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Resources, Community, and
Economic Development Division

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May 27, 1998

The Honorable Thomas J. Bliley, Jr.
Chairman, Committee on Commerce
House of Representatives

The Honorable John R. Kasich
Chairman, Committee on the Budget
House of Representatives

The Honorable Bob Livingston
Chairman, Committee on Appropriations
House of Representatives

Subject: Results Act: NRC's Annual Performance Plan for Fiscal Year 1999

This report summarizes our observations on the Nuclear Regulatory Commission's (NRC) annual performance plan for fiscal year 1999, which was submitted to the Congress in February 1998. As you know, the Government Performance and Results Act of 1993 (the Results Act) requires federal agencies, beginning with fiscal year 1999, to prepare annual performance plans covering the program activities set out in their budgets. To analyze NRC's performance plan, we condensed the requirements in the Results Act into three basic questions: (1) To what extent does the plan provide a clear picture of intended performance across the agency? (2) How well does the plan discuss the strategies and the resources the agency will use to achieve its performance goals? (3) To what extent does the plan provide confidence that the agency's performance information will be credible?¹ Enclosure I presents our detailed observations concerning how well NRC's plan answered these questions.

¹These questions are based on criteria in the Results Act, the Office of Management and Budget's (OMB) guidance to federal agencies on developing their plans, and a December 1997 letter to OMB from eight congressional leaders on their expectations for these plans.


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In summary, we found that NRC's performance plan for fiscal year 1999 partially meets the criteria set forth in the Results Act and related guidance. The plan could provide a clearer picture of intended performance across the agency and better discuss the strategies and resources the agency will use to achieve its performance goals. Moreover, the performance plan does not provide confidence that the agency's performance information will be credible.

We provided NRC with a draft of this report for its review and comment. We received comments on these observations from NRC's Chief Financial Officer. (See enc. II.) NRC said that it considers our comments as a key element in its lessons learned as it strives to strike the right balance of information in its performance plan. NRC also suggested several editorial changes, which we incorporated where appropriate.

A list of related GAO products is included at the end of this report. We conducted our work from February through April 1998 in accordance with generally accepted government auditing standards. We are sending copies of this report to the appropriate congressional committees; the Commissioners, Nuclear Regulatory Commission; and the Director, Office of Management and Budget. We will also make copies available to others on request.

Please call me at (202) 512-3841 if you or your staff have any questions about this report. Major contributors to this report were Mary Ann Kruslicky and Philip Olson.


(Ms.) Gary L. Jones
Associate Director, Energy,
Resources, and Science Issues

Enclosures - 2

OBSERVATIONS ON THE NUCLEAR REGULATORY COMMISSION'S
ANNUAL PERFORMANCE PLAN

The following presents our detailed observations concerning how well the Nuclear Regulatory Commission's (NRC) fiscal year 1999 performance plan addressed three basic questions inherent in the Government Performance and Results Act and related guidance for implementing the act. (1) To what extent does the plan provide a clear picture of intended performance across the agency? (1) How well does the plan discuss the strategies and the resources the agency will use to achieve its performance goals? (3) To what extent does the plan provide confidence that the agency's performance information will be credible?

NRC'S PERFORMANCE PLAN COULD PROVIDE
A CLEARER PICTURE OF INTENDED
PERFORMANCE ACROSS THE AGENCY

NRC's performance plan could provide a clearer picture of the agency's intended performance. NRC has established performance goals that are precise, measurable, and when taken together cover key aspects of the agency's strategic goals and program activities in the budget.¹ The performance goals are generally results-oriented, include performance measures (indicators according to NRC), and many are self-measuring. For example, three of NRC's performance goals are: zero civilian nuclear reactor accidents; zero radiation-related deaths due to the civilian uses of source, byproduct, and special nuclear material; and zero loss or theft of special nuclear material regulated by NRC. In the performance plan, NRC also provides "output measures" for each strategic goal. The output measures are the means and strategies (processes and activities that NRC expects to perform) to attain the performance goals.

NRC lists output measures as a group for each strategic goal but does not link the output measures to specific performance goals. The performance plan includes over 110 output measures for seven strategic goals (NRC did not include output measures for its goal for organizational excellence). By including such a large number of output measures, NRC risks creating an excess of data that will obscure rather than clarify performance issues. To ensure that the performance plan is clear and concise, NRC should seek to establish a clear hierarchy of performance goals and measures, recognizing that lower organizational levels may use goals and measures that are in addition to or even different from those included in the performance plan. This does

¹NRC refers to strategic goals as general goals.

not mean that these other goals are not important for guiding the day-to-day efforts of the lower organizational levels. NRC's Chief Financial Officer and others told us that the agency recognizes—and has proposed to the Commission—that the agency revise its strategic plan to in part explain why the strategies, if properly implemented, will achieve the strategic goals and to identify the functions that NRC needs to conduct to implement the strategies.

