NUREG-1100
VOLUME-17

BUDGET ESTIMATES AND PERFORMANCE PLAN

FISCAL YEAR 2002

April 2001

U.S. Nuclear Regulatory Commission

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FUNDS: The NRC's FY 2002 budget request is $513,080,000, as shown in the following table.

FTEs: The NRC's FY 2002 budget request is 2,789 FTE, which includes 11 reimbursable business-like FTE, as shown in the following table.

TOTAL NRC BUDGET AUTHORITY BY APPROPRIATION

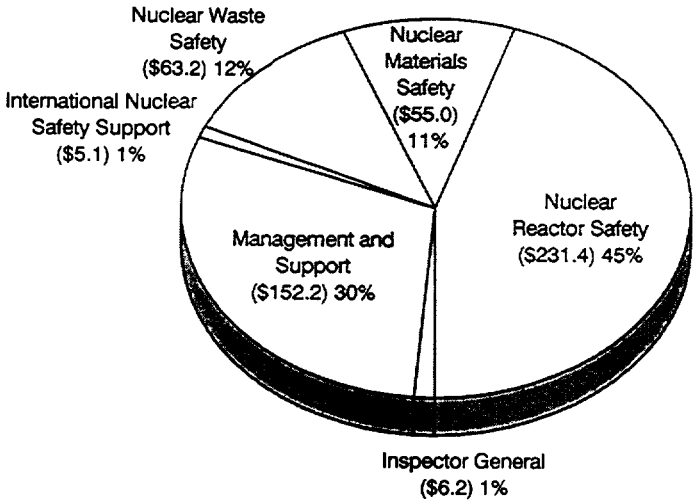
NRC Appropriation	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Salaries and Expenses (S&E) ($K)				
Budget Authority	464,913	481,825	506,900	25,075
Offsetting Fees	442,000	447,937	463,248	15,311
Net Appropriated—S&E	22,913	33,888	43,652	9,764
Office of the Inspector General (OIG) ($K)				
Budget Authority	5,000	5,500	6,180	680
Offsetting Fees	5,000	5,390	5,933	543
Net Appropriated—OIG	0	110	247	137
Total NRC ($K)				
Budget Authority	469,913	487,325	513,080	25,755
Offsetting Fees	447,000	453,327	469,181	15,854
Total Net Appropriated—NRC [1]	22,913	33,998	43,899	9,901

[1]Net Appropriation - NRC ($K)	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate
Nuclear Waste Fund	19,150	21,552	23,650
General Fund	3,763	12,446	20,249
Total	22,913	33,998	43,899

EXECUTIVE SUMMARY

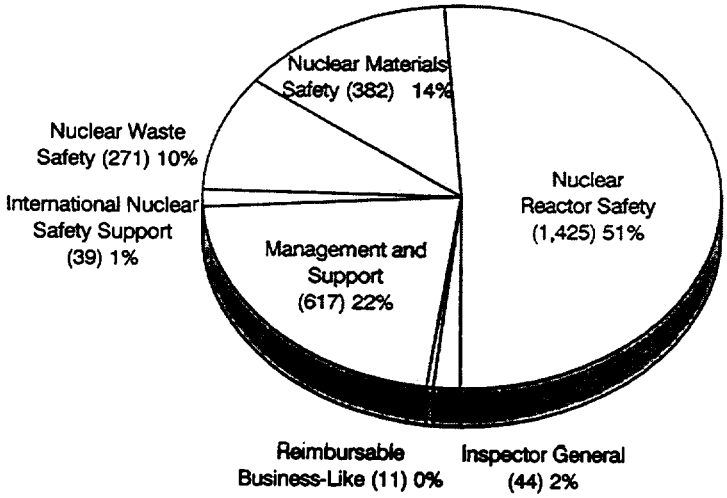
SUMMARY OF BUDGET AUTHORITY AND STAFFING BY STRATEGIC ARENA				
			FY 2002 Estimate	
Summary	FY 2000 Enacted	FY 2001 Enacted	Request	Change from FY 2001
Budget Authority by Strategic Arena				
Nuclear Reactor Safety	210,465	219,214	231,397	12,183
Nuclear Materials Safety	51,737	52,463	55,038	2,575
Nuclear Waste Safety	53,882	59,288	63,157	3,869
International Nuclear Safety Support	4,692	4,779	5,119	340
Management and Support	144,137	146,081	152,189	6,108
Subtotal (Salaries & Expenses)	**464,913**	**481,825**	**506,900**	**25,075**
Inspector General	5,000	5,500	6,180	680
Total NRC	**469,913**	**487,325**	**513,080**	**25,755**
Staffing (FTE) by Strategic Arena				
Nuclear Reactor Safety	1,430	1,424	1,425	1
Nuclear Materials Safety	399	377	382	5
Nuclear Waste Safety	259	266	271	5
International Nuclear Safety Support	39	38	39	1
Management and Support	630	614	617	3
Subtotal (Salaries & Expenses)	**2,757**	**2,719**	**2,734**	**15**
Inspector General	44	44	44	0
Total NRC	**2,801**	**2,763**	**2,778**	**15**
Reimbursable Business-Like FTE	13	11	11	0
Total (NRC)	**2,814**	**2,774**	**2,789**	**15**

DISTRIBUTION OF NRC BUDGET AUTHORITY BY STRATEGIC ARENA



FY 2002 ($513.1 MILLION)

DISTRIBUTION OF NRC STAFF BY STRATEGIC ARENA



FY 2002 (2,789 FTEs)

Note: Percentages are rounded to the nearest whole number.

EXECUTIVE SUMMARY

NRC's Mission

The Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, as amended, establish the basic regulatory mission of the Nuclear Regulatory Commission.

The NRC's mission is to regulate the Nation's civilian use of byproduct, source, and special nuclear materials to ensure adequate protection of public health and safety, to promote the common defense and security, and to protect the environment.

Overview of the NRC Budget and Performance Plan

The NRC's net budget request for FY 2002 is $43.9 million, consisting of $513.1 million in gross budget authority offset by fees of $469.2 million. The NRC's gross budget request for FY 2002 is $513.1 million and 2,789 FTE. NRC is required by the Omnibus Budget Reconciliation Act (OBRA) of 1990, as amended, to collect user fees for its new budget authority less the appropriations from the Nuclear Waste Fund and from the General Fund. The OBRA was amended in FY 2000 to extend the requirement to collect fees through FY 2005 and to reduce the amount of fees collected from 100 percent to 90 percent. The Congress reduced the amount of fees to be collected to mitigate the fairness and equity burden on NRC licensees to pay for costs for which they receive no direct benefit. The reduction is being phased in at two percent per year beginning in FY 2001 through FY 2005. In FY 2002, 96 percent or $469.2 million, of the new budget authority will be offset from fees.

Our FY 2002 budget request accommodates an increasing workload in areas such as reactor license renewal, reactor license transfers, and research of the fabrication and use of mixed oxide (MOX) fuel in civilian nuclear reactors as part of the U.S. Government's plans for the disposition of excess weapons-grade plutonium.

Our budget request and performance plan support implementation of our Strategic Plan goals and strategies. Our FY 2002 budget is $513.1 million—an increase of $25.7 million above our FY 2001 appropriations. While we made improvements in the effectiveness and efficiency of our programs, additional outside pressures are being placed on the budget as a result of increasing personnel costs and increasing workload. For example, approximately $14.8 million, or 58 percent of the budget increase is for salary and benefit increases primarily needed to fund a 3.6 percent pay raise based on guidance from OMB. The remaining $10.9 million increase is primarily necessary for NRC to be prepared to review a potential Department of Energy application to build a high-level waste geologic repository at Yucca Mountain; to review four additional reactor license renewal applications; to develop environmental impact statements or environmental assessments, as needed for

decommissioning or terminated license requests; to sustain critical reactor and nuclear waste safety research; and to pay for increased operating costs associated with rent and transit subsidies.

The $10.9 million increase also includes the Office of Inspector General (OIG) increase of $0.4M for contract support. The requested resource increase for contract support in FY 2002 stems from a recognition that after FY 2001, OIG carryover funds will be inadequate to reinstate base-funding to a level so that the OIG can carry out its essential programs.

Highlights of the FY 2002 budget for each strategic arena are listed below.

Nuclear Reactor Safety

- Supports regulatory oversight of 104 reactors licensed to operate.[1]
- Supports review of four new reactor license renewal applications in FY 2001 and four in FY 2002.
- Supports continuation of the revised reactor oversight program.
- Supports review of a wide range of licensing actions, including areas such as power uprates and license transfers.
- Supports a reactor research program including initial activities needed to maintain critical research capabilities.
- Supports risk-informing 10 CFR Part 50 (Nuclear Reactor Regulation) and update to Part 52 (Standard Design Certification).
- Supports an incident response program that is also responsive to Presidential Decision Directives 63 and 67.

Nuclear Materials Safety

- Supports regulatory oversight of 24 fuel facilities (8 major and 16 minor facilities), 2 gaseous diffusion plants, and approximately 5,000 materials licenses.
- Supports a nuclear materials research program, including development of probabilistic risk assessment tools and guidance to risk-inform materials regulatory framework.

Nuclear Waste Safety

- Supports review of a potential Yucca Mountain high-level waste repository application.
- Supports spent fuel storage and transportation and decommissioning programs.
- Supports a nuclear waste research program.
- Supports the close-out of formerly NRC-licensed sites in Agreement States.

International Nuclear Safety Support

- Continues work with international organizations such as the International Atomic Energy Agency and the Nuclear Energy Agency and supports the issuance of 85-100 import/export licenses per year.
- Continues to provide support for Agency for International Development-related work for the countries of the Former Soviet Union and Central and Eastern Europe.
- Continues to provide access to non-U.S. safety information through interactions with foreign entities, thereby leveraging NRC resources.
- Supports the development and implementation of international regulatory standards, policies, and practices.

Management and Support

- Supports administrative and logistical support including rent and facilities management.
- Supports recruitment, staffing, training, and workforce effectiveness and utilization.
- Supports the NRC information management and information technology infrastructure and services.
- Supports the NRC's accounting, finance, and Planning, Budgeting, and Performance Management processes.
- Provides necessary policy support activities.

Office of Inspector General

- Supports independent evaluations of the NRC's programs and operations through audits, investigations, event inquiries, assessments, and other reviews.
- Supports reviews of NRC's policies and procedures to ensure they meet specific legislative mandates.
- Supports assessing and reporting on the efforts of the NRC to ensure that its safety-related programs are operated efficiently.

