because the actions of its licensees and industry organizations have a significant impact on the extent to which NRC will achieve its strategic and

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performance goals for this key outcome and because NRC cannot show a one-to-one relationship between the performance of its licensees and the impact that the agency's programs have on safety. According to NRC staff, no one program evaluation will test its strategic direction for this and other key outcomes. Rather, NRC expects to conduct a number of evaluations that over time, should provide insights on whether a need exists to change its strategic direction.

For example, by the end of June 2001, NRC expects to complete one program evaluation related to this key outcome—an assessment of its first year of implementing the new safety oversight process for commercial nuclear power plants. The new safety oversight process has been the centerpiece in NRC's efforts to move to a risk-informed, performance-based regulatory approach. NRC believes that the evaluation will help determine whether it will meet its four performance goals, but as discussed earlier, we have doubts that the evaluation will determine whether NRC will meet its increasing public confidence goal because it will not have the baseline data needed for the evaluation. In addition, a NRC advisory panel concluded in May 2001 that the agency did not have the necessary data to evaluate the new safety oversight process against the performance goals.

NRC's strategies to ensure that the commercial nuclear power plants continue to operate safely appear clear and reasonable. For example, NRC expects to improve its inspection activities to better assess the safety performance of the nation's 103 operating nuclear power plants. Other strategies include resolving such safety issues as age-related plant degradation, ensuring that plant operator licenses are issued to and renewed only for qualified individuals, and continuing to develop and incrementally use risk-informed, and where appropriate, less prescriptive performance-based regulatory approaches. For its newly developed strategies for the three nonsafety goals, NRC may need to revise them and/or specify how some strategies will help achieve its desired outcomes. For example, one strategy to make its activities more effective, efficient, and realistic is to anticipate challenges posed by the introduction of new technologies and changing regulatory demands. Without further amplification, it is difficult to see how this strategy will result in more effective, efficient, and realistic NRC activities and decisions.

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## Nuclear Material Licensees' Performance

NRC reported that it had improved its performance in fiscal year 2000 compared with its performance fiscal year 1999 for the safety-related performance outcomes for this key outcome. However, NRC has concerns

about the quality of its performance data for 10 measures related to this key outcome and noted that the actual data reported for some of the safety performance goal measures are subject to change on the basis of further analysis and the receipt of newly reported information. NRC's strategies to achieve its safety-related performance goal outcomes seem clear and reasonable. But we could not assess its performance for the three nonsafety performance goals because NRC only recently reported the measures to achieve them in its fiscal year 2002 performance plan. As with the nuclear reactor safety key outcome, NRC has had limited experience in applying the strategies and measures for the three nonsafety goals. As a result, it may need to revise them after it completes various planned program evaluations.

Although NRC has set more realistic performance targets for this key outcome, it continues to set others that are easily achievable and do not challenge or stretch its staff to improve their performance. On the basis of more complete historical data, NRC revised some of its performance targets. The same analysis showed that in some areas, actual nuclear material licensees' performance was much better than NRC's targeted performance. Table 1 shows some of NRC's performance goal measures for the nuclear material safety key outcome and compares its actual performance in fiscal years 1999 and 2000 with the targets for fiscal year 2002.

**Table 1: Comparison of Fiscal Years 1999 and 2000 Actual Performance to NRC's Targets for Fiscal Year 2002**

Measure	Fiscal year 1999	Fiscal year 2000	Fiscal year 2002
	Actual	Actual	Target
Number of losses of licensed material per year	227	201	350
Events resulting in overexposures that exceed regulatory limits	26	11	40
Medical events per year	35	28	45

As noted above in the nuclear reactor safety key outcome, NRC faces strategic human capital management and other challenges that could impair accomplishing its goals. During this period of potentially very high attrition, the Office of Nuclear Material Safety and Safeguards will be challenged to implement a risk-informed regulatory approach for a large

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number of diverse licensees.<sup>7</sup> As part of its strategy to address this challenge, NRC is implementing an intern program to attract and retain individuals with scientific, engineering, and other technical competencies.

As it did with the nuclear reactor safety key outcome, NRC did not complete any program evaluations in fiscal year 2000 for the key outcome of nuclear material safety. NRC expects to complete one program evaluation in June 2001. The evaluation will address redefining NRC's role in an environment where an increasing number of states are entering into agreements with NRC to regulate material licensees within their borders (agreement states). As of September 2000, 32 states had such agreements with NRC and by 2004, NRC anticipates that 35 states will have such agreements and that the states will oversee more than 80 percent of all material licensees. Such a large shift of responsibility over time from NRC to the agreement states could have significant budgetary and other implications for NRC.

The program evaluation will consider such issues as the roles and legal responsibilities of NRC, the agreement states, and others; the need for statutory changes; and the resources needed. This program evaluation should help determine whether NRC will meet one of its four performance goals—maintain safety—but is not likely to provide information to assess the impact on NRC's three nonsafety performance goals. For example, it is unlikely that a useful assessment can be made of the “improve the efficiency and effectiveness of NRC's activities” performance goal when the evaluation will not address such questions as the following: Would NRC continue to need staff in all four of its regional offices as the number of agreement states increases? And what are the appropriate number, type, and skills needed for its headquarters staff? In commenting on a draft of this report, NRC said that program evaluations are to assess the manner and extent to which programs achieve their intended objectives and to assess program implementation policies, practices, and processes.

NRC's strategies to ensure that licensees use nuclear material safely appear clear and reasonable. For example, NRC will continue to focus on the relative risk of licensees' activities to determine the appropriate level of oversight, determine that licensees' activities are consistent with

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<sup>7</sup>The Office of Nuclear Material Safety and Safeguards is responsible for ensuring that nuclear material licensees use and dispose of nuclear material in a safe and environmentally sound manner.

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regulatory requirements, and respond to operational events that have potential safety or safeguards consequences. For its newly developed strategies for the three nonsafety goals, NRC may need to revise them and/or specify how some strategies will help achieve its desired outcomes. For example, one strategy is to improve the regulatory framework to increase NRC's effectiveness and efficiency. Without further amplification on how NRC expects to improve the regulatory framework, it is difficult to determine how this strategy will result in more effective and efficient NRC activities and decisions.

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## Radioactive Waste Disposal

NRC reported that it had met the safety-related performance outcomes for this key outcome in fiscal year 2000. Although NRC's performance and strategies for achieving the safety-related goal for this key outcome appear reasonable, as with the other two key outcomes, we could not assess NRC's performance relative to the three nonsafety goals for which NRC did not have performance measures. In addition, to ensure that NRC can meet the strategies, goals, and measures, it will have to follow through on its plans to attract and retain individuals with the competencies and skills needed to carry out its mission.