With the exception of the nuclear waste safety strategic goal, NRC did not specifically identify when its performance goals involved crosscutting activities with other agencies. For example, NRC merely footnoted that it is seeking legislation to remedy the differences in residual radiation levels between itself and the Environmental Protection Agency. NRC does not discuss the ramifications on licensees from using different criteria to decontaminate their facilities. Likewise, NRC does not discuss the implications of regulating certain Department of Energy nuclear facilities. NRC states that where appropriate it will reference the crosscutting functions in the performance plan. Although the performance plan referred to other agencies, NRC did not elaborate on the manner in which it coordinates crosscutting activities with them. NRC also does not discuss whether any crosscutting functions will have an effect or potential effect on the agency's achieving the performance goals and targets.

According to the Chief Financial Officer and other staff, they believe that NRC sufficiently addressed the overlap in standard-setting authority with the Environmental Protection Agency because any change in residual radiation levels would have more of an affect on the actions and resources of licensees than on NRC. They also noted that the external regulation of certain Department of Energy facilities is a very minor pilot program, and no decision will be made until the year 2000 or 2001 about moving beyond the pilot. In addition, the staff noted that NRC discussed its major crosscutting functions with other agencies in its strategic plan and did not believe they needed to repeat such discussion in the performance plan. By not having such information, NRC has missed the opportunity to clarify how achieving its program goals will contribute to addressing crosscutting issues.

**NRC'S PERFORMANCE PLAN COULD BETTER DISCUSS
HOW THE AGENCY'S STRATEGIES AND RESOURCES
WILL HELP ACHIEVE ITS GOALS**

NRC's performance plan could better discuss how the agency's strategies and resources will help achieve its goals. NRC included its mission statement and strategic goals in the plan. But, NRC did not directly link the strategies to

performance goals. Rather, NRC describes strategies to accomplish the strategic goals; the strategies are the same as NRC discussed in the strategic plan. In addition, NRC did not identify the operational processes, technology, staff skills and experience, or capital needed to achieve the performance goals.

NRC did not directly link strategies to performance goals nor did the agency link resources to strategies. As a result, neither the performance plan nor the fiscal year 1999 budget request shows the resources needed to achieve each performance goal, and the plan does not provide a rationale as to how resources will contribute to accomplishing the expected level of performance. NRC also did not directly relate its output measures to performance goals. Without such a relationship, NRC has not demonstrated how completing the output measure will help ensure meeting not only the performance goals but also the strategic goals. Although not required by the Results Act, better performance plans will be most useful to decisionmakers if they not only describe the strategies needed but will also provide a rationale as to how the strategies will contribute to accomplishing the expected level of performance. Such information is important to help the Congress determine whether the (1) resources are sufficient to accomplish the expected level of performance or (2) benefits of performance justify the expected costs. The Chief Financial Officer, Director of Budget and Analysis, and other staff said that during the fiscal year 1999 budget preparation, NRC developed costs for those output measures where costs could be assigned but did not include that information in the performance plan.

NRC's information on the impact of external factors is limited. NRC could build on the discussion in its strategic plans and provide additional context in the performance plan on external factors. In addition, the efforts of agencies often are but one factor among many that may influence whether, and the degree to which, an agency's programs achieve their intended results. NRC merely states that to achieve the performance goals requires the collective efforts of NRC, agreement states, and their licensees. Since agreement states and licensees conduct numerous activities designed to prevent radiation-related deaths—a performance goal for the nuclear materials safety strategic goal—it will be difficult for the Congress to determine the impact of NRC's actions and the effectiveness of its programs on ensuring safety. According to the Chief Financial Officer, Director of Budget and Analysis, and other staff, NRC recognized licensees' actions in the strategic plan and did not believe it needed to reiterate such information in the performance plan. The staff also noted that NRC cannot directly measure the impact of its staff and resources on ensuring safe operations by licensees.