Strategic Arenas

To facilitate the correlation with the Strategic Plan, the FY 2002 Budget Estimates/Performance Plan is organized into the same four strategic arenas as follows: Nuclear Reactor Safety, Nuclear Materials Safety, Nuclear Waste Safety, and International Nuclear Safety Support. Also included is information on Management and Support activities and the Office of the Inspector General. For each of the mission-related strategic arenas, the following information is provided: a brief introduction to the arena; the strategic goal; the

strategic goal measures and metrics; and the performance goal measures, metrics, and strategies for each goal.

Strategic Goals

The NRC will conduct an efficient regulatory program that allows the Nation to use nuclear materials for civilian[2] purposes in a safe manner to protect public health and safety and the environment by working to achieve the following strategic goals: (1) prevent radiation-related[3] deaths and illnesses, promote the common defense and security, and protect the environment in the use of civilian nuclear reactors (Nuclear Reactor Safety); (2) prevent radiation-related deaths and illnesses, promote the common defense and security, and protect the environment in the use of source, byproduct, and special nuclear material (Nuclear Materials Safety); (3) prevent adverse impacts from radioactive waste to the current and future public health and safety and the environment and promote the common defense and security (Nuclear Waste Safety); and (4) support U.S. interests in the safe and secure use of nuclear materials and in nuclear nonproliferation (International Nuclear Safety Support).

Performance Goals

The NRC has also identified performance goals for Nuclear Reactor Safety, Nuclear Materials Safety, and Nuclear Waste Safety. For FY 2001 and FY 2002, NRC has adopted the following four performance goals which were identified in the FY 2000-2005 Strategic Plan: maintain safety, protection of the environment, and the common defense and security; increase public confidence; make NRC activities and decisions more effective, efficient, and realistic; and reduce unnecessary regulatory burden.

Performance Measures

Performance measures indicate whether the NRC is achieving its strategic and performance goals. The NRC has established 59 performance measures. The FY 2001 and FY 2002 performance targets for these measures are included in this annual performance plan. Our success in meeting these targets will be reported in our annual performance report.

Program Outputs

In addition to its performance measures, the NRC Annual Performance Plan includes several program outputs. Program outputs link the overall level of funding requested for the strategic arena and the funding requested for specific program activities. The agency has identified actual, preliminary, and projected targets for key activities that play an important role in

driving the strategies that are used to achieve our performance goals and their associated performance measures. These outputs are more closely related to funding levels, workload projections, policy assumptions, and external factors.

Verification and Validation

Appendix IV provides a description of the agency's process to verify and validate the performance measures relating to its strategic and performance goals.

Management Challenges

Appendix V identifies the most serious management challenges facing the agency. These challenges were identified by the agency's Office of Inspector General and the Government Accounting Office. A response is provided that describes how the agency is addressing each challenge and provides a link to agency goals and strategies.

Selected Accomplishments

Following are examples of NRC accomplishments in FY 2000 that helped the agency achieve its goals and strategies:

Revised Reactor Oversight Process

Began implementation of major process improvements to the reactor oversight process. The revised process includes a risk-informed baseline inspection program, use of licensee-reported performance indicator information, and revised assessment and enforcement activities. Process improvements were developed in response to staff assessments, Commission direction, and external stakeholder comments to provide for greater objectivity, predictability, and consistency, and to provide the public with greater access to plant performance information. The revised reactor oversight process will maintain safety by focusing staff and industry attention on risk-significant activities while reducing unnecessary regulatory burden, thus achieving gains in staff effectiveness. A six-month pilot program to test the new regulatory oversight process at nine nuclear power plant sites was completed in November 1999. Staff activities included the conduct of a number of public workshops to solicit feedback on process changes; establishment of internal and external web sites to provide plant performance information to industry and members of the public; and extensive work on inspection procedure development and inspector staff training. The NRC ensured a high level of stakeholder participation in the development of the revised process, including public workshops in each of the regions to inform licensees and the public about the new process,

roundtable public meetings in the vicinity of the nine pilot program plant sites, and the conduct of a Lessons Learned Public Workshop on the pilot program. The NRC began industrywide implementation of the revised reactor oversight process with the exception of DC Cook in April 2000.

Regulatory Reform Initiatives

Continued to pursue numerous regulatory reform initiatives, including amending its regulations to allow holders of operating licenses for nuclear power plants to voluntarily replace the traditional source term used in design basis accident analyses with alternative source terms. This allows interested licensees to pursue cost-beneficial licensing action without compromising the margin of safety of the reactor facility. In FY 2000, the NRC published a revision to 10 CFR 50.59 which provides clarity and flexibility in regulations that allow licensees to make certain changes to their facilities and procedures, or to conduct tests and experiments without prior NRC approval.

Completed the amendment of 10 CFR Part 70, a critical mass of special nuclear material as a risk-informed performance-based rule. The final rule identifies performance requirements for prevention of accidents or mitigation of their consequences and requires affected licensees to perform an integrated safety analysis. The NRC developed a risk-informed revision to the medical regulations (Part 35) and a policy statement revision on medical uses of NRC regulated radioactive material intended to focus on those medical procedures that pose the highest risk to workers, patients and the public. This rule will result in a more effective and efficient regulatory program and reduce unnecessary regulatory burden for medical licensees.

License Renewal

Continued to meet or exceed all established schedules for license renewal activities. The agency issued the first renewed license on March 23, 2000, for the Calvert Cliffs Nuclear Power Plant, followed by the second renewed license on May 23, 2000, for the Oconee Nuclear Station. License renewal applications were received for Arkansas Nuclear One, Unit 1, on February 1, 2000; for Hatch Nuclear Plant on March 1, 2000; and for Turkey Point on September 11, 2000. These applications, which reflect an increasing interest by licensees in license renewal, are under review by the staff. On August 31, 2000, the agency issued for public comment, draft improved license renewal guidance consisting of a Generic Aging Lessons Learned report, Standard Review Plan for License Renewal, and a Regulatory Guide for License Renewal that proposes to endorse an industry implementation guideline.

Licensing Actions

Continued to meet or exceed established performance measures for completing nuclear power plant licensing-related actions. The NRC staff completed 1,574 licensing actions, and maintained 98 percent of all licensing actions in its working inventory to an age of one year or less and 100 percent at two years or less. Included in the licensing actions completed are responses to licensee requests to change or amend their licenses in areas such as license transfers, power uprates, initiatives involving risk informed regulation, and voluntary conversions of plant technical specifications to an improved standard format.

Year 2000 (Y2K) Contingency Plan

In the first quarter of FY 2000, the NRC implemented a plan for responding to potential Y2K problems affecting the commercial nuclear industry. This effort required extensive communication, coordination, and testing with other Federal agencies, the White House, the public, and the nuclear industry. Due to the extensive collaborative effort between the industry and NRC in preparing for and addressing Y2K issues, NRC and its licensees made the transition to Y2K without incident. One of the NRC's goals in developing a Y2K contingency plan was to maximize the extent to which the Y2K preparations could be leveraged for future benefit to the agency. For example, upgrades and testing of telecommunication and emergency power systems in Region IV (the backup to NRC Headquarters during the Y2K transition) also support the NRC's continuity of operations plan required by Presidential Decision Directive 67. Similarly, steps were taken to enhance the reliability of communications with licensee and State decisionmakers, so that communications will be assured in the event of public telephone network congestion or unavailability. NRC also developed a secure Internet-based Y2K early warning system to facilitate international information-sharing during the Y2K transition. NRC has provided this computer code to the International Atomic Energy Agency for future use.

Risk-Informing 10 CFR Part 50

Continued to incorporate risk information into the regulatory process through a systematic, risk-informed examination of current technical requirements in 10 CFR Part 50. Results of this examination included the recommendation to change NRC's regulation on combustible gas control during reactor accidents, potentially to eliminate requirements which have minimal safety benefit and impose unnecessary burden, and to add requirements where necessary to ensure safety.

Mixed Oxide Standard Review Plan

Issued a final Standard Review Plan in anticipation of a license application for a MOX fuel fabrication facility. The NRC held public meetings to describe our role and to obtain comments and questions regarding the proposed MOX facility and plans for the use of MOX fuel in commercial power reactors.

Generally-Licensed Devices

The NRC developed a comprehensive rule (10 CFR Parts 31 and 32) to improve NRC's control of generally-licensed (GL) devices and a new computer database (General License Device Tracking System) to track GL information and facilitate registration of certain GL devices.

High-Level Waste Repository Activities

The NRC provided comments to the Department of Energy on its proposed revision to the High-Level Waste Repository Siting Guidelines in 10 CFR Part 963 and on its draft environmental impact statement for the proposed Yucca Mountain High-Level Waste Repository.

ENDNOTES

1. Includes Browns Ferry Unit 1, which has no fuel loaded and requires Commission approval to restart.

2. As used in this plan, "civilian" uses or activities refer to those commercial and other uses of nuclear materials and facilities, including certain military activities (such as at hospitals and high-level waste disposal), required by the Atomic Energy Act to be licensed and otherwise regulated by the NRC.

3. The term "radiation-related" as used in this document includes other hazards associated with the production and use of radioactive materials such as potential chemical hazards related to fuel processing.

NUCLEAR REACTOR SAFETY

2

NUCLEAR REACTOR SAFETY

The Nuclear Reactor Safety strategic arena encompasses all NRC efforts to ensure that civilian nuclear power reactor facilities, as well as non-power reactors, are operated in a manner that adequately protects public health and safety and the environment and protects against radiological sabotage and theft or diversion of special nuclear materials. The Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, as amended, are the foundation for regulating the Nation's civilian nuclear power industry. These efforts include reactor licensing; reactor license renewal; operator licensing; financial assurance; inspection; performance assessment; identification and resolution of safety issues; reactor regulatory research; regulation development; operating experience evaluation; incident investigation; threat assessment; emergency response; investigation of alleged wrongdoing by licensees, applicants, contractors, or vendors; imposition of enforcement sanctions for violations of NRC requirements; and reactor technical and regulatory training.

BUDGET OVERVIEW

Summary	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	148,428	155,938	163,240	7,302
Contract Support and Travel	62,037	63,276	68,157	4,881
Total Budget Authority	210,465	219,214	231,397	12,183
FTE	1,430	1,424	1,425	1

The budget request of $231.4M and 1,425 FTE supports the regulatory oversight of 104 civilian nuclear power reactors licensed to operate.[1] The budget also includes funding to review four additional license renewal applications in FY 2001 and an additional four in FY 2002. The regulatory improvement initiatives, including the revised reactor oversight program and risk-informing 10 CFR Part 50, are continued. Of the increase, $7.3M is for increased salaries and benefits primarily associated with the governmentwide FY 2002 pay raise, and the remaining increase of $4.9M is primarily to support review of additional reactor license renewal applications and to accomplish critical reactor safety research activities.