On the basis of our prior work, we believe that NRC's achieving some of its strategies and performance goals in this key outcome may be affected by such external factors as the standards that the Environmental Protection Agency (EPA) eventually issues on the level of residual radiation that can safely remain at a nuclear power plant site after licensees complete their decommissioning activities as well as the recently issued standards for the Department of Energy's potential high-level waste repository at Yucca Mountain, Nevada. EPA started to develop residual radiation standards in 1984 but has not yet finalized them. Currently, licensees are using standards that NRC issued in 1997. If NRC's licensees are ultimately required to comply with EPA standards, which are more restrictive than NRC's, the licensees may have to perform additional cleanup activities and incur additional costs. Likewise, NRC's success may be affected by EPA's final rule on the environmental radiation protection standards for Yucca Mountain. The rule, published in the *Federal Register* on June 13, 2001, includes a separate limit for groundwater. NRC, along with such others as the National Academy of Sciences, does not believe that a scientific basis exists for establishing the separate limit. Nevertheless, in commenting on a draft of this report, NRC said that it will implement EPA's standards for Yucca Mountain.

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Although program evaluations are helpful and important, NRC did not complete any such evaluations related to the nuclear waste safety key outcome in fiscal year 2000. However, NRC expects to evaluate ongoing and planned changes related to its decommissioning program for nuclear power plants and other radioactively contaminated sites in fiscal year 2003. In doing so, NRC expects to assess its various decommissioning initiatives, determine whether it has achieved all four performance goals, identify deviations from its performance goals, and determine whether a need exists for NRC to change its goals, strategies, or measures related to this key outcome. If NRC meets these objectives, the information should help determine the validity and reasonableness of the agency's goals and strategies for this key outcome.

NRC's strategies appear reasonable and clearly discuss how the agency plans to meet its fiscal year 2002 safety-related goals. For example, NRC expects to evaluate new research and safety information as well as international programs and licensees' operational experience to improve its regulation of nuclear waste activities. NRC says that it will also keep pace with the nation's high-level waste program to ensure that it can meet the time frame established by legislation when deciding to license a geological repository. For its newly developed strategies for the three nonsafety goals, NRC may need to revise them and/or specify how some strategies will help achieve its desired outcomes. As with the nuclear material safety outcome, one strategy is to improve the regulatory framework to increase NRC's effectiveness and efficiency. Again, however, without further amplification on how NRC expects to improve the regulatory framework, it is difficult to determine how this strategy will result in more effective and efficient NRC activities and decisions.

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## Comparison of NRC's Fiscal Year 2000 Performance Report and Fiscal Year 2002 Performance Plan With the Prior Year Report and Plan for Selected Key Outcomes

For the selected key outcomes, this section describes major improvements or remaining weaknesses in NRC's (1) fiscal year 2000 performance report in comparison with its fiscal year 1999 report and (2) fiscal year 2002 performance plan in comparison with its fiscal year 2001 plan. It also discusses the degree that NRC's fiscal year 2000 report and fiscal year 2002 plan address concerns and recommendations by the Congress, GAO, the Inspectors General, and others.

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### Comparison of Performance Reports for Fiscal Years 1999 and 2000

NRC made a number of improvements to its fiscal year 2000 performance report. For example, NRC used final and finite data for its performance measures rather than preliminary data as it had for some measures last year. In its fiscal year 1999 performance report, NRC used preliminary data for three nuclear reactor safety measures: no more than one event that could lead to a severe accident, no significant radiation exposures resulting for nuclear power plants, and no deaths resulting from radiation or radiation releases from nuclear plant operations. NRC designated the data as preliminary because the Commission had not approved their release to the public. In its fiscal year 2000 report, NRC used final data. According to NRC staff, they would be aware of an event, release, or death by the end of the fiscal year and before the Commission approved releasing the data. Therefore, NRC concluded that it did not need to show this information as "preliminary" in the fiscal year 2000 performance report. In addition, NRC previously used a combined 5-year average as its target for some performance measures. NRC now uses an annual value, which will better allow the Congress and others to assess its performance in a particular fiscal year.

In addition, NRC included information to address the requirements of the Reports Consolidation Act of 2000. The act requires agency heads to assess the completeness and reliability of the data used in their fiscal year 2000 performance reports. The Office of Management and Budget (OMB) issued draft guidance describing how agencies should assess the completeness and reliability of data. NRC's performance report discusses these two data related issues. In its fiscal year 2000 performance report, NRC says that its performance data are complete, noting that it has reported actual or preliminary data for every strategic and performance

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measure, and reliable because its managers and decision makers use the data in the normal course of their duties. NRC discusses data quality in its fiscal year 2000 performance report and refers to its fiscal year 2002 performance plan for details on its efforts to ensure that its performance data are credible.

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### Comparison of Performance Plans for Fiscal Years 2001 and 2002

NRC's performance plan for fiscal year 2002 differs in several significant ways from its predecessor. First, NRC followed through on its commitment to establish measures for three of its performance goals. In its fiscal year 2001 performance plan, NRC established measures for the "maintain safety" performance goal only, saying that it would develop measures for the three nonsafety performance goals—increase public confidence; reduce unnecessary regulatory burden; and enhance the effectiveness, efficiency, and realism of its activities and decisions—for the fiscal year 2002 plan. NRC has done so and now shows measures for all four performance goals. NRC also links each performance measure to a specific performance goal.

Second, NRC provided greater details on how it ensures the credibility of the data used to assess its performance in achieving its strategic and performance goal measures. As noted in prior reports on NRC's performance plans, the credibility of its performance data is an issue that has concerned us for several years. Now, NRC links each strategic and performance goal measure to the data source and the automated system in which the data are collected and stored. NRC also described its process to ensure that the data were valid and reliable. For example, to verify the data used to determine whether it has achieved the "no more than one event per year identified as a significant precursor of a nuclear accident" performance measure, NRC evaluates nuclear power plants' operating experience and identifies those events that were the most safety significant. NRC describes each step taken in its evaluation process. In those cases where NRC identified data limitations, it described the actions it had taken to address the limitations. For example, NRC highlighted its concerns with the credibility of the data used to assess its achievements in the key outcome of nuclear material safety. In commenting on a draft of this report, NRC noted that this key outcome includes over 15,000 licensees administered by the agreement states and that NRC relies on the agreement states to collect performance data related to them. NRC also said that it has provided training for the states and its own staff on the database used to collect the information and data collection procedures. It is also developing an internal policy to ensure continued improvements in the performance data reported to the Congress.



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Third, NRC described the actions it has taken to address the management challenges that we and its Office of the Inspector General identified. NRC's fiscal year 2002 performance plan includes an appendix that describes its ongoing and planned actions to address these management challenges. NRC also relates each challenge to its strategic and performance goals and strategies. NRC did not include comparable information in its fiscal year 2001 performance plan.