In addition, NRC did not recognize in its performance plan that a number of utilities have announced that they will not seek to renew nuclear plant operating licenses but will instead shut down the plants and decontaminate and decommission them. NRC did not discuss how the reduction in the number of operating reactors will impact the agency's operations. The Chief Financial Officer and other NRC staff told us that the performance plan was to address NRC activities in fiscal year 1999, and to the best of its ability, NRC has reflected the industry's status in the plan. The staff also said that in the strategic plan NRC recognized the decrease in the number of operating plants over time, and the agency did not believe that it needed to repeat the information in the performance plan. NRC does not expect any utility to prematurely shut down a plant in fiscal year 1999. For planning purposes, NRC estimates that utilities will prematurely shut down one plant each year beginning in fiscal year 2000. However, utilities have prematurely shut down five plants since December 1996; in January 1998 one utility announced plans to shut down two plants; and the investment firm, Shearson Lehman Brothers, projected that utilities will shut down 25 plants by the year 2003. This estimate is well above the number of premature shutdowns that NRC projects. According to various NRC staff, the agency will reevaluate its planning assumptions when developing the fiscal year 2000 performance plan.

**PERFORMANCE PLAN DOES NOT PROVIDE
CONFIDENCE THAT NRC'S PERFORMANCE
INFORMATION WILL BE CREDIBLE**

NRC's performance plan does not provide confidence that its performance information will be credible. NRC indicated the baseline data to be used to determine whether it meets the performance goals, and in those instances where the baseline data do not exist, NRC has specified the actions that it will take to establish such data. However, NRC makes no mention of the development of information that would be necessary to relate costs to financial and program performance as well as to conform with federal cost accounting standards.

Both NRC's performance plan and fiscal year 1998 budget request identify several major information technology investments that NRC expects to make to support its strategic and performance plans. However, the performance plan addresses information technology investments separate from the discussion of performance goals. As a result, it is difficult to determine how the information technology investments will support NRC's achievement of specific performance goals. For example, NRC requires all licensees to monitor employee exposure to radiation to demonstrate compliance with occupational dose limits specified in its regulations. Although NRC mentions the Radiation Exposure Information Report System that is

used to record employee exposures, NRC does not discuss the system in the section on performance goals. NRC staff agree that the plan could be strengthened by including more information about how information technology investments support performance goals. They noted that page 70 of the plan includes a matrix that relates eight key systems to NRC's strategic goals. The staff also said that NRC expects to integrate more fully the discussion of information technology investments with the agency's performance goals in future plans.

Most of the data to measure performance are developed for and summarized in the abnormal occurrences report that NRC submits to the Congress annually.² The information needed to develop this report originates with such external sources as electric utilities, fuel cycle facility operators, or materials licensees. Yet, the performance plan does not address how NRC will ensure that these external sources provide accurate, timely, and reliable information. According to agency staff, NRC has a high degree of confidence about the reliability of this information because (1) external sources are required by regulations to report the information to NRC; (2) NRC's inspection program, among other activities, audits licensees to determine that the required information is reported; and (3) the agency has established procedures for reporting, reviewing, and evaluating potential abnormal occurrences reported by licensees. They also noted that these are the most significant types of events that occur at nuclear power plants, fuel cycle facilities, and materials licensees and are highly visible and hard to miss and would be reported. Therefore, the Chief Financial Officer and other staff believe that NRC has ensured that the agency's information will be credible.

NRC maintains most of the information related to abnormal occurrences in three primary data bases. According to the performance plan, in 1998, NRC plans to carefully examine its data systems to help ensure that accurate and reliable data are reported in fiscal year 1999. Although the plan discusses validating the list of primary systems and measuring levels of satisfaction with the accuracy and availability of information in the systems, NRC does not discuss how it intends to actually validate these data to ensure that they are accurate and complete. The plan also does not address any limitations to NRC's achieving its data verification and validation goals. NRC does state that it will continue to rely on established procedures, such as Office of the Inspector General (OIG) audits and management reviews, to verify and validate

²The Energy Reorganization Act of 1974 requires NRC to submit abnormal occurrence reports to the Congress. The act defines an abnormal occurrence as an unscheduled incident or event that NRC has determined to be significant from the standpoint of public health and safety.

performance data but does not delineate these procedures. According to the Assistant Inspector General for Audits and members of his staff, NRC's OIG has examined only a limited number of systems that the agency will use to measure performance against its stated goals. The Assistant Inspector General also noted that the OIG and Chief Financial Officer need to determine how the OIG can assist NRC with its data verification and validation efforts.