The agency was also able to fund new initiatives, such as improving risk-informed analytical methods and the establishment of recruitment and intern programs, using resources made available from efficiencies and reduction opportunities in the areas of licensing actions and other licensing tasks, and the completion of program development efforts associated with revising the reactor oversight process.

MEASURING RESULTS - STRATEGIC AND PERFORMANCE GOALS

This strategic arena includes strategic goals, performance goals and measures, and strategies. The **strategic goals** represent the agency's fundamental mission and the overall outcome the NRC wants to achieve. The **performance goals** are the key contributors to achieving the strategic goals and focus on outcomes over which the agency has control. The **performance measures** indicate whether the NRC is achieving its performance goals and establish the basis for performance management. These measures establish how far and how fast the agency will move in the direction established by the performance goals. The **strategies** describe how the NRC will achieve its performance goals and their associated measures. The strategies provide the direct link between what the agency wants to achieve (i.e., goals) and the key activities NRC will conduct to achieve these goals.

Our Strategic Goal

Prevent radiation-related deaths and illnesses, promote the common defense and security, and protect the environment in the use of civilian nuclear reactors.

Four Performance Goals and Their Implementing Strategies

1. To **maintain safety, protection of the environment, and the common defense and security**, the NRC will employ the following strategies:

    - We will sharpen our focus on safety by continuing to assess and improve the revised NRC reactor oversight program for our inspection, assessment, and enforcement activities.

    - We will respond to operational events involving potential safety or safeguards consequences.

    - We will evaluate operating experience and the results of risk assessments for safety implications.

    - We will identify, evaluate, and resolve safety issues, including age-related degradation, and ensure that an independent technical basis exists to review licensee submittals to ensure that safety is maintained.

    - We will ensure that changes to operating licenses and exemptions to regulations maintain safety and meet regulatory requirements.

- We will ensure license amendments involving license transfers and power uprates maintain safety and meet regulatory requirements.

- We will ensure that safety is maintained as licenses are renewed by ensuring that aging effects will be adequately managed and that the licensing basis related to the present plant design and operation will be maintained.

- We will maintain safety by ensuring that operator licenses are issued and renewed only to qualified individuals.

- We will continue to develop and incrementally use risk-informed and, where appropriate, less prescriptive performance-based[2] regulatory approaches to maintain safety.

2. To **increase public confidence**, the NRC will employ the following strategies:

- We will make public participation in the regulatory process more accessible. We will listen to the public's concerns and involve our stakeholders more fully in the regulatory process.

- We will communicate more clearly. We will add more focus, clarity, and consistency to our message, be timely, and present candid and factual information in the proper context with respect to the risk of the activity.

- We will continue to enhance the NRC's accountability and credibility by being a well-managed, independent regulatory agency. We will increase efforts to share our accomplishments with the public.

- We will report on the performance of nuclear power facilities in an open and objective manner.

- We will continue to foster an environment in which safety issues can be openly identified without fear of retribution.

- We will continue to develop and present communications courses to facilitate more effective communication with the public in public meetings and in documents.

- We will continue to implement the plain language initiatives through staff and supervisor training in techniques for writing in clear, plain language and in including plain-language executive summaries in high-profile reports and documents.

3. To **make NRC activities and decisions more effective, efficient, and realistic,** the NRC will employ the following strategies:

   - We will use risk information to improve the effectiveness and efficiency of our activities and decisions.
   - We will make agency decisions based on technically sound and realistic information.
   - We will anticipate challenges posed by the introduction of new technologies and changing regulatory demands.
   - We will identify, prioritize, and modify processes based on effectiveness reviews to maximize opportunities to improve those processes.
   - We will maintain a strong research program that supports more realism in our decisionmaking.

4. To **reduce unnecessary regulatory burden on stakeholders**, the NRC will employ the following strategies:

   - We will utilize risk information and performance-based approaches to reduce unnecessary regulatory burden.
   - We will improve and execute our programs and processes in ways that reduce unnecessary costs to our stakeholders.
   - We will improve our reactor oversight program by redirecting resources from those areas less important to safety.
   - We will actively seek stakeholder input to identify opportunities for reducing unnecessary regulatory burden.

NUCLEAR REACTOR SAFETY

Performance Measures

The actual data reported for some of our strategic goal measures and the maintain safety performance goal measures are subject to change as a result of NRC analysis of reported information as well as the receipt of newly reported information. Changes to this data will be reported and explained in future performance plan submissions.

Strategic Goal

The following measures are associated with the Nuclear Reactor Safety arena strategic goal.

MEASURES	PERFORMANCE	
	Target	Actual
No nuclear reactor accidents.[3]	FY 2002: 0 FY 2001: 0 FY 2000: 0 FY 1999: 0	 0 0
No deaths resulting from acute radiation exposures from nuclear reactors.	FY 2002: 0 FY 2001: 0 FY 2000: 0 FY 1999: 0	 0 0
No events at nuclear reactors resulting in significant radiation exposures.[4]	FY 2002: 0 FY 2001: 0 FY 2000: 0 FY 1999: 0	 0 0
No radiological sabotages at nuclear reactors.	FY 2002: 0 FY 2001: 0 FY 2000: 0 FY 1999: 0	 0 0
No events that result in releases of radioactive material from nuclear reactors causing an adverse impact[5] on the environment.	FY 2002: 0 FY 2001: 0 FY 2000: 0 FY 1999: 0	 0 0

Performance Goals (PG)

The following measures are associated with the Nuclear Reactor Safety arena performance goals. The associated performance goal is identified by the acronym PG and the goal number as identified in the previous section.

MEASURES	PERFORMANCE	
	Target	Actual
No more than one event per year identified as a significant precursor of a nuclear accident.[6] (PG1)	FY 2002: 1 or less FY 2001: 1 or less FY 2000: 1 or less FY 1999: 1 or less	 0 0
No statistically significant adverse industry trends in safety performance.[7] (PG1)	FY 2002: 0 FY 2001: 0 FY 2000: 0 FY 1999: 0	 0 0
No events resulting in radiation over exposures[8] from nuclear reactors that exceed applicable regulatory limits. (PG1)	FY 2002: 0 FY 2001: 0 FY 2000: 0 FY 1999: 0	 0 0
No more than three releases per year to the environment of radioactive material from nuclear reactors that exceed the regulatory limits.[9] (PG1)	FY 2002: 3 or less FY 2001: 3 or less FY 2000: 3 or less FY 1999: 3 or less	 0 0
No breakdowns of physical security that significantly weaken the protection against radiological sabotage or theft or diversion of special nuclear materials in accordance with abnormal occurrence criteria. (PG1)	FY 2002: 0 FY 2001: 0 FY 2000: 0 FY 1999: 0	 0 0

MEASURES	PERFORMANCE	
	Target	Actual
Complete the milestones relating to collecting, analyzing, and trending information for measuring public confidence. (PG2) **Milestones:** FY 2001 - Conduct semiannual evaluations of all public meeting feedback forms to determine any trends in NRC public meetings. FY 2002 - Develop recommendation for continued use of public meeting feedback form or for another method of assessing public confidence.	FY 2002: Will meet target FY 2001: Will meet target New measure in FY 2001	
Complete all of the public outreaches. (PG2) **Milestones:** October, November, and December 2000 - Conduct regional/licensee public forums January 2001 - Issue Federal Register notice requesting external stakeholder feedback Second Quarter FY 2001 - Analyze external stakeholder feedback on Reactor Oversight Process April 2001 - Conduct public lessons learned workshop FY 2002 - Specific milestones are under development and will be identified in the FY 2003 President's Budget to Congress.	FY 2002: Will meet target FY 2001: Will meet target New measure in FY 2001	

MEASURES	PERFORMANCE	
	Target	Actual
Complete the milestones specific to the agency allegation program effectiveness assessment plan. (PG2) **Milestones:** October 2000 - Start survey pilot program April 2002 - Analysis of pilot program sent to Commission	FY 2002: Will meet target FY 2001: Will meet target New measure in FY 2001	
Issue Director's Decisions for petitions filed to modify, suspend, or revoke a license under 10 CFR 2.206[10] within an average of 120 days.[11] (PG2)	FY 2002: 120 days FY 2001: 120 days New measure in FY 2001	
Complete those specific reactor milestones in the Risk-Informed Regulation Implementation Plan. (PG3) **Milestones:** October 27, 2000 - Risk-Informed Regulation Implementation Plan (RIR-IP) sent to the Commission November 17, 2000 - Commission briefed on RIR-IP August 2001 - Develop final criteria and milestones. FY 2002 - Execute milestones identified in FY 2003 Annual Performance Plan.	FY 2002: Will meet target FY 2001: Will meet target New measure in FY 2001	
Complete at least two key process improvements per year in selected program and support areas that increase efficiency, effectiveness, and realism. (PG3)	FY 2002: 2 key processes completed FY 2001: 2 key processes completed New measure in FY 2001	

MEASURES	PERFORMANCE	
	Target	Actual
Complete all license renewal application reviews within 30 months. (PG3)	FY 2002: License renewal application for Arkansas Nuclear One completed by February 2002 and Hatch by March 2002 FY 2001: No application scheduled for completion. FY 2000: License renewal application for Calvert Cliffs completed by April 2000 and Oconee by July 2000[12] FY 1999: No application scheduled for completion.	Approved license renewal for Calvert Cliffs (March 2000) and Oconee (May 2000)
Complete those specific milestones to reduce unnecessary regulatory burden. (PG4) **Milestones:** FY 2001 - Develop a process for collecting data and identify activities that have the greatest impact on reducing unnecessary regulatory burden while maintaining safety. FY 2002 - Issue final measures and voluntary reporting approach.	FY 2002: Will meet target FY 2001: Will meet target New measure in FY 2001	

ACCOMPLISHMENTS

- Continued to meet or exceed all established schedules for license renewal activities. The agency issued the first renewed license on March 23, 2000, for the Calvert Cliffs Nuclear Power Plant, followed by the second renewed license on May 23, 2000, for the Oconee Nuclear Station. License renewal applications were received for Arkansas Nuclear One, Unit 1, on February 1, 2000; for Hatch Nuclear Plant on March 1, 2000; and for Turkey Point on September 11, 2000. These applications, which reflect an increasing interest by licensees in license renewal, are under review by the staff. On August 31, 2000, the agency issued for public comment, draft improved license renewal guidance consisting of a Generic Aging

Lessons Learned report, Standard Review Plan for License Renewal, and a Regulatory Guide for License Renewal that proposes to endorse an industry implementation guideline.