Finally, NRC addressed three governmentwide performance goals as directed by OMB in March 2001: (1) the use of performance-based contracts for at least 20 percent of all service contracts over \$25,000; (2) expanding the use of on-line procurement methods by posting acquisitions of over \$25,000 to [www.FedBizOpps.gov](http://www.FedBizOpps.gov); and (3) completing studies to determine whether it is more cost-effective to have commercial activities performed in-house by its staff or outsourced. In September 2000, we reported that NRC identified 783 full-time equivalent employees performing activities that are exempt from OMB's cost comparison requirements.<sup>8</sup> NRC discusses its efforts to meet the three governmentwide reforms and believes that it has satisfied OMB's requirements for various reasons. For example, its management strategy to "employ innovative and sound business practices" includes efforts to make greater use of performance-based contracts. NRC participated in a task group that developed the *Best Practices Guide on Performance-Based Service Contracting*, which the Office of Federal Procurement Policy published for use by other federal agencies. In addition, NRC believes that the same management strategy will help it increase the use of competition and ensure more accurate Federal Activities Inventory Reform Act inventories.

Despite these enhancements over its fiscal year 2001 performance plan, we identified an area warranting improvement and additional attention. NRC says it will provide proactive information management and information technology services by working with its program and support offices and by providing reliable and easy-to-use systems for internal and external stakeholders. Although NRC's fiscal year 2002 performance plan sets targets to meet its information technology objectives, it does not address how it expects to verify and validate the data. As a result, we have no assurance that the measures can be used reliably to gauge the

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<sup>8</sup>See *Competitive Contracting: Agencies Upheld Few Challenges and Appeals Under the FAIR Act* (GAO/GGD/NSIAD-00-244, Sept. 29, 2000).

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effectiveness of NRC's information technology performance or as a basis for making program decisions and revisions. According to its staff, NRC only describes how it verifies and validates performance goal data that are reported to the Congress. Since it only has output measures (that are not reported to the Congress) for information technology, NRC does not describe how it verifies and validates the data related to them.

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## NRC's Efforts to Address Its Major Management Challenges Identified by GAO

For the three major management challenges that GAO identified, NRC's fiscal year 2000 performance report discussed its progress in resolving two challenges, but it did not discuss the agency's progress in resolving the challenge related to managing the agency—strategic human capital management, financial management, and information technology. However, in its fiscal year 2002 performance plan, NRC identified management strategies to address this challenge.

GAO identified two governmentwide high-risk areas: strategic human capital management and information security. Regarding strategic human capital management, NRC's performance report for fiscal year 2000 did not explain its progress in resolving this challenge and its performance plan for fiscal year 2002 did not have goals and measures related to it. However, in its fiscal year 2002 performance plan, NRC included a management strategy to sustain a high-performing, diverse workforce. To achieve this strategy, NRC says that it will base human resource decisions on sound workforce planning and analysis. In this regard, in January 2001, the staff provided the Commission with a suggested action plan—a 5-year, \$2.4 million effort to maintain the core competencies, knowledge, and skills needed by NRC. NRC has also taken the initiative and identified options to attract new employees with critical skills, developed training programs to meet its changing needs, and identified legislative options to help resolve its aging staff issue. As we recently testified, continued oversight of NRC's multiyear effort is needed to ensure that it is being properly implemented and is effective in achieving its goals.<sup>9</sup>

With respect to information security, NRC has no goal, strategy, or measure to resolve this challenge agencywide, and its fiscal year 2000 performance report did not explain its progress in resolving it. NRC staff acknowledged the lack of an agencywide goal, strategy, or measure but

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<sup>9</sup>See *Nuclear Regulation: Challenges Confronting NRC in a Changing Regulatory Environment* (GAO-01-707T, May 8, 2001).

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noted that the support office responsible for information security has developed a management strategy and output measure for its own use in addressing this issue. Since the output measure is not applicable to the entire agency and NRC did not include one that is in its fiscal year 2002 performance plan, the Congress will have no assurance that NRC is effectively addressing this challenge. In addition, NRC's plan did not address contingency planning to respond to the loss or degradation of essential services because of a problem in an automated system. In general, a contingency plan describes the steps that NRC would take, including the activation of manual processes, to ensure the continuity of its core business processes in the event of a system failure. According to NRC staff, the agency has processes to ensure continuity in the event of a system failure and did not believe that it needed to disclose this information in the fiscal year 2002 performance plan.

For two other major management challenges that GAO identified—resolving numerous issues to implement a risk-informed approach for commercial nuclear power plants and overcoming inherent difficulties to apply a risk-informed approach to nuclear material licensees—NRC established strategies or performance measures that specifically address them. For example, one strategy is to develop and incrementally use risk-information and, where appropriate, less prescriptive performance-based regulatory approaches to maintain safety.

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## Scope and Methodology

As agreed, our evaluation was generally based on the requirements of GPRA, the Reports Consolidation Act of 2000, guidance to agencies from OMB for developing performance plans and reports (OMB Circular A-11, Part 2), previous reports and evaluations by us and others, our knowledge of NRC's operations and programs, GAO's identification of best practices concerning performance planning and reporting, and our observations on NRC's other GPRA-related efforts. We also discussed our review with NRC staff in the Office of the Chief Financial Officer, Office of the Executive Director for Operations, and Office of the Inspector General. The agency outcomes that were used as the basis for our review were identified by the Ranking Minority Member, Senate Governmental Affairs Committee, as important mission areas for NRC and generally reflect the outcomes for almost all of NRC's programs or activities. The major management challenges confronting NRC, including the governmentwide high-risk areas of strategic human capital management and information security, were identified by GAO in our January 2001 performance and accountability series and high-risk update, and were identified by NRC's Office of the Inspector General in December 2000. We did not

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independently verify the information contained in the performance report and plan, although we did draw from other GAO work in assessing the validity, reliability, and timeliness of NRC's performance data. We conducted our review from April 2001 through June 2001 in accordance with generally accepted government auditing standards.

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## Agency Comments and Our Response

We provided copies of a draft of this report to NRC for its review and comment. NRC provided a number of specific comments, which are presented in appendix II. Although NRC generally agreed with the information presented in the report, it does not agree that its fiscal year 2000 performance report showed mixed progress in achieving the three key outcomes. We revised the report to make it clear that we concluded that NRC's performance was mixed because it did not have measures for three performance goals until it issued its fiscal year 2002 performance plan. NRC also provided technical clarifications, which we incorporated as appropriate.

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As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days after the date of this letter. At that time, we will send copies to appropriate congressional committees; the Chairman, Nuclear Regulatory Commission; the Commissioners, Nuclear Regulatory Commission; and the Director, Office of Management and Budget. Copies will also be made available to others on request.

If you or your staff have any questions, please call me at (202) 512-3841. Key contributors to this report were Mary Ann Kruslicky and Philip Olson.