In 1993, we reported on certain aspects of NRC's nuclear materials program.³ We found that NRC's quarterly reports to the Congress did not identify all abnormal occurrences that had occurred nationwide. According to various NRC staff, the agency has taken a number of actions to correct the problems that we identified in our 1993 report. In addition, in 1997, we found that NRC's performance indicator and inspection programs had not made a concerted effort to verify the accuracy and completeness of these data.⁴ We also found examples where licensees had not reported certain incidents to NRC at the time they occurred. According to the Chief Financial Officer and Director of Budget and Analysis, the performance indicator program is not mission-critical and will not be used to measure performance against the plan.

NRC's performance plan and capital asset plan highlight several new information technology initiatives. A 1996 OIG report identified numerous weaknesses in NRC's developing and managing information systems.⁵ The OIG also found that the development of some systems was significantly over budget and behind schedule. The performance plan does not address the impact that information technology initiatives will have on the achievement of performance goals should resource shortfalls or schedule delays occur. With the aggressive information technology restructuring underway, NRC needs to ensure that the problems of the past do not adversely affect the agency's information technology plans. According to various NRC staff, the agency has undertaken a number of actions since 1996 to ensure that cost overruns and schedule slippages do not recur. For example, NRC has instituted the Capital Planning and Investment Control process that entails rigorous and robust planning for

³Nuclear Regulation: Better Criteria and Data Would Help Ensure Safety of Nuclear Materials (GAO/RCED-93-90, Apr. 26, 1993).

⁴Nuclear Regulation: Preventing Problem Plants Requires More Effective NRC Action (GAO/RCED-97-145, May 30, 1997).

⁵Improvements Needed in Agency Oversight of Information Resources Management Activities (OIG/96A-11, Sept. 24, 1996).

new computer systems and has recently adopted increasingly stringent guidelines for managing the cost and schedule of such systems. In addition, NRC's Executive Council will review project variances and require corrective action before they become significant. NRC's Assistant Inspector General for Audits confirmed that the agency has controls in place to help ensure that past problems do not recur. Whether NRC can prevent past problems from recurring will depend on how successfully the agency follows through on the procedures established when implementing the new systems.

OTHER OBSERVATIONS

In its proposed fiscal year 1999 budget, NRC notes that the strategic goals of excellence and public confidence are overarching management strategies that are integrated throughout the agency. We too agree that excellence and public confidence are overarching strategies; therefore, it would seem more appropriate for NRC to incorporate excellence and public confidence as strategies within its performance goals rather than as goals unto themselves. On March 17, 1998, the Chief Financial Officer sent a proposal to NRC to merge the excellence and public confidence strategic goals with the management goals. The proposal, we believe, demonstrates the dynamic process that the Congress envisioned in the Results Act.

NRC makes only a single reference to the Year 2000 issue when the agency states that it will meet OMB's March 31, 1999, milestone for systems compliance. Yet, NRC cannot meet many of its other performance goals if systems external to NRC, such as those maintained by licensees, fail on the Year 2000 issue. The performance plan does not address how NRC will ensure that the data it receives from external data sources are Year 2000 compliant. Even if an agency has made its own systems compliant, the systems can still be contaminated by incorrect data entering from external sources. NRC also does not discuss whether Year 2000 compliance will strain its resources, particularly in the information technology staff. According to various NRC staff, compliance will not strain the agency's resources. NRC staff told us that the agency has complied with OMB guidelines to inventory its electronic data exchanges by February 1, 1998, and coordinate repairs or transition planning with data exchange partners by March 1, 1998. In addition, NRC is repairing one mission-critical data exchange system to accept incoming data in either two- or four-digit date formats and has notified the Nuclear Energy Institute (representative for all affected nuclear utilities) that the testing and validation would be required for those utilities that change their data link once NRC completes the repairs. Because of these efforts, NRC believes that its systems are adequately protected from contamination by electronic data received from external sources.

NRC cited the National Environmental Policy Act (NEPA) and other environmental legislation as its authority to protect the environment. According to NRC staff, the act does not explicitly state that it authorizes agencies to take actions to protect the environment. However, NRC's authority is derived from case law interpreting NEPA rather than the act. NRC's General Counsel concurred and said that the agency would rephrase the wording when it submitted its fiscal year 2000 performance plan.