- Began implementation of major process improvements to the reactor oversight process. The revised process includes a risk-informed baseline inspection program, use of licensee-reported performance indicator information, and revised assessment and enforcement activities. Process improvements were developed in response to staff assessments, Commission direction, and external stakeholder comments to provide for greater objectivity, predictability, and consistency, and to provide the public with greater access to plant performance information. The revised reactor oversight process will maintain safety by focusing staff and industry attention on risk-significant activities while reducing unnecessary regulatory burden, thus achieving gains in staff effectiveness. A six-month pilot program to test the new regulatory oversight process at nine nuclear power plant sites was completed in November 1999. Staff activities included the conduct of a number of public workshops to solicit feedback on process changes; establishment of internal and external web sites to provide plant performance information to industry and members of the public; and extensive work on inspection procedure development and inspector staff training. The NRC ensured a high level of stakeholder participation in the development of the revised process, including public workshops in each of the regions to inform licensees and the public about the new process, roundtable public meetings in the vicinity of the nine pilot program plant sites, and the conduct of a Lessons Learned Public Workshop on the pilot program. The NRC began industrywide implementation of the revised reactor oversight process with the exception of DC Cook in April 2000.

- Amended regulations in January 2000 to allow holders of operating licenses for nuclear power plants to voluntarily replace the traditional source term used in design basis accident analyses with alternative source terms (ASTs). This action allows interested licensees to pursue cost-beneficial licensing actions to reduce unnecessary regulatory burden without compromising the margin of safety of the reactor facility. In July 2000, the NRC issued a new guide in its Regulatory Guide series to provide guidance to licensees in implementing an AST at their facility. By the end of FY 2000, the NRC reviewed and approved two AST implementations and had four AST implementations under review. Seven additional nuclear power plant sites have expressed interest with submittals expected in FY 2001. Additional submittals are also expected in FY 2002.

- Continued to meet or exceed established performance measures for completing nuclear power plant licensing-related actions. The NRC staff completed 1,574 licensing actions, and maintained 98 percent of all licensing actions in its working inventory to an age of one year or less and 100 percent at two years or less. Included in the licensing actions completed are responses to licensee requests to change or amend their licenses in areas such as license

transfers, power uprates, initiatives involving risk informed regulation, and voluntary conversions of plant technical specifications to an improved standard format.

- Conducted several significant rulemakings in FY 2000, including revisions to 10 CFR 50.59, 50.72, and 50.73. In the beginning of FY 2000, NRC published a revision to 10 CFR 50.59 which, when effective in mid-March 2001, will provide clarity and flexibility in regulations that allow licensees to make certain changes to their facilities and procedures, or to conduct tests and experiments. In July 2000, the Commission approved a revision to the reporting requirements of 10 CFR 50.72 and 50.73. These revisions reduce the reporting burden associated with events of little or no safety significance, clarify the reporting requirements where needed, and extend reporting time limits consistent with the need for prompt NRC action.

- Revised 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," in response to Commission direction, to require that power plant licensees, before performing maintenance, assess and manage the increases in risk that may result from the maintenance activities. Prior to the rulemaking, the maintenance rule only recommended the performance of safety assessments. The revised rule will become effective November 28, 2000. During FY 2000, the staff continued to work in a collaborative fashion with stakeholders to produce a final regulatory guide endorsing industry developed guidance. The staff conducted multiple public meetings regarding the revised industry guidance. The draft regulatory guide, along with the revised industry guidance, was provided to the Commission in December 1999 and was issued for public comment. Following review of the public comments and approval by the Commission, the final regulatory guide was issued in June 2000.

- Certified in January 2000, the Westinghouse advanced passive pressurized water reactor (AP600) standard plant design after a comprehensive review. The AP600 was the third standard plant design to achieve certification, joining the General Electric Advanced Boiling Water Reactor and the Asea Brown Boveri Combustion Engineering System 80+ standard plant designs that were certified in 1997.

- Implemented in the first quarter of FY 2000, a plan for responding to potential Year 2000 (Y2K) problems affecting the commercial nuclear industry. This effort required extensive communication and coordination with other Federal agencies, the White House, the public, and the nuclear industry. Due to the extensive collaborative effort between the industry and NRC in preparing for and addressing Y2K issues, NRC and its licensees made the transition to Y2K without incident. NRC's Y2K contingency plan was extensively tested through exercises involving other Federal agencies, the White House, State and local officials, and the industry. One of NRC's goals in developing a Y2K contingency plan was to maximize

the extent to which the Y2K preparations could be leveraged for future benefit to the agency. For example, upgrades and testing of telecommunication and emergency power systems in Region IV (the backup to NRC Headquarters during the Y2K transition) were completed during FY 2000. These upgrades also support the NRC's continuity of operations plan required by Presidential Decision Directive 67. Similarly, steps were taken to enhance the reliability of communications with licensee and State decisionmakers, so that emergency communications will be assured in the event of public telephone network congestion or unavailability. NRC also developed a secure Internet-based Year 2000 early warning system to facilitate international information-sharing during the Y2K transition. NRC has provided this computer code to the International Atomic Energy Agency for future use.

- Supported the license renewal effort through resolution of Generic Safety Issue 190, "Fatigue Evaluation of Metal Components for 60-Year Life," and through evaluation of technical issues such as thermal aging embrittlement of cast stainless steels. Outcomes of these efforts have contributed to both maintaining safety and the reduction of unnecessary burden through development of technically defensible positions that justified not imposing generic requirements in these areas for license renewal.

- Continued to incorporate risk information into the regulatory process through a systematic, risk-informed examination of current technical requirements in 10 CFR Part 50. Results of this examination included the recommendation to change NRC's regulation on combustible gas control during reactor accidents, potentially to eliminate requirements which have minimal safety benefit and impose unnecessary burden, and to add requirements where necessary to ensure safety.

- Increased focus on initiatives to improve the effectiveness of communications. Various actions were used to methodically improve the consistency of staff communication activities, improve the management of communication activities, and improve communication skills. For the more visible programs, the staff developed and implemented communication plans (CPs). Additionally, a large effort was undertaken to evaluate and redesign the NRC Web site to increase its effectiveness. The significant implementation activities include: (1) developed CPs for significant and generic topics; (2) identified communication interfaces (organizations/groups); (3) solicited feedback from stakeholders at public meetings; (4) developed guidance and provided training on CP development and implementation; and (5) established a Web Redesign Work Group.

- Approved for use ABB Combustion Engineering's (CE) 800 steam generator tube repair technique at Baltimore Gas & Electric's (BG&E) Calvert Cliffs plant. BG&E is expected to become the first U.S. plant to apply this repair method, which uses differential thermal

expansion to repair steam generator tubes. According to ABB CE, the sleeve's non-welded design allows quick installation and easier in-service inspection.

- Issued the safety evaluation report (SER) for the ABB "Crossflow" measuring system topical report. The increased accuracy of the Crossflow measuring system can be used to support a reduction in the power level margin used in the plant emergency core cooling system (ECCS) evaluations. In turn, licensees can submit a license amendment to operate the power plant at higher power levels. With issuance of the ABB Crossflow SER, licensees seeking such license amendments now have a choice between two vendor designs.

- Submitted for Commission approval a final rule that amends 10 CFR Part 50, Appendix K, "ECCS Evaluation Models." The amendment will facilitate small but cost-beneficial power uprates for commercial nuclear power plants seeking to utilize the improved feedwater flow measurement systems discussed above. While all plants could conceivably benefit from this risk-informed rulemaking, if only 50 plant licensees pursue a marginal power uprate, they would share an annual benefit ranging from $50 million to $135 million.

- Approved a rulemaking plan to revise 10 CFR 73.55, "Requirements for Physical Protection of Licensed Activities in Nuclear Power Reactors Against Radiological Sabotage." The staff's proposal includes a requirement for periodic drills and exercises for evaluating power reactor licensees' capability to respond to safeguards contingency events. The proposed rule is scheduled to be submitted to the Commission in May 2001. The staff and industry continue to work on a voluntary industry initiative called the Safeguards Performance Assessment that is intended to test the concepts being considered in the new rule and maintain assurance of licensee readiness to respond to safeguards contingency events.

- Held meetings regarding the licensees' interest in amendment requests for a 15 percent power uprate. Five plants representing 9 units are expected to submit their licensing amendment requests in the coming year. A 15 percent uprate for these 9 units represents about 3,400 Mwt (1,100 Mwe) of additional generating capacity. Until late 1998, power uprates have been limited to 5 percent nominal. A total of 42 power uprate amendments were issued between 1977 and mid-1998, all within 5 percent. Any uprate beyond the 5 percent threshold would require significant balance-of-plant equipment upgrades.

- With a number of States taking steps toward deregulation of the power market, the unbundling of services, and general industry consolidation, there was significant activity in the financial review program for nuclear power reactors. During the performance period, the NRC provided regulatory guidance in the form of Regulatory Issue Summaries, Regulatory Guides, and Standard Review Plans to enhance stakeholder understanding of practices involving license transfer applications. These included guidance on foreign ownership,

antitrust issues, non-owner operators, and an overarching guide that summarizes NRC practices. The NRC completed over 25 licensing actions under this program during the period with cases ranging from the sale of a passive owner's minority share, to the creation of an intermediary holding company, to the merger of two major license holders to form Exelon. The latter case was the most complex transaction seen to date and involved over 20 nuclear power reactors. The NRC has established an ambitious six-month target for completing license transfer licensing actions and has met that target in virtually all cases.

BUDGET AUTHORITY AND FULL-TIME EQUIVALENT BY PROGRAM

Summary	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Program ($K)				
Reactor Licensing	54,294	56,836	57,802	966
Reactor License Renewal	10,701	11,584	15,707	4,123
Reactor Inspection and Performance Assessment	71,056	72,278	74,255	1,977
Reactor Incident Response	4,808	5,856	5,978	122
Reactor Safety Research	55,356	56,381	58,654	2,273
Reactor Technical Training	5,256	6,740	9,160	2,420
Reactor Enforcement Actions	1,722	1,726	1,685	-41
Reactor Investigations	3,803	3,939	4,107	168
Reactor Legal Advice	2,333	2,511	2,629	118
Reactor Adjudication	1,136	1,363	1,420	57
Total Budget Authority	210,465	219,214	231,397	12,183
Full-Time Equivalent Employment by Program				
Reactor Licensing	432	429	411	-18
Reactor License Renewal	66	74	90	16
Reactor Inspection and Performance Assessment	653	636	627	-9
Reactor Incident Response	26	28	28	0
Reactor Safety Research	152	150	149	-1
Reactor Technical Training	25	30	44	14
Reactor Enforcement Actions	17	16	15	-1
Reactor Investigations	31	31	31	0
Reactor Legal Advice	21	22	22	0
Reactor Adjudication	7	8	8	0
Total FTE	1,430	1,424	1,425	1

JUSTIFICATION OF PROGRAM REQUESTS

The Nuclear Reactor Safety strategic arena is comprised of ten program areas. Program descriptions and output measures for each program follow.