Sincerely yours,



(Ms.) Gary L. Jones  
Director, Natural Resources  
and Environment

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# Appendix I: Observations on the Nuclear Regulatory Commission's Efforts to Address Its Major Management Challenges

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The following table identifies the major management challenges that confront the Nuclear Regulatory Commission (NRC), including the governmentwide high-risk areas of strategic human capital management and information security. The first column lists the management challenges that we and/or NRC's Office of the Inspector General (OIG) have identified. The second column discusses the progress, as discussed in its fiscal year 2000 performance report, that NRC has made in resolving its challenges. The third column discusses the extent to which NRC's fiscal year 2002 performance plan includes performance goals and measures to address the challenges that we and its OIG identified. Overall, we found that NRC's performance report discussed the agency's progress in resolving some of its challenges. However, it did not discuss its progress in resolving the following challenges:

- coping with strategic human capital management, improving its financial management activities, and ensuring that its information technology acquisitions perform as intended;
- information security;
- intra-agency communication (up, down, and across agency organizational lines); and
- regulatory processes that are integrated and continue to meet NRC's safety mission in a changing external environment.

In its fiscal year 2000 performance report, NRC says that the Reports Consolidation Act of 2000 required an assessment by the Inspector General of the agency's management challenges. As a result, NRC staff said they did not discuss each of the management challenges in its performance report but that specific actions and milestones related to the challenges are included in NRC's fiscal year 2002 performance plan.

Of its nine major management challenges, NRC has strategic and performance goals and measures directly related to four; management strategies for four others; but no goal, strategy, or output for one—information security. One GAO management challenge includes three issues—strategic human capital management, financial management, and information technology. For ease of presentation, we discuss each of these issues separately. Table 2 provides information on how NRC addresses the two governmentwide high-risk areas and its major management challenges.

**Appendix I: Observations on the Nuclear  
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**Table 2: Major Management Challenges**

<b>Major management challenge</b>	<b>Progress in resolving major management challenge as discussed in the fiscal year 2000 performance report</b>	<b>Applicable goals and measures in the fiscal year 2002 performance plan</b>
<p><b>GAO-designated governmentwide high risk</b></p> <p><u>Strategic Human Capital Management</u>: GAO has identified shortcomings at multiple agencies involving key elements of modern human capital management, including strategic human capital planning and organizational alignment; leadership continuity and succession planning; acquiring and developing staff whose size, skills, and deployment meet agency needs; and creating results-oriented organizational cultures.</p> <p>(GAO also identified NRC's continued efforts to cope with significant human capital issues as a major management challenge for the agency.)</p>	<p>NRC did not discuss options or actions to hire and retain staff in its fiscal year 2000 performance report. NRC noted, however, that it has training efforts to provide staff with the knowledge and skills required to implement a risk-informed approach and for managers to help them adapt to NRC's changing regulatory environment.</p>	<p>None. However, in its fiscal year 2002 performance plan, NRC included a management strategy to sustain a high-performing, diverse workforce. NRC has identified subsidiary strategies to achieve this goal. For example, NRC says that it will base human resource decisions on sound workforce planning and analysis. In this regard, NRC expects to use a human resources planning process to identify current and future skill needs and gaps for the agency. In January 2001, the staff provided the commission with a suggested action plan for maintaining core competencies. The staff proposed to begin the 5-year effort in February 2001 at an estimated cost of \$2.4 million, including the costs to purchase software that will be used to identify the knowledge and skills needed by NRC. NRC sets out several actions and milestones in its fiscal year 2002 performance plan related to the 5-year effort.</p> <p>In addition, for the nuclear reactor safety and nuclear material safety outcomes, NRC is implementing an intern program to attract and retain individuals with scientific, engineering, and other technical competencies. NRC is also working to develop and maintain a pool of high-potential management candidates through its Senior Executive Service Candidate Development Program.</p>

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<b>Major management challenge</b>	<b>Progress in resolving major management challenge as discussed in the fiscal year 2000 performance report</b>	<b>Applicable goals and measures in the fiscal year 2002 performance plan</b>
<p><u>Information Security</u>: Our January 2001 high-risk series update noted that the agencies' and governmentwide efforts to strengthen information security have gained momentum and expanded. Nevertheless, recent audits continue to show that federal computer systems are riddled with weaknesses that make them highly vulnerable to computer-based attacks and place a broad range of critical operations and assets at risk of fraud, misuse, and disruption.</p> <p>(NRC's OIG identified information security as part of a broader management challenge related to the identification, acquisition, and implementation of information technologies.)</p>	<p>NRC did not discuss information security in its fiscal year 2000 performance report.</p>	<p>None. However, the support office responsible for information security has a management strategy and an associated output measure for its own use related to information security. Since this output measure is not applicable to the entire agency and NRC did not include one that is in its fiscal year 2002 performance plan, the Congress will have no assurance that NRC is effectively addressing this challenge.</p> <p>In its fiscal year 2002 performance plan, NRC requested funding to, among other things, increase computer security activities. These activities are intended to ensure that the agency's information and automated systems protect classified information, unclassified safeguards information, and sensitive unclassified information. To accomplish these objectives, NRC expects to continue providing security awareness training for its staff and monitor the effectiveness of its security protection initiatives.</p> <p>NRC did not address contingency planning to respond to the loss or degradation of essential services due to a problem in an automated system. In general, a contingency plan describes the steps NRC would take, including the activation of manual processes, in the event of a system failure. According to staff, NRC routinely prepares contingency plans for its major business systems, but the agency does not believe that it needed to disclose this information in the fiscal year 2002 performance plan.</p>

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<b>Major management challenge</b>	<b>Progress in resolving major management challenge as discussed in the fiscal year 2000 performance report</b>	<b>Applicable goals and measures in the fiscal year 2002 performance plan</b>
<b>GAO- and OIG-designated major management challenges</b>		
<p><u>Development and implementation of a risk-informed approach for commercial nuclear power plants:</u> NRC faces numerous challenges in implementing a risk-informed approach for nuclear power plants. Whatever processes NRC ultimately adopts must be consistent, visible, and clear. A clearly defined strategy would help NRC and the utilities address the public's concerns as it implements a risk-informed regulatory approach. Although NRC initially agreed on the need for a comprehensive strategy, it has not followed through to develop one. Instead, NRC developed a Risk-Informed Regulation Implementation Plan, but the plan is not as comprehensive as it needs to be because it does not identify those items critical to achieving its objectives, activities that cut across the agency, resources, performance measures, or the relationships among these various activities.</p>	<p>NRC discussed some completed and ongoing risk-informed initiatives in its fiscal year 2000 performance report. In July 2000, for example, NRC issued revised regulations on the types of events that licensees should report to NRC. The regulations are intended to reduce the reporting burden associated with events of little or no safety significance. In addition, NRC briefly described its ongoing efforts to change other such regulations as those related to the control of combustible gas during accidents.</p>	<p>In its fiscal year 2001 performance plan, NRC had established measures for the "maintain safety" performance goal only, saying that it would develop measures for the three nonsafety performance goals for the fiscal year 2002 plan. NRC has done so in the fiscal year 2002 plan. But since NRC has limited experience in applying the strategies and measures for the three nonsafety goals, it may find that they need to be revised after it completes various planned evaluations over the next 3 years.</p> <p>A major challenge will be for NRC to demonstrate that it is meeting its "increasing public confidence" goal. This is because NRC has not defined the "public" that it is targeting and does not have a baseline by which to measure the "increase." To address this performance goal, NRC instituted an 18-month pilot effort in October 2000 to use feedback from public meetings. In March 2000, the Commission did not approve a staff proposal to conduct a survey to establish a baseline. Evaluating feedback from public meetings will provide NRC with information on the extent to which the public was aware of the meetings and the clarity, completeness, and thoroughness of the information that NRC provided at the meetings. Over time, for a particular plant, NRC may find that the public better understands the issues of concern or interest. It is not clear how this will show that public confidence in NRC as a regulator has increased.</p>