COMMENTS FROM THE NUCLEAR REGULATORY COMMISSION

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

April 14, 1998

Mr. Victor S. Rezendes
 Director, Energy, Resources, and
 Science Issues
 U.S. General Accounting Office
 Washington, DC 20548

Dear Mr. Rezendes:

We appreciate the opportunity to comment on your draft report entitled, "Observations on the Nuclear Regulatory Commission's Annual Performance Plan." The development of performance plans and their requirements is an evolving process. We consider your comments as a key element in our lessons learned as we strive to strike the right balance of information in our performance plan.

The following are suggested modifications to your report:

See page 5. Page 6, second paragraph, tenth line—replace sentence beginning, "Various NRC staff..." with:

NRC staff agrees that the plan could be strengthened by including more information about how IT investments support performance goals. Included on page 70 of the plan is a detailed matrix titled, "Major IT Systems Support for NRC Strategic Plan" in which eight key systems are crosswalked against the strategic arenas and Strategic Plan goals. Three pages of explanatory text follow. The NRC staff plans to do additional integration of the discussion of IT investments with performance goals in future plans. This approach limits redundancy and makes the performance plan concise.

See page 5. Page 7—the first sentence should be re-worded as follows:

Most of the data to measure performance is developed for and summarized in the abnormal occurrence report that NRC submits to Congress annually.

See page 5. Page 7, sixth line—the sentence should be re-worded as follows:

According to agency staff, NRC has a high degree of confidence about the reliability of this information because (1) the information needed from external sources is required to be reported to the NRC by regulations; (2) the NRC maintains an aggressive inspection program which, among other activities, audits licensees to determine that information is being reported as required by the regulations; and (3) the agency has established procedures for reviewing and evaluating potential abnormal occurrences reported by licensees. These are the most significant types of events that occur at nuclear power plants, fuel cycle facilities, and materials licensees. Accordingly, NRC staff believe that these types of occurrences are highly visible and hard to miss and would be reported.

V. Rezendes

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See page 7.

Page 9, fifth line--add new sentence:

NRC staff advised us that the NRC has recently adopted increasingly stringent guidelines for managing cost and schedule. NRC's Executive Council will review project variances and require corrective action before they become significant.

See page 7.

Page 9, second full paragraph, last line--Delete the sentence beginning, "They also questioned our identifying..." and replace with the following:

NRC advised us that they are in full compliance with OMB guidelines which state that agencies must inventory all of their electronic data exchanges by February 1, 1998, and coordinate repairs or transition planning with data exchange partners by March 1, 1998. NRC met both of these dates.

The results of its inventory revealed that NRC receives data electronically from only one "outside" entity, and sends data electronically to six "outside" entities. At this time, discussions with the various data exchange partners indicate that five outgoing data exchanges do not require NRC to make any changes, and the sixth outgoing data exchange is already Year 2000 compliant.

NRC is repairing the mission-critical system (Emergency Response Data System (ERDS)) associated with its incoming data exchange. This was explained in their January 9, 1998, response to the GAO, "Survey of Year 2000-related Electronic Data Exchange Issues." The response was directed to Joel C. Willemssen, Director, IRM/Accounting and Information Management Division.

In this response NRC explained that it is repairing the system associated with this data exchange to accept incoming data in either two or four digit date formats. A windowing algorithm is used to determine if the two digit date should be prefaced with "19" or "20". This gives maximum flexibility with respect to ensuring that any data received will be processed correctly. Four digit dates are accepted as is. The data that is finally stored in ERDS for further processing will reside as a 32 bit binary number based on seconds since midnight, December 31, 1980. Dates for output to display will be in four digit year format.

NRC has informed the Nuclear Energy Institute (NEI), which represents all nuclear utilities involved, of its approach to ensuring that ERDS can function once the millennium is reached. NEI was told that testing and validation would be required for those utilities that change their ERDS link once repairs were completed.

Because of these efforts, NRC believes its systems are adequately protected from contamination by electronic data received from external sources.

V. Rezendes

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See page 8.

Page 10, first full paragraph, second line--reword sentence beginning, "However...." as follows:

However, that statute does not explicitly state that it authorizes agencies to take action to protect the environment.

Please feel free to contact me if you have any questions about our comments. The NRC remains committed to improving its performance plan as we move forward with our implementation of the Government Performance and Results Act.

Sincerely,



Jesse L. Funches
Chief Financial Officer



RELATED GAO PRODUCTS

Nuclear Regulation: Preventing Problem Plants Requires More Effective NRC Action
(GAO/RCED-97-145, May 30, 1997).

Nuclear Regulation: Better Criteria and Data Would Help Ensure Safety of Nuclear Materials
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