Reactor Licensing

	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	46,762	48,853	48,910	57
Contract Support and Travel	7,532	7,983	8,892	909
Total Budget Authority	54,294	56,836	57,802	966
FTE	432	429	411	-18

The resource increase in FY 2002 for Reactor Licensing includes:

- Salaries and benefits increase resulting from the governmentwide FY 2002 pay raise, offset by the decrease in FTE.
- Contract support and travel increase primarily to support new initiatives that have been determined to best contribute to the performance goals, such as developing and applying risk-informed analytical methods, collecting performance goal information from stakeholders, and developing an integrated outreach plan.
- FTE decrease resulting from efficiencies and reduction opportunities in the areas of licensing actions, other licensing tasks, and rulemaking. Some of these savings were used to offset the new initiatives.

With respect to the Reactor Licensing program, maintaining the safety of the operating nuclear power reactors remains the NRC's highest priority, as it relates to ensuring adequate protection of public health. Planned activities in the reactor licensing area are intended to support accomplishing the four performance goals while improving the NRC's regulatory approach to become more risk-informed and performance-based. While maintaining our safety focus, the NRC regulatory approach will seek to reduce unnecessary regulatory burden; to improve the effectiveness, efficiency, and

realism of our activities and decisions; and to increase public confidence in NRC's Reactor Licensing program.

Each operating reactor site is assigned a project manager whose primary responsibility is to maintain the power reactor license and to serve as the headquarters point of contact with licensees, other NRC staff, and the public on safety matters concerning specific plants. This includes coordinating complex technical reviews, evaluating information received from licensees in response to requests for information or as required by regulation or operating license condition, consulting with State and local officials, and responding to requests from the public, the Administration, or Congress. Power reactor project management activities contribute most to NRC's goals of increasing effectiveness and efficiency, and increasing public confidence.

Operating license requirements frequently need to be changed as a result of routine activities, technical advances, or unexpected events at power plants. In addition, the economic deregulation of the electric utility industry has resulted in an increasing number of requests from its power reactor licensees to change its operating license requirements such as transferring its license to a new owner/operator. The NRC expects to continue its efforts to expeditiously review and amend, as appropriate, affected licenses as well as otherwise keeping pace with the challenges associated with the economic deregulation of the electric utility industry. In addition, appropriate technical review of other applications from licensees for amendments to their operating licenses, such as technical specification changes, modification of license conditions, and exemption and relief requests, will be accomplished in a timely fashion to ensure that the operational safety of the plant is maintained. These licensing actions require NRC approval before the licensee can implement the requested action. The review and approval of licensing actions makes a significant contribution to reducing unnecessary burden while maintaining safety. In FY 2002, the NRC expects to complete approximately 1,500 licensing actions, including initiatives involving risk-informed regulation and conversions to improved Standard Technical Specifications (iSTS). The age of the licensing action inventory will be maintained in FY 2001 and FY 2002 so that 95 percent of the licensing actions in the inventory are one year old or less, and all actions are no more than two years old, except for those actions such as license renewals and iSTS conversions that have an established milestone schedule.

The NRC receives annually about 15 to 25 license transfer applications. License transfer requests have tended to increase as the pace of deregulation has accelerated. The NRC has approved and expects to continue to receive license transfer applications resulting from the sale of plants, mergers, and the creation of holding and operating companies involving current NRC power reactor licensees. The NRC review of a license transfer request is performed in a manner that supports the indirect transfer of ownership within the licensee or the direct transfer of ownership of the facility. During FY 2000, the NRC received 27 license transfer applications. The NRC actions taken in response to these applications resulted in either direct or indirect changes in ownership for 67 units.

A major licensing action effort involves a voluntary conversion of operating power reactor technical specifications from their custom plant format to an improved standard format (iSTS). The NRC expects to receive between three and six applications for conversion to the iSTS in FY 2002. Conversions to the iSTS are projected to result in resource savings to both the NRC and the licensee because of decreases in routine licensing amendment requests, thereby promoting NRC efficiency and effectiveness as well as reducing unnecessary regulatory burden.

The NRC, as part of its licensing amendment review process, has also supported an important industry initiative to improve the power generation capacity of the nuclear power plants through the review of license applications for extended power uprates. The Generic Topical Reports for the Boiling Water Reactor (BWR) Extended Power Uprate program were approved in 1998. Since that approval, BWRs have typically applied for and received approvals for five percent to eight percent uprates. In FY 2001, certain BWR licensees are planning to submit licensee applications requesting 15 percent uprates.

In addition, the NRC changed 10 CFR Part 50, Appendix K which allows licensees to modify the assumed power level in the Emergency Core Cooling System analyses. This change would allow certain licensees to pursue small (i.e., about one percent) power uprates. The revised Appendix K was made effective July 2000. For the period of 1990–1999, 31 units have received power uprates, totaling about 1370 Mwe.

NRC review is also required on issues that do not result in an amendment of the operating license. These reviews are considered "other licensing tasks." These other licensing tasks include: (1) responding to petitions from the public requesting action pursuant to 10 CFR 2.206; (2) evaluating information received from individual licensees in response to requests for information (e.g., generic letters and bulletins); or (3) evaluating information as required by regulation or license conditions as part of the NRC's responsibility for reviewing the safety of the operating licensed facilities (e.g., final safety analysis report updates, 10 CFR 50.59 reports, and changes to quality assurance, safeguards, and emergency preparedness plans). The NRC expects to complete approximately 675 other licensing tasks in FY 2001 and 550 in FY 2002. The review of other licensing tasks contributes to the performance goals of maintaining safety and increasing public confidence.

The NRC provides the overall management, quality assurance, and plant-to-plant consistency of generic efforts and lessons learned as a result of iSTS conversions including all generic efforts to improve technical specifications to make them more operator oriented, and focused on the more safety-significant requirements. In FY 2002, the staff will continue to maintain the iSTS with insights from the ongoing iSTS conversions and will upgrade the iSTS to reflect risk-informed insights. Activities in this area provide strong positive leverage to the goals of maintaining safety, reducing unnecessary regulatory burden, and improving effectiveness and efficiency of regulatory programs.

The NRC must license all personnel authorized to operate power reactors. Initial examinations are administered by the NRC to ensure that operating plants are staffed by qualified personnel. NRC also examines candidates for new operator licenses on generic fundamentals to measure the candidates' knowledge of reactor theory, plant components, and thermodynamics. These activities contribute to maintaining safety and contribute to public confidence in NRC regulatory oversight of reactor safety. For FY 2001 through FY 2002, the NRC will conduct three generic fundamental examination sessions per year for an estimated number of 400 candidates per year; and will conduct approximately 50 operator licensing examination sessions per year. Based on licensee estimates provided in response to an August 1999 NRC administrative letter, the total number of operator licensing examination candidates that the industry will request for examination in FY 2001 and FY 2002 is estimated at 600 per year. A change in the operator licensing rule, published in April 1999, allows but does not require power reactor licensees to prepare the examinations. This change has resulted in the NRC preparing approximately 25 percent of the examinations. In addition, the NRC will review facility-prepared examinations, and will continue to administer all operating tests and make the final licensing decisions. To ensure effective implementation of the revised operator licensing rule and associated guidance, the staff conducts workshops and is continuing to solicit and resolve additional industry feedback on the rule and guidance. In addition, the NRC is working with the industry in evaluating proposals for changes to the operator licensing process in order to reduce costs associated with preparation and approval of operator licensing examinations. The staff is also working to revise 10 CFR Part 55 to reduce unnecessary regulatory burden in the areas of the experience prerequisites for an operator's license and certification and maintenance of simulation facilities. Activities in this area, such as the examination of power reactor operators, further NRC's goals and outcomes primarily by a substantial contribution to maintaining safety and increasing public confidence.

The NRC develops regulations and regulatory guidance applicable to reactor licensees. The NRC's efforts to integrate and improve its regulations for reactors in the decommissioning phase are further discussed in the Nuclear Waste Safety arena chapter. For reactors in the operating phase, the NRC will complete approximately three rulemakings in FY 2001 and approximately seven in FY 2002. Milestones for completing rulemakings are established in the annual NRC Rulemaking Activity Plan. Among the priority rulemakings identified for completion during this period are the following: Part 52 standard design certification update, integrated decommissioning rulemaking, fitness for duty (scope), decommissioning trust provisions, update of 10 CFR Part 50.55a to recent American Society of Mechanical Engineers Boiler and Pressure Vessel Code edition, and developing a new risk-informed and performance-based fire protection regulation. In addition, the NRC continues to examine and modify its regulatory approach to make it more risk-informed and performance-based. Resources in the rulemaking area are planned for FY 2001 to continue the effort to risk-inform the current Part 50 of the reactor regulations. This effort will be continued in FY 2002. Rulemaking activities provide important contributions to achieve all four performance goals with the greatest contributions to maintaining safety and increasing public confidence.

NUCLEAR REACTOR SAFETY

The NRC continually monitors and assesses the performance of nuclear power plant licensees to verify that plants are operated safely, and analyzes operational data to identify safety issues and potential degradations in performance. During FY 2001–FY 2002, prompt technical screening and assessments of approximately 3,000 nuclear reactor event reports and other incoming data will result in approximately 160 potential issues that require followup. Followup activities can also result from technical assessments of potential generic safety questions, from licensee reports of defects and/or noncompliance, or from allegations. The NRC manages and tracks potential generic safety questions until they are resolved and documented in agency databases for future reference. If the NRC determines that a short-term potential safety concern exists, corrective action is recommended and prompt operating experience feedback is provided to licensees or vendors, most likely in the form of a generic communication. Approximately 40 of these generic communications are expected to be issued in FY 2002. The NRC has made recent enhancements to the generic communications process, including early engagement with industry to determine whether an industry initiative could be utilized to effectively complement regulatory action and result in more efficient use of staff and industry resources. Event evaluations and generic communications activities are an important factor in the outcome of maintaining safety by disseminating safety information to licensees. Additionally, NRC followup of operational events and dissemination of operational experience increases public confidence.