**Appendix I: Observations on the Nuclear  
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Major management challenge	Progress in resolving major management challenge as discussed in the fiscal year 2000 performance report	Applicable goals and measures in the fiscal year 2002 performance plan
<p><u>Inherent difficulties in applying a risk-informed approach to nuclear material licensees:</u> The sheer number of licensees—almost 21,000—and the diversity of the activities they conduct—converting uranium; transporting radioactive materials; and using radioactive material for industrial, medical, or academic purposes—increase the complexity of developing a risk-informed approach for nuclear material licensees. In addition, NRC will be challenged to define its role, including the size and skill mix of staff both in headquarters and regional offices, as an increasing number of states assume responsibility for regulating nuclear material users within their borders. The decisions that NRC ultimately makes could have budgetary and other implications for the agency.</p>	<p>NRC's fiscal year 2000 performance report notes that it formed a group to ensure consistency in applying risk for nuclear materials regulations and industry and staff guidance in implementing the regulations. In addition, NRC revised its regulations applicable to those facilities that produce fuel for commercial nuclear power plants to make them more risk-informed and performance-based. NRC</p>	<p>NRC has addressed some challenges related to developing and implementing a risk-informed approach for commercial nuclear power plants in its fiscal year 2002 performance plan and in the 25 activities identified in its Risk-Informed Regulation Implementation Plan. It has established a performance goal measure to complete specific milestones discussed in the plan. For example, NRC expects to provide the Commission with a report on the lessons learned from the first year of implementation of the new safety oversight process for nuclear power plants in June 2001.</p> <p>To help achieve its performance goals and measures, NRC's fiscal year 2002 performance plan identifies a number of outputs. But NRC does not relate the outputs to its performance goals, strategies, or measures. However, a careful reading of the plan shows that most of the outputs relate to the safety performance goal.</p> <p>In its fiscal year 2001 performance plan, NRC had established measures for the "maintain safety" performance goal only, saying that it would develop measures for the three other performance goals for the fiscal year 2002 plan. NRC has done so in the fiscal year 2002 plan. However with the exception of the "maintain safety" goal, NRC has no strategies to use risk information to achieve the other three goals.</p> <p>NRC has addressed some challenges to applying a risk-informed approach to nuclear material licensees in its fiscal year 2002 performance plan and in the</p>

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Major management challenge	Progress in resolving major management challenge as discussed in the fiscal year 2000 performance report	Applicable goals and measures in the fiscal year 2002 performance plan
	<p>also revised its policy on the medical uses of NRC-regulated radioactive material, putting greater emphasis on high-risk procedures and less emphasis on procedures posing a lower risk to the patient, workers, and the public.</p>	<p>eight activities included in the Risk-Informed Regulation Implementation Plan. It has established a performance goal measure to complete specific milestones discussed in the plan. For example, NRC expects to develop risk assessment tools and guidance for material licensees and perform risk studies, revise its oversight program for those facilities that produce fuel for commercial nuclear power plants, pilot test a risk-informed program for the conduct of inspections for medical facilities, and train staff on applying risk analysis.</p> <p>See discussion above about NRC's efforts related to achieving the "increase public confidence" goal.</p>
<p><u>Improving financial management systems</u>: NRC needs to develop and implement a cost accounting system. NRC's Office of the Inspector General identified the lack of a cost accounting process as a material weakness constituting a substantial noncompliance with the Federal Financial Management Improvement Act.</p>	<p>As last year, NRC does not have a cost accounting system to provide managers with reliable and routine information for decision-making purposes. NRC experienced delays in implementing the time- and labor-reporting software portion of the cost model for its managerial cost accounting system. NRC expects to implement a managerial cost accounting system by October 7, 2001. Once implemented, NRC will have to determine whether the system provides office directors with the information they need. If it does not, NRC would have to enhance the system to provide additional cost information.</p>	<p>None. However, in its fiscal year 2002 performance plan, NRC has a management strategy to employ innovative and sound business practices. To achieve this goal, NRC says that it will strengthen its financial systems and processes. NRC also expects to increase managers' accountability and responsibility for their decisions by placing more agency funds under their control. The performance plan lists some actions and milestones to address this management challenge.</p>

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Major management challenge	Progress in resolving major management challenge as discussed in the fiscal year 2000 performance report	Applicable goals and measures in the fiscal year 2002 performance plan
	<p>NRC also expects to terminate its contract with the U.S. Department of the Treasury for the Federal Financial System by the end of fiscal year 2002. NRC will seek to acquire core accounting services from another federal agency before that time.</p>	
<p><u>Information technology issues:</u> NRC experienced problems with implementing a new document capture and retrieval system—Agencywide Documents Access and Management System (ADAMS).</p>	<p>NRC relies on a wide variety of information systems and networks to carry out its mission. The performance report notes that NRC has made improvements in budgeting for new systems development but also said that further improvements are needed.</p> <p>NRC, like other federal agencies, continues to struggle in its efforts to obtain a good return on its information technology investments. Although NRC has made improvements in how it budgets for new systems development, its Inspector General found that NRC needs to improve in the areas of planning and managing information technology projects.</p> <p>NRC discussed the actions it has taken to implement a system to track the training</p>	<p>None. However, in its fiscal year 2002 performance plan, NRC has a management strategy to provide proactive information management services and has identified subsidiary strategies to achieve its goals. For example, NRC says that it will work with program and support offices to integrate information technology and business planning and will make it easier for its staff to acquire, access, and use the information needed to perform their work. NRC also says that it will provide external stakeholders with the ability to easily access publicly available information and to conduct mutual business electronically.</p> <p>NRC has established outputs for its information technology program, including the availability of key infrastructure services, level of staff satisfaction with NRC's primary data application systems, and completion of milestones to implement ADAMS. NRC continues to experience problems with implementing ADAMS. NRC's fiscal year 2002 performance plan identifies actions and milestones to address</p>