Many policy and technical activities are conducted to assess the policy and safety significance of potentially generic regulatory issues as they emerge. Action plans are used, when appropriate, for issues that are complex, safety significant, or that have significant policy implications. Issues like implementation of probabilistic risk assessment (PRA) policies, and utility deregulation are examples. Other activities such as: interactions with nuclear vendors and plant owner's groups; liaison with other Federal agencies; evaluation of topical reports; development of electrical, mechanical, radiation, and fire protection codes; and other regulatory process improvements all contribute to increasing the NRC's efficiency and effectiveness. Regulatory improvement activities also contribute to maintaining safety.

The NRC is responsible for licensing, inspecting, decommissioning, and license renewal of smaller non-power reactors that are designed and used for research and testing in such areas as physics, chemistry, biology, medicine, and materials sciences, and for training individuals for nuclear-related careers in the power industry, national defense, research, and education. During FY 2002, the NRC will conduct inspections as well as licensing reviews for approximately 50 non-power reactors. In addition, during FY 2002, the NRC will administer initial examinations for new reactor operators and requalification examinations to ensure that the approximately 300 non-power reactor operators are qualified to perform their duties. These activities primarily support the maintain safety goal as well as reduce unnecessary burden goal.

The NRC will complete the development plan of the Reactor Programs System (RPS) in FY 2001. The RPS will provide for the effective and efficient integration and analysis of information

associated with nuclear reactor regulation programs. The RPS will also provide reactor inspection and licensing information that can be used to improve NRC's ability to better monitor plant performance characteristics, effectively compare plant performance, and better identify early causes for concern.

Program Outputs

The following program outputs have been identified for the Reactor Licensing program.

OUTPUT MEASURES				
Output	**FY 1999 Actual**	**FY 2000 Actual**	**FY 2001 Target**	**FY 2002 Target**
Licensing actions completed per year. (FY 1998: 1,425 licensing actions completed.)	Target: Complete 1,670 licensing actions. Actual: 1,727 licensing actions completed.	Target: Complete 1,500 licensing actions. Actual: 1,574 licensing actions completed.	Complete 1,500 licensing actions, including conversions to improved Standard Technical Specifications.	Complete 1,500 licensing actions, including conversions to improved Standard Technical Specifications.
Age of licensing action inventory. (FY 1998: 66 percent of inventory 1 year old or less; 86 percent 2 years old or less; 95 percent 3 years old or less.)	Target: 80 percent of inventory should be 1 year old or less; 95 percent 2 years old or less; all actions 3 years old or less. Actual: 86 percent 1 year old or less; 100 percent 2 years old or less; 100 percent 3 years old or less.	Target: 95 percent of inventory should be 1 year old or less; all actions 2 years old or less, except for license renewal. Actual: 98.3 percent 1 year old or less; 100 percent of inventory 2 years old or less, except for license renewal.	95 percent of inventory should be 1 year old or less; all actions 2 years old or less, except for license renewal.	95 percent of inventory should be 1 year old or less; all actions 2 years old or less, except for license renewal.
Other licensing tasks completed per year. (FY 1998: 1,006 other licensing tasks completed.)	Target: Complete 800 other licensing tasks. Actual: 939 other licensing tasks completed.	Target: Complete 800 other licensing tasks. Actual: 1,100 other licensing tasks completed.[13]	Complete 675 other licensing tasks.[14]	Complete 550 other licensing tasks.[12]

OUTPUT MEASURES				
Output	**FY 1999 Actual**	**FY 2000 Actual**	**FY 2001 Target**	**FY 2002 Target**
Number of operator licensing examinations administered. [15] (FY 1998: administered 413 initial exams; and 393 generic fundamentals exams.) Note: Beginning with FY 2001 values, the number of examination sessions will be reported, vice the number of examination candidates.	Target: Meet licensee demand estimated at 400 initial operator licensing examinations and 400 generic fundamentals examinations. Actual: Met licensee demand at 429 initial operator licensing exams and 265 generic fundamentals exams.	Target: Meet licensee demand estimated at 565 initial operator licensing examinations and 400 generic fundamentals examinations. Actual: Met licensee demand at 352 initial operator licensing examinations and 392 generic fundamentals exams.	Meet licensee demand estimated at 50 initial operator licensing examination sessions and 3 generic fundamentals examination sessions.	Meet licensee demand estimated at 50 initial operator licensing examination sessions and 3 generic fundamentals examination sessions.

Reactor License Renewal

	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	7,192	8,476	10,729	2,253
Contract Support and Travel	3,509	3,108	4,978	1,870
Total Budget Authority	10,701	11,584	15,707	4,123
FTE	66	74	90	16

The resource increase in FY 2002 for Reactor License Renewal includes:

- Salaries and benefits increase resulting from the increase in FTE and the governmentwide FY 2002 pay raise.

- Contract support and travel increase consistent with the number and timing of applications expected. The NRC expects to receive four new applications each year in FY 2001 and FY 2002. The increase is partially offset by the completion of major efforts in developing license renewal regulatory guidance.

- FTE increase resulting from the increased workload associated with the number and timing of applications expected.

The Reactor License Renewal program evaluates applications to renew current power reactor licenses beyond their expiration dates, evaluates generic industry renewal reports, and establishes the technical requirements and regulatory framework for renewal of power plant licenses. Activities in the license renewal area are aimed at supporting NRC outcomes in the area of maintaining safety and increasing public confidence as well as a particularly strong contribution to reducing unnecessary regulatory burden. The reviews for Calvert Cliffs and Oconee licensee renewal applications were completed in FY 2000 and the renewed licenses issued. Applications for license renewal were received from Hatch, Arkansas Nuclear One, Unit 1, and Turkey Point in FY 2000 and NRC review is scheduled through FY 2002. Resources are included to support the review of four additional license renewal applications each year in FY 2001 and FY 2002. The review process for renewal applications is intended to provide continued assurance that the level of safety provided by an applicant's current licensing bases is maintained for the period of extended operation.

The NRC is continuing development of improved implementation guidance for the license renewal rule. In August 2000, the agency issued for public comment the draft Standard Review Plan (SRP) for license renewal and a draft Generic Aging Lessons Learned (GALL) report which documents generically the basis for determining when existing programs are adequate and when existing programs should be augmented for license renewal. A draft License Renewal Regulatory Guide which proposes to endorse an industry implementation guideline was also issued for public comment in August which provides guidance on the format and content of a license renewal application. The revision of the guidance documents incorporated the experience gained from the review of the Calvert Cliffs and Oconee license renewal applications. After receipt and resolution of public comments, final versions of these documents are expected to be forwarded to the Commission for approval in FY 2001. The NRC expects that these activities will result in process enhancements that will improve the timeliness and effectiveness of future license renewal application reviews.

The NRC's goal is to establish a stable, efficient, and timely renewal process while maintaining plant safety. Opportunities for public participation in the license renewal process have been provided and the public is kept informed of license renewal activities through the use of public meetings, web sites, and making documents publicly available.

Program Outputs

The following program outputs have been identified for the Reactor License Renewal program.

OUTPUT MEASURES				
Output	**FY 1999 Actual**	**FY 2000 Actual**	**FY 2001 Target**	**FY 2002 Target**
Completion of license renewal application reviews. (FY 1998: Major milestones completed.)	Target: Complete those major milestones scheduled in FY 1999 in accordance with the Commission-approved schedules in order to support completion of license renewal applications within 36 months from receipt of the application to a Commission decision. Actual: Major milestones completed.	Target: Complete those major milestones scheduled in FY 2000 in accordance with the Commission-approved schedules in order to support completion of license renewal applications within 30 months[16] from receipt of the application to a Commission decision. Actual: Approved license renewal for Calvert Cliffs in 24 months and Oconee in 23 months.	Complete those major milestones scheduled in FY 2001 in accordance with the Commission-approved schedules in order to support completion of license renewal applications within 30 months from receipt of the application to a Commission decision.	Complete those major milestones scheduled in FY 2002 in accordance with the Commission-approved schedules in order to support completion of license renewal applications within 30 months from receipt of the application to a Commission decision.

Reactor Inspection and Performance Assessment

	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	63,919	65,686	67,811	2,125
Contract Support and Travel	7,137	6,592	6,444	-148
Total Budget Authority	71,056	72,278	74,255	1,977
FTE	653	636	627	-9

The resource increase in FY 2002 for Reactor Inspection and Performance Assessment includes:

- Salaries and benefits increase resulting from the governmentwide FY 2002 pay raise, offset by the decrease in FTE.
- Contract support and travel decrease primarily associated with the completion of development efforts for the revised reactor oversight process.
- FTE decrease primarily associated with completing the development efforts for the revised reactor oversight process.

Beginning in FY 2001, the Reactor Inspection program and Reactor Performance Assessment program have been combined into a single program. This is a direct outcome of implementation of the revised reactor oversight process that includes risk-informed baseline inspections, use of performance indicator data, and a revised reactor assessment process.

The Reactor Inspection and Performance Assessment program is designed to ensure, through selective examinations, that the licensee identifies and resolves safety issues before they affect safe plant operations. This program is audit-oriented to verify that relevant activities are being properly conducted and equipment properly maintained to ensure safe operations. The inspection program is composed of three major elements: baseline inspections, plant-specific inspections, and generic safety issue inspections. These elements provide a strong positive contribution to maintaining safety and increasing public confidence in NRC regulatory oversight of reactor safety.

Baseline inspections are performed at all operating reactors and focus on licensee performance in the areas of plant operations, maintenance, engineering, plant support (which includes security, radiation protection, and emergency preparedness), and licensee effectiveness in identifying, resolving, and preventing problems. As part of the revised reactor oversight process, risk-informed baseline inspections provide increased focus on aspects of performance that have the greatest impact on safe plant operation. Resident inspectors carry out the major part of the baseline inspection program and participate in plant-specific and generic safety issue inspections. Their primary role is to observe, evaluate, and report on the adequacy of licensee nuclear safety activities, concentrating on day-to-day licensee operational and event followup activities, and licensee activities and processes that are important to safety and reliability.

The conduct of plant-specific inspections contributes to maintaining safety and public confidence by following up on operational events and safety issues, and further investigating the root causes and corrective actions related to inspection findings. In general, the level of plant-specific inspection performed at each site is commensurate with that site's performance. In addition, inspections are performed in support of license renewal application reviews. NRC inspectors also respond to allegations of safety and safeguards violations at nuclear facilities and provide technical support to investigative personnel. The NRC staff takes regulatory action in response to allegations if warranted, consistent with the risk significance of the issues, thus contributing to maintaining safety. The staff's efforts to provide timely, technically sound responses to allegations also contribute to public confidence in NRC's regulatory oversight of reactor safety.