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Major management challenge	Progress in resolving major management challenge as discussed in the fiscal year 2000 performance report	Applicable goals and measures in the fiscal year 2002 performance plan
	<p>received by inspectors. Staff can register for training using the system, and each office has designated a training contact to enter completed external training information into the system and monitor attendance at NRC-provided training.</p>	<p>various information technology issues, including the problems related to ADAMS.</p> <p>Although NRC identified targets for its information technology measures, it does not address the verification and validation of the data. As a result, we have no assurance that the measures can be reliably used to gauge the effectiveness of NRC's information technology performance or as a basis for making program decisions and revisions. According to its staff, NRC only described how it verifies and validates performance goal data that are reported to the Congress. Since it only has output measures (that are not reported to the Congress) for information technology, NRC did not describe how it verifies and validated the data related to them.</p>
<b>OIG-designated major management challenges</b>		
<p><u>Clear and balanced communication with external stakeholders</u>: NRC says that it will accomplish this by providing external stakeholders with clear and accurate information. This is a difficult task because of the highly technical nature of NRC's operations and the balance it must maintain to remain independent.</p>	<p>In its report, for the three key outcomes, NRC discusses some of its public outreach efforts. For example, NRC developed communication plans for its more visible nuclear reactor safety programs, is redesigning its Web site, and solicited feedback from stakeholders at public meetings. For the nuclear materials safety outcome, NRC said that it conducted public workshops and issued for public comment a report on potential radiation doses associated with source and byproduct material that are exempt from NRC's regulations. For the nuclear waste safety outcome, NRC said it held seven workshops and a series of public meetings to obtain public recommendations</p>	<p>NRC has a performance goal to increase public confidence for the three key outcomes—nuclear reactor safety, nuclear materials safety, and nuclear waste safety. NRC also has a management strategy to establish, evaluate, and sustain effective communication with external stakeholders. Although NRC has identified actions and milestones to address this management challenge, most are scheduled to be completed in fiscal year 2001.</p>

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<b>Major management challenge</b>	<b>Progress in resolving major management challenge as discussed in the fiscal year 2000 performance report</b>	<b>Applicable goals and measures in the fiscal year 2002 performance plan</b>
	<p>and comments on, among other things, the performance of casks to store and ship spent nuclear fuel.</p> <p>In commenting on a draft of this report, NRC said that in April 2001, it held a public meeting to obtain recommendations from the public on ways to improve NRC's public participation procedures. NRC staff expect to use this information to recommend changes to its policies and procedures.</p>	

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<b>Major management challenge</b>	<b>Progress in resolving major management challenge as discussed in the fiscal year 2000 performance report</b>	<b>Applicable goals and measures in the fiscal year 2002 performance plan</b>
<p><u>Intra-agency communication (up, down, and across agency organizational lines)</u>: Internal communication is a fundamental necessity to conducting NRC's business and carrying out its critical health and safety mission.</p>	<p>NRC did not discuss this management challenge in its fiscal year 2000 performance report.</p> <p>According to NRC's fiscal year 2000 performance report, the Reports Consolidation Act of 2000 required an assessment by the Inspector General of the agency's management challenges. As a result, staff said that NRC did not discuss each of the management challenges in its performance report.</p>	<p>None. However, in its fiscal year 2002 performance plan, NRC has a management strategy to employ innovative and sound business practices. To achieve this goal, NRC says that it will strengthen collaborative processes for conducting business among support offices and between support and program offices. NRC notes that collaboration is essential for integrating information technology initiatives with programmatic initiatives and for integrating training and development with programmatic initiatives to improve performance. The plan identifies actions and milestones to address this management challenge. NRC expects to complete some activities in fiscal year 2001; the remainder relate to periodic, ongoing activities.</p> <p>NRC has also established a management strategy to effectively communicate with its internal and external stakeholders. To achieve this goal internally, NRC expects to assess the effectiveness of communication channels and methods within the agency. NRC also expects to develop an inventory of the methods used to transmit information, identify staff's information needs and expectations, and develop a list of specific changes needed to improve the effectiveness and efficiency of internal communications. In commenting on a draft of this report, NRC noted that a report on improving internal communications has been provided to the Executive Director for Operations, who will determine the actions that NRC staff should pursue.</p>

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<b>Major management challenge</b>	<b>Progress in resolving major management challenge as discussed in the fiscal year 2000 performance report</b>	<b>Applicable goals and measures in the fiscal year 2002 performance plan</b>
<p><u>Regulatory processes that are integrated and continue to meet NRC's safety mission in a changing external environment:</u> NRC is in a period of transition, and the change is more rapid than in any time in the history of civilian nuclear power. NRC's organizational structure can also affect the way the agency integrates its internal processes.</p>	<p>NRC did not discuss this management challenge in its performance report.</p> <p>According to NRC's fiscal year 2000 performance report, the Reports Consolidation Act of 2000 required an assessment by the Inspector General of the agency's management challenges. As a result, staff said that NRC did not discuss each of the management challenges in its performance report.</p>	<p>NRC has a performance goal to enhance the effectiveness, efficiency, and realism of its activities and decisions for the three key outcomes—nuclear reactor safety, nuclear materials safety, and nuclear waste safety. Although none of the strategies relate to integrating activities across the agency, NRC has integrated research activities with the three key outcomes since its first performance plan in fiscal year 1999. In addition, the fiscal year 2002 performance plan identifies actions and milestones to address this management challenge. NRC expects to complete some activities in fiscal year 2001; the remainder relate to periodic, ongoing activities.</p>

# Appendix II: Comments From the Nuclear Regulatory Commission

Note: GAO's comments supplementing those in the report's text appear at the end of this appendix.



CHIEF FINANCIAL  
OFFICER

UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

June 19, 2001

Ms. Gary L. Jones, Director  
Natural Resources and Environment  
United States General Accounting Office  
441 G Street, N.W.  
Washington, DC 20458

Dear Ms. Jones:

This is in response to your June 12, 2001, General Accounting Office (GAO) draft report entitled *Nuclear Regulatory Commission: Status of Achieving Key Results and Addressing Major Management Challenges* (GAO-01-760). The U.S. Nuclear Regulatory Commission (NRC) has reviewed the draft report and the attachment contains our specific concerns and recommendations.

The NRC's leadership continues to be committed to achieving results which benefit the public. GAO has recognized this commitment in the recent GAO report entitled *Managing for Results: Federal Managers' Views on Key Management Issues Vary Widely Across Agencies*. It noted that the percentage of NRC managers who reported that their agency's top leadership demonstrated a strong commitment to achieving results was among the highest in the federal government. As a result of this commitment to achieving results, the NRC achieved all of its key outcomes and strategic and performance goals, as reported in the agency's FY 2000 Performance Report.

The NRC has made improvements in the FY 2000 Performance Report and FY 2002 Performance Plan. Improvements in our measures, verification and validation of performance data, and explanations of actions NRC has taken to address management challenges allow stakeholders and the public to better understand how the NRC will achieve its goals. We appreciate GAO's recognition of the progress and improvements the NRC has achieved in these areas.



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**Appendix II: Comments From the Nuclear  
Regulatory Commission**

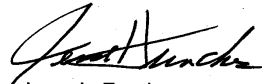
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G. L. Jones

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The NRC appreciates this opportunity to review and address key issues on GAO's draft report regarding the FY 2000 Performance Report and FY 2002 Performance Plan. The NRC will take GAO's observations into consideration as we develop the FY 2003 Performance Plan and the FY 2001 Performance Report. We are prepared to discuss our recommendations in the attachment with you at your convenience.