Generic issue inspections are one-time inspections that address areas of emerging safety concern or areas requiring increased emphasis because of recurring problems. These inspections are required to be performed at all operating reactors, at a particular type of reactor facility, or at designated reactors. Previously conducted generic issue inspections include team inspections of maintenance, emergency operating procedures, and electrical distribution and service water systems.

Direct onsite inspection hours planned for individual units are adjusted on the basis of licensee performance. For example, the baseline and generic safety issue inspections constitute (at least) an adequate level of inspection at plants that have demonstrated good performance. To ensure that resources are allocated effectively to enhance reactor safety, significant flexibility exists to conduct additional inspections of safety problems and of plants that require special attention.

The revised reactor oversight process was implemented at all but one reactor site in April 2000. One site had been shut down for an extended period and did not have historical data necessary to implement the process fully. It is being brought into the process in a phased approach. In FY 2001 and FY 2002, the NRC will continue to develop and implement a more risk-informed, efficient, and effective baseline inspection program. By risk-informed, we mean that the scope of the inspection program is defined primarily by those areas that are significant from a risk perspective, and inspection methods used to assess these areas take advantage of both generic and plant-specific risk

insights. Resource adjustments for direct inspection activities, if necessary, will be made based on the revised oversight process when the agency garners enough experience, evaluates the results, and provides recommendations to the Commission from the first year of implementation of the revised oversight program.

Staff efforts in program development include overall program management and planning for the inspection, performance assessment, and performance indicator programs. The staff prepares inspection, assessment, and performance indicator procedures and guidance, and makes revisions to address new initiatives and to incorporate lessons learned from ongoing reviews. In addition, the effectiveness and implementation of the reactor oversight process and industry safety performance will be evaluated on an ongoing basis, including a comprehensive program evaluation to be conducted in FY 2001.

The NRC conducts an integrated assessment of licensee performance by collecting and assessing inspection and performance indicator data on each power reactor site. This program provides for ongoing and annual reviews of agency observations and findings on the safety performance of operating reactor facilities. Assessing reactor performance also includes integrating lessons learned, overseeing the implementation of corrective actions, systematically reexamining reactor oversight activities, and continually evaluating and developing the program.

The assessment process is used to develop the NRC's conclusions regarding a licensee's safety performance and to identify agency actions to ensure licensees address performance weaknesses, providing a strong positive contribution to the outcome of maintaining safety. The assessment process serves as a vehicle to clearly communicate with licensee management and the public on plant performance from a safety and risk perspective, contributing to the outcome of increasing public confidence in NRC regulatory oversight of reactor safety. In addition, the NRC will use assessment results in effectively allocating reactor inspection resources at specific plants.

During FY 2000, the NRC transitioned from the previous performance assessment process, which included the Systematic Assessment of Licensee Performance (which has been terminated by the Commission), Plant Performance Reviews, and Senior Management Meetings, into a single integrated process. The revised assessment process includes the review of performance indicator information and inspection findings, development of inspection plans every six months, ongoing assessment of plant performance and preparation of an annual assessment letter, and conduct of an annual agency-level review meeting by NRC's senior management. In FY 2001 and FY 2002, the NRC will continue to collect and assess inspection and performance indicator data on each power reactor site, and use the assessment process to: (1) conduct an integrated assessment of licensee's safety performance, (2) identify agency actions to ensure that licensees address performance weaknesses, (3) clearly communicate the results of the assessment and planned actions to licensees and the public, and (4) assist NRC management in allocating resources used to inspect and assess licensee performance. The revised integrated process which uses a streamlined, structured review

process is expected to result in improved effectiveness and process efficiencies and to lead to improved consistency in regulatory decisions in response to licensee performance at power reactor sites.

Under the State and Tribal Liaison Program, the NRC coordinates activities of interest to State, local, Indian tribal governments, and other Federal agencies with NRC offices; and keeps the Commission and staff informed of significant actions. The Office of State Programs was changed to the Office of State and Tribal Programs to reflect the government-to-government relationships with Indian tribal governments. The NRC regularly consults with the Governor-appointed State Liaison Officers, and maintains contact with representatives of State Public Utility Commissions, National Governors' Association, and the National Association of Regulatory Utility Commissioners to identify NRC regulatory initiatives affecting States and to keep the NRC apprised of those organizations' activities. The NRC negotiates memoranda of understanding with States on various NRC and State activities involving mutual cooperation.

Program Outputs

The following program outputs have been identified for the Reactor Inspection and Performance Assessment program.

OUTPUT MEASURES				
Output	**FY 1999 Actual**	**FY 2000 Actual**	**FY 2001 Target**	**FY 2002 Target**
Number of plants for which core/baseline inspection program is completed during the fiscal year. (FY 1998: Completed at all reactors.)	Target: All operating reactors. Actual: Completed at all reactors.	Target: All operating reactors. Actual: Completed at all reactors.	All operating reactors.	All operating reactors.
Average time to complete reviews of allegations. (FY 1998: Average time to complete reviews = 122 days.)	Target: 180 days Actual: Average time to complete reviews = 116 days.	Target: 180 days Actual: Average time to complete reviews = 137 days.[17]	180 days.[18]	180 days.[18]

OUTPUT MEASURES				
Output	**FY 1999 Actual**	**FY 2000 Actual**	**FY 2001 Target**	**FY 2002 Target**
Mid-cycle review and end of cycle review; annual assessment letter and meeting with licensee. (FY 1998: 2 plant performance reviews per site conducted.)	Target: Conduct 2 reviews per site. Actual: 2 plant performance reviews per site conducted.	Target: Conduct 2 reviews per site. Actual: 1 plant performance review per site conducted in 2nd quarter. Given implementation of revised reactor assessment process in April 2000, schedule for next review moved from 4th quarter to the 1st quarter of FY 2001 with mid-cycle reviews to be conducted after the first six months of implementation of the revised process.	Conduct one mid-cycle review and one end-of-cycle review per site. Issue annual assessment letter and conduct annual meeting with licensee per site.	Conduct one mid-cycle review and one end-of-cycle review per site. Issue annual assessment letter and conduct annual meeting with licensee per site.
Agency action review meetings. (FY 1998: 2 senior management meetings conducted.)	Target: Conduct an annual meeting. Actual: Conducted a senior management meeting in April 1999.	Target: Conduct an annual meeting. Actual: Conducted a senior management meeting in May 2000.	Conduct an annual meeting.	Conduct an annual meeting.

Reactor Incident Response

	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	2,709	3,136	3,291	155
Contract Support and Travel	2,099	2,720	2,687	-33
Total Budget Authority	4,808	5,856	5,978	122
FTE	26	28	28	0

The resource increase in FY 2002 for Reactor Incident Response includes:

- Salaries and benefits increase resulting from the governmentwide FY 2002 pay raise.
- Contract support and travel decrease resulting from the completion of the study on Critical Infrastructure (Presidential Decision Directive 63) and anticipated savings in emergency telecommunications.

Reactor incident response activities are conducted to maintain incident and accident investigation programs to ensure that safety-significant operational events involving nuclear power reactors are investigated in a timely, systematic, and technically sound manner. In addition, information is obtained on the causes of the events so that NRC can make timely and effective corrective actions.

Emergency response activities are also conducted to ensure NRC is prepared to carry out its role in a radiological emergency at NRC-licensed nuclear reactor facilities, licensee responses are consistent with licensee responsibilities, and NRC responses are coordinated with other Federal response activities and State and local governments. This also includes support of information technology including an emergency telecommunications system, the Emergency Response Data System, and the Operations Center Information Management System.

During FY 2002, the Incident Investigation Program (IIP) will be maintained in a high state of readiness to establish and support an Incident Investigation Team (IIT) at any time. The Incident Investigation Manual (NUREG-1303), which provides formal guidance on the conduct of IITs, will be revised if necessary, to address investigation and programmatic deficiencies, if any. IIT rosters

will be revised as needed. IITs will be established and supported, and findings will be documented as staff followup actions.

In FY 2002, the NRC will continue to provide oversight and interaction to maintain high Headquarters Operations Center (HOC) reliability and facility availability. The emergency response program will continue to be updated on the basis of lessons learned. The on-call response coordination team member position will be continuously staffed to initiate the call-out process when the HOC is activated. Response team readiness will be maintained. The staff will continue its interfaces with other Federal agencies involved in radiological incident response. The NRC will respond to new initiatives, including Presidential Decision Directives, while maintaining its role in the principal Federal response plans (Federal Response Plan, Federal Radiological Emergency Response Plan, and National Contingency Plan). The NRC's incident response staff will participate in exercises, drills, major organizational meetings, and training sessions with State coordination as a focus. The training provided will be conducted in the most expeditious and efficient way possible.

In FY 2002, the NRC staff will continue to improve the conceptual design of emergency response courses, prepare and revise training documents, and schedule, track, and conduct training for headquarters and regional responders. In this way, the efficiency and effectiveness of headquarters and regional responder training will be significantly improved. Training outside the exercise environment will continue to be provided in order to improve responder technical skills.

During FY 2002, the HOC will be continuously staffed by Headquarters Operations Officers. They will take initial notifications of events and will document reported events for further review within the agency. During non-working hours (for other NRC staff), they will take allegation and reactor event reports and will screen any initial reports for the decisionmaking process to activate the agency's emergency response.

The NRC's Regional Incident Response program will also be maintained at a high level of readiness at all times during FY 2002. To accomplish this, the NRC's regional offices will train response personnel as required to maintain technical and administrative skills, participate periodically in drills and exercises, maintain response equipment in a state of operational readiness, maintain response procedures current, and implement program improvements resulting from lessons learned. The regions will designate sufficient staff to participate as response team members to implement program objectives, keeping in mind program efficiencies. In addition, the regions will continually evaluate ways to improve response through upgrades to equipment, resources, and facilities. The regions will interface with NRC headquarters, other Federal agencies, licensees, and State and local governments in order to maintain a high level of cooperation necessary for response to emergencies

Program Outputs

The following program outputs have been identified for the Reactor Incident Response program.

OUTPUT MEASURES				
Output	**FY 1999 Actual**	**FY 2000 Actual**	**FY 2001 Target**	**FY 2002 Target**
Emergency Response Performance Index (ERPI).	Target: 90 percent Actual: 99.7 percent	Target: 95 percent. Actual: 99.4 percent.	99 percent.	99 percent.
Definition: Index provides the single overall measure of the degree to which the agency believes it is ready to respond to an emergency situation. It serves as a method for measuring disparate activities that comprise the elements of the incident response program. It will be determined by averaging the degree of satisfaction of the following program functions: Response Organization Staffing, Response Facility Availability, Communications Reliability, Response Organization Training, 24-Hour Notification Point, Timeliness of Activation Decision, and Timeliness of Activation. If the overall index falls below or approaches its target value of 99 percent for FY 2001 and FY 2002, management will determine what is contributing most to the decline and conduct appropriate corrective measures based on this review.				