Sincerely,



Jesse L. Funches  
Chief Financial Officer

Enclosure: As stated

**NRC Concerns and Recommendations**

**RESULTS IN BRIEF**

See comment 1.

1-GAO Statement (p. 2): First paragraph, first sentence, GAO states, "NRC reports *mixed* progress in achieving the key outcomes."

NRC Recommendation: This statement is not accurate. The FY 2000 Performance Report shows that the agency achieved all of its outcomes (strategic and performance goals and supporting measures).

See comment 2.

2-GAO Statement (p. 2): First paragraph, second sentence, GAO states that "... three relate to such nonsafety issues ..."

NRC Recommendation: The three nonsafety goals should not be cast as issues. The sentence should be changed to read "To measure performance for the three outcomes, NRC established the same four goals: one relates to safety and the other three are: increasing public confidence, reducing unnecessary regulatory burden, and increasing effectiveness, efficiency and realism."

See comment 3.

3-GAO Statement (p.2): Second full paragraph, third, fourth, and fifth sentences

NRC Recommendation: Replace with the following text: However, human capital challenges could potentially impact NRC's ability to meet its performance goals in the future. This is because NRC's office responsible for achieving this outcome is facing the potential loss of a number of its senior managers and professional/technical staff. As of June 2001, 16 percent of its senior managers and 22 percent of its professional/technical staff are eligible for retirement.

The statistics in the draft report are based on a projection made in July 2000 that examined the numbers of employees eligible for either early or optional retirement through the 2004-2005 timeframes. We believe that the revised statistics is a better representation of potential retirement attrition.

See comment 4.

4-GAO Statement (p. 3): Second paragraph, last sentence, GAO states "For example, the Environmental Protection Agency may issue more stringent standards for the level of radiation that can safely remain at a nuclear power plant site after licensees complete their decommissioning activities than NRC is currently using."

NRC Recommendation: Add an additional sentence stating "The NRC will implement the standards in the EPA rule issued in June 2001."

Enclosure

See comment 5.

5-GAO Statement (p. 3): Fourth paragraph, first sentence, GAO states "NRC's fiscal year 2000 performance report does not explain its progress in resolving the challenges to strategic human capital management or information security and its performance plan for fiscal year 2002 does not have performance goals or measures related to them."

NRC Recommendation: However, GAO then states on page 14, second paragraph, that "NRC describes the action it has taken to address the management challenges that we and its Office of Inspector General identified. NRC's fiscal year 2002 performance plan includes an appendix that describes its ongoing and planned actions to address these management challenges." GAO needs to revise their statement on page 3 to be consistent with the statement identified on page 14.

See comment 6.

6-GAO Statement (p. 4): First paragraph, 1<sup>st</sup> full sentence, GAO states that "Although NRC does not have a performance goal or measure for the third challenge related to managing the agency-coping with its strategic human capital management crisis, ..."

NRC Recommendation: NRC does not see human capital management as a crisis. Replace the word "crisis" with the word "challenge."

**REACTOR SAFETY**

See comment 7.

7-GAO Statement (p. 6): Second paragraph, second and third sentences.

NRC Recommendation: Replace with the following text: In a highly technical, complex industry, NRC is facing the potential loss of a number of its senior managers and professional/technical staff. For example, within the Office of Nuclear Reactor Regulation—about 22 percent of the professional technical staff and 16 percent of senior executive service staff are eligible for retirement now.

The statistics in the draft report are based on a projection made in July 2000 that examined the numbers of employees eligible for either early or optional retirement through the 2004-2005 timeframes. We believe that the revised statistics is a better representation of potential retirement attrition.

See comment 8.

8-GAO Statement (p. 8): First partial paragraph, last sentence, GAO states "In addition, a NRC advisory panel concluded in May 2001 that the agency did not have the necessary data to evaluate the new safety oversight process against the performance goal."

NRC Recommendation: This statement is not accurate. Replace the sentence with "An NRC advisory panel concluded in May 2001 that the implementation of the new safety oversight process had made progress with respect to achieving the four performance goals, including the increasing public confidence goal."

See comment 9.

9-GAO Statement (p. 8): First full paragraph. GAO states "For example, one strategy to enhance its effectiveness and efficiency is to anticipate challenges posed by the introduction of new technologies and changing regulatory demands. Without further amplification, it is difficult to see how this strategy will result in more effective and efficient NRC activities and decisions."

NRC Recommendation: The referenced performance goal is to "make NRC activities and decisions more effective, efficient, and **realistic**" [emphasis added] and is not limited to effectiveness and efficiency. The strategy in the GAO example is focused on making NRC activities and decisions more realistic, not more effective and efficient.

**MATERIAL SAFETY**

See comment 10.

10-GAO Statement (p. 8): First paragraph under Nuclear Material Licensees' Performance, GAO states that "However, NRC has concerns about the quality of its performance data for 10 measures related to this key outcome and noted that actual data reported for some of the safety performance goal measures are subject to change based on further analysis and the receipt of newly reported information."

NRC Recommendation: The report should expand on this statement by addressing the fact that there are over 15,000 Agreement State regulated licensees (these are licensees which are monitored by individual states rather by the NRC) and over 5,000 licensees regulated by the NRC. The number of licensees, their physical dispersion across the United States, and the reliance by NRC on Agreement States to collect data, presents a significant challenge for collecting and analyzing performance data. The NRC discussed the data limitations in this arena in the FY 2000 Performance Report, as required by OMB's guidance for performance reports. The NRC also discussed actions it was taking to improve the quality of the data. For example, NRC has provided training throughout the country to Agreement State and NRC employees on the Nuclear Material Events Database and data collection procedures. In addition, NRC is working with our Agreement

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State partners to evaluate current data collection and analysis procedures to recommend future improvements for data collection and analysis. Moreover, subsequent to the FY 2000 Performance Report, NRC has begun to develop a management directive which will address data verification and validation procedures. This management directive was recommended by the NRC Inspector General, and NRC has agreed to the recommendation. The management directive will result in continued improvements in the performance data reported to Congress. The GAO report should include the above to fully explain the limitations to nuclear materials safety arena performance data and the actions NRC is taking to improve that data.

See comment 11.

11-GAO Statement (p. 10): First full paragraph. GAO states that "This program evaluation should help determine whether NRC will meet one of its four performance goals-maintain safety-but is not likely to provide information to assess the impact on NRC's three nonsafety performance goals."

NRC Recommendations: It is NRC's understanding under GPRA that performance measures are used to determine if an agency meets its performance goals and the program evaluations are to assess the manner and extent to which programs achieve intended objectives, and assess program implementation policies, practices, and processes. This statement should be corrected.

**WASTE SAFETY**

See comment 12.

12-GAO Statement (p. 11): First paragraph. GAO states, "Likewise, in August 1999, EPA issued a proposed rule on the environmental radiation protection standards for Yucca Mountain ..."

NRC Recommendation: Note: EPA has now issued the referenced standards as a final rule. Add an additional sentence stating "NRC will implement the standards in the EPA's final rule issued in June 2001."