Reactor Safety Research

	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	17,258	17,917	18,604	687
Contract Support and Travel	38,098	38,464	40,050	1,586
Total Budget Authority	55,356	56,381	58,654	2,273
FTE	152	150	149	-1

The resource increase in FY 2002 for Reactor Safety Research includes:

- Salaries and benefits increase resulting from the governmentwide FY 2002 pay raise.
- Contract support and travel increase to support the detailed review of the technical bases for additional rulemaking to 10 CFR Part 50, probabilistic risk assessment on risks associated with cable aging, and facility capability related to evaluation of the integrity of steam generator tubes and other passive and active components in the primary coolant system under severe accident conditions. The increase also supports increased facilities' capabilities related to mixed oxide (MOX) fuel research, spent fuel pool accident risks associated with source term and cladding integrity, and support to rulemaking for pressurized thermal shock and reactor vessel pressure-temperature limits.

The NRC conducts reactor safety research to support the NRC's mission of ensuring that its licensees safely design, construct, and operate civilian nuclear reactor facilities. This research program is carried out to identify, evaluate, and resolve safety issues, to ensure that an independent technical basis exists to review licensee submittals, to evaluate operating experience and results of risk assessments for safety implications, and to support the development and use of risk-informed regulatory approaches. In conducting the Reactor Safety Research program, the NRC will anticipate challenges posed by the introduction of new technologies and changing regulatory demand. NRC continues to seek out opportunities to leverage its resources through domestic and international cooperative programs, and provide enhanced opportunities for stakeholder involvement and feedback on its research program. In addition, at a low level of effort, NRC plans to support the Department of Energy's Generation IV initiative by identifying potential regulatory issues related to advanced reactor designs. The Reactor Safety Research program, which is comprised of four major program

areas, is directly aligned to the NRC's performance goals, and addresses issues as discussed on the following pages.

Cracking of reactor pressure boundary components, such as piping, vessel penetrations, and vessel internals continues to be observed and has been attributed to the harmful effects of the light water reactor coolant environment. Degradation of these components could cause leaks or breaks that could also impair the ability to shut down and cool the reactor core. During FY 2001–FY 2002, research in this area will address: environmental effects on fatigue crack initiation and growth; stress corrosion cracking and irradiation-assisted stress corrosion cracking; void swelling of stainless steels; and effects of irradiation on the fracture toughness of stainless steels. This research can be used to evaluate plant-specific and generic environmental cracking issues and will support licensing decisions related to operating plants and future license renewal reviews, thereby supporting the performance goal of maintaining safety, particularly as plants age and the effects of this degradation continue.

Failure of the reactor pressure vessel (RPV) in regions adjacent to the reactor core could lead directly to significant core damage since the core might not be able to be cooled. During FY 2001–FY 2002, research in this area will continue to provide improved data, analytical tools, and support to decisions by the licensing office on the integrity of RPVs for the current operating and license renewal periods. The information produced by this research will support the performance goal of maintaining safety by providing the technical bases for changes to vessel integrity evaluations for setting pressure-temperature limits directly affecting plant operation; for evaluating cracks that may be detected by in-service inspection; for evaluation of pressurized thermal shock; and for more realistic methods to evaluate loads in the presence of flaws potentially resulting in increased operational flexibility.

Electric cables provide power to safety-related equipment as well as provide instrumentation and control signals necessary for plant operation. These cables are exposed to temperature and radiation during plant operation and could be exposed to high temperatures, high levels of radiation, and a steam/water environment during accidents for which the plant was designed, such as pipe breaks. These conditions could adversely impact plant safety by preventing the functioning of safety significant plant systems. During FY 2001–FY 2002, research in this area will evaluate environmental qualification of power cables and the adequacy of potential condition monitoring methods that may be used at operating plants and during license renewal terms. A key aspect of research on condition monitoring techniques will be the development of the capability to evaluate the functioning of inaccessible cables in a non-intrusive manner. The research effort will be supplemented by similar efforts in other Federal agencies through the Interagency Working Group on Wire System Safety. The results of this research will serve as the technical bases for decisions to ensure that these cables can continue to perform their safety function throughout design life. This research supports the maintenance of safety by evaluating the degree to which the original qualification process adequately bounds actual plant operating conditions.

The containment encloses the nuclear reactor and confines fission products that otherwise might be released to the atmosphere in the event of an accident. Age-related degradation of the containment structure has been reported by licensees. During FY 2001–FY 2002, research in this area will permit the development of insights into the possible failure modes and capacity of degraded containments. The results of this research will serve as part of the technical bases to ensure that aging mechanisms are adequately addressed.

Steam generator (SG) tubes account for approximately 90 percent of the primary coolant pressure boundary. Failure of these tubes could result in a radiation release to the atmosphere. Ongoing degradation of the SG tubes in operating plants continues to be observed and can unacceptably erode the integrity of these tubes. Technical issues in this research area include: prediction of SG tube structural integrity; understanding of degradation mechanisms; and reliability and effectiveness of SG tube non-destructive examinations. Research supporting resolution of these issues for FY 2001–FY 2002 can provide an enhanced technical basis for decisions involving SG tube cracking behavior, the ability of cracked tubes to withstand normal and accident loads, and the accuracy and reliability of current and advanced in-service inspection methods. In FY 2002, research will be initiated to address the integrity of critical components in the primary coolant system related to pressurized water reactor (PWR) SGs (including the SG tubes) in response to selected severe accident scenarios to identify the potential failure locations and modes. This research will improve current knowledge of the thermal-hydraulic conditions and structural response of critical components including the associated risks. The outcomes of this research support the performance goal of maintaining safety by providing the data and analysis tools for the licensing office to independently confirm assessments of integrity or make risk-informed decisions about primary system integrity.

Passive structures serve a variety of functions in nuclear power plants. Age-related degradation has been observed in several of these structures/components and new modes of degradation may appear as plants continue to age. During FY 2001–FY 2002 more accurate methods for predicting aging of passive components and structures such as the degradation of reinforced concrete structures, unreinforced masonry walls, flat bottom tanks, anchorages, and inaccessible or buried piping will be developed. In addition, the effects of aging and operational conditions (e.g., temperature) on valve performance will be assessed. This research will provide the technical bases for ensuring that aging mechanisms are appropriately addressed.

The general direction of the nuclear industry is to replace their analog instrumentation and control (I&C) equipment with digital equipment because of the difficulty in replacing equipment modules and the advantages of newer digital equipment. It is expected that plants will retrofit their protection systems, control systems, and eventually the majority of their control rooms. This will result in a mixture of analog and digital (hybrid) equipment that will require complex interfaces with an increased potential for errors. While digital technology has the capability to improve system performance, there are also challenges to the introduction of this technology. As recommended in the National Research Council study on digital I&C, during FY 2001–FY 2002, research will be

conducted to complete the development of guidance on environmental stressors and quality assurance methods for assuring the safety of new digital systems, particularly commercial-off-the-shelf systems. In addition, research will be carried out to develop methods for assessing potential failure modes associated with digital technology and to develop effective methods and tools for assessing the safety of the systems. The evaluation of this operational experience and development of these risk-informed tools and methods will support the performance goal of maintaining safety by providing the information and methods needed to avoid new potential failure modes associated with digital technology.

A July 1992 incident at a Swedish BWR, followed by several U.S. BWR occurrences, identified new physical phenomena that led to questions about long-term cooling capability in BWRs. This resulted in U.S. BWRs being retrofitted with significantly larger emergency core cooling system suppression pool suction strainers. These newly identified physical phenomena and insights gained from BWR evaluations resulted in the need to evaluate the clogging of PWR sump screens, and the failure of containment protective coatings that led to blockage debris. Research related to containment protective coatings is projected for completion in FY 2002, and research related to U.S. PWR sump blockage is projected for completion in FY 2003. The results of these research activities will be applied in the evaluation of sump screen clogging and the potential need to modify these screens to assure cooling under some accident scenarios.

Analyses of operational experience show that human performance significantly influences risk. Human performance in maintenance, testing, or work processes can affect equipment failure probabilities. While human intervention is important to the mitigation of accidents and the recovery from failures, human response to accidents can also significantly contribute to risk. During FY 2001, the NRC will continue to conduct research to better identify the most risk-significant aspects of human performance, given current designs and operating conditions. The results will support the new reactor oversight and inspection programs as well as licensing decisions related to operating plants. During FY 2002, development of inspection guidance to review licensees' proposed corrective action plans that address human performance and inspection guidance for responding to problems involving latent failures will be completed. The outcomes of this research contribute to the goal of maintaining reactor safety by providing a technically sound basis for review guidance related to human performance and assessment as well as inspecting human performance issues within the plant assessment context.

Continued economic pressure associated with electric utility deregulation is causing the nuclear power industry to pursue longer operating cycles with longer use of fuel elements before they are replaced (higher burnup). Higher burnup contributes to certain changes in fuel characteristics including higher cladding oxidation, which leads to embrittlement of the cladding. Fuel damage criteria, which are affected by cladding ductility, are used as limits in core-reload licensing, and the adequacy of these limits must be reestablished for higher burnup fuel. During FY 2001–FY 2002, NRC research programs and cooperative agreements with other countries will continue to provide

the relevant data to properly assess the behavior of high burnup fuels. The data will be used to maintain safety by either confirming the adequacy of existing regulatory requirements or providing the basis for revising these requirements.

The use of plutonium to fuel commercial reactors in the U.S. is being considered following the 1994 U.S. agreement with Russia to reduce the inventory of fissile material from nuclear weapons. A license application for two MOX fuel lead test assemblies is expected by August 2001, and applications for batch utilization are expected in early 2005. The fuel damage criteria, which are used as limits in core-reload licensing and the ability to calculate MOX fuel behavior in relation to these criteria, need to be established for MOX fuel. During FY 2001–FY 2002, research will be performed to provide the basis for these criteria, for understanding related performance phenomena, and for modeling. In FY 2002, testing will be pursued under appropriate accident conditions in a pulse-type reactor, such as the French Cabri reactor or the Department of Energy's (DOE) Transient Reactor Test Facility. The safety significance of this area lies in assuring the integrity of the fuel whose failure could affect the ability of the control rods to insert properly, could lead to