Now on p. 12.

13-GAO Statement (p. 11): Second paragraph. GAO states that "Although program evaluations are helpful and important, NRC did not complete any such evaluations related to the nuclear waste safety key outcome in fiscal year 2000."

See comment 13.

NRC Recommendation: It is NRC's understanding under GPRA that performance measures are used to determine if an agency meets its performance goals and the program evaluations are to assess the manner and extent to which programs achieve intended objectives, and assess program implementation policies, practices, and processes. This statement should be corrected.

**COMPARISON of REPORTS for FY 1999 and 2000**

Now on p. 13.  
See comment 14.

14-GAO Statement (p. 12): Last paragraph, last sentence. GAO states, "NRC had **previous** used ...)

NRC Recommendation: Add "ly" to previous.

See comment 15.

15-GAO Statement (p. 15): First paragraph, third sentence. GAO states that "Although NRC's fiscal year 2002 performance plan sets targets to meet its information technology objectives, it does not address how it expects to verify and validate the data."

NRC Recommendation: Delete, this refers to verifying and validating data that corresponds to outputs. This information is not reported in the annual performance report but is lower level operational information.

**MANAGEMENT CHALLENGES**

Now on p 19.  
See comment 16.

16-GAO Statement (p. 18): Third paragraph, second sentence, there is a word missing between "they" and "not".

NRC Recommendation: Add the word "did"

Now on p. 21.  
See comment 17.

17-GAO Statement (p. 20): Third column, second paragraph, last sentence. GAO states that "To accomplish these objectives, NRC expects to begin providing security awareness training for its staff and monitor the effectiveness of its security protection initiatives.

NRC Recommendation: The statement should reflect that the NRC has provided security awareness training for many years and NRC expects to continue providing security awareness training for its staff.

Now on pp. 26 and 27.  
See comment 18.

18-GAO Statement (p. 25): Under Clear and Balanced Communication with External Stakeholders, second column, second sentence. GAO states that "NRC redesigned its Web site..."

NRC Recommendation: Revise sentence as follows: "For example, NRC developed communication plans for its more visible nuclear reactor safety programs, **and is in the process** of redesigning its Web site."

Also add the following text to the sentence above: "NRC also provides training for the staff in public outreach, writing in plain English, and communicating with the public. In addition, the staff held a major meeting in April which was devoted entirely to obtaining recommendations from the public on ways to improve NRC's public participation procedures. The staff will be

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recommending changes to our policies and procedures in response to the numerous suggestions received at this meeting."

19-GAO Statement (p. 26): Under Intra-agency communication, third column, second paragraph, second and third sentences. GAO statements are not quite accurate.

NRC Recommendation: Change sentence to: "To achieve this goal internally, the SES candidates have produced a report on internal communications at the NRC, which assesses the effectiveness of current practices. The report also identifies staff needs and expectations, examines best practices at other organizations, and includes specific recommendations on how to improve the effectiveness and efficiency of internal communications. The EDO will be reviewing these recommendations and determine actions to be pursued."

Now on p. 28.  
See comment 19.

The following are GAO's comments on the Nuclear Regulatory Commission's letter dated June 19, 2001.

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## GAO's Comments

1. We agree that NRC's fiscal year 2000 performance report shows that it achieved its goals and targets for the safety-related performance goal for the three key outcomes. We revised the report to make it clear that we concluded that NRC's performance was mixed because it did not have measures for three performance goals until it issued its fiscal year 2002 performance plan. Therefore, we could not fully assess NRC's progress in meeting the three key outcomes.
2. We did not make the change suggested by NRC since we wanted to distinguish between safety- and nonsafety performance goals.
3. We revised the report to show the Office of Nuclear Reactor Regulation staff that are eligible to retire now.
4. We did not include the additional information that NRC suggested because the final standards that the Environmental Protection Agency issued on June 13, 2001, relate to the Department of Energy's proposed high-level waste repository at Yucca Mountain, Nevada—not to the residual radiation that can safely remain at a commercial nuclear power plant site after decommissioning.
5. The information presented on pages 3 and 14 are not inconsistent and do not need to be changed. In our comparison of performance plans for fiscal year 2001 and 2002 (p. 14), we note that NRC's fiscal year 2002 performance plan describes the actions that NRC has taken to address the management challenges that we and its Office of the Inspector General identified. This is not inconsistent with our discussion related to the information that was not included in NRC's fiscal year 2000 performance report (p. 3). The information that we discuss relates to two different NRC documents.
6. We did not make the change that NRC recommended because in fiscal year 2001, about 16 percent of NRC staff are eligible to retire, and by the end of fiscal year 2005, about 33 percent will be eligible. In our opinion, NRC's replacing such a large number of staff qualifies as a crisis. In addition, last year, one NRC Commissioner said, "There is a crisis looming in government" because an entire generation of employees is going to retire or will be eligible to retire in the near future. Finally, in January 2001, we identified strategic human capital management as a high-risk area governmentwide.



7. See comment 3.
8. NRC has correctly portrayed one of the overall conclusions of its advisory panel concerning the new safety oversight process; that is, that the process has made progress toward achieving NRC's four performance goals. The advisory panel also concluded that NRC has the necessary elements to evaluate the new oversight process against the performance goals. But the panel concluded, as we noted in this report, that NRC did not have the necessary data to evaluate the new safety oversight process against the performance goals. As a result, we did not change the report as NRC suggested.
9. NRC says that the strategy—anticipate the introduction of new technologies and changing regulatory demands—focuses on making NRC's activities more realistic. We will add "realistic" to the information presented. However, NRC provided no further amplification about how the strategy will make NRC's activities more realistic.
10. As NRC noted, its fiscal year 2000 performance report discussed data limitations related to the nuclear material safety key outcome. Since NRC's efforts to provide greater details on how it ensures the credibility of the data used to assess its performance are discussed later in the report, we made no change here as NRC suggested. However, we included some of the information that NRC suggested in the section of the report that compares the fiscal years 2001 and 2002 performance plans.
11. We revised the report to include a broader description of how program evaluations can be used. It should be noted that NRC's programs contribute to achieving its performance measures and ultimately its performance and strategic goals. Therefore, we do not believe that NRC's views and our views are inconsistent.
12. We revised the report to show that the Environmental Protection Agency issued the final rule for the Department of Energy's high-level waste repository at Yucca Mountain on June 13, 2001. We also included the information that NRC recommended.
13. We did not revise the report as NRC suggested because we included the information earlier in the report. (See comment 11.)
14. We corrected the typographical error that NRC identified.

15. We did not delete the information as NRC suggested because we believe it clarifies the conditions under which NRC verifies and validates performance data.
16. We corrected the typographical error that NRC identified.
17. We revised the report as NRC recommended.
18. We revised the report as NRC recommended and included some of the additional information it provided.
19. We revised the report to show that NRC staff have offered recommendations for improving internal communications to the Executive Director for Operations who will determine the actions that NRC staff should pursue.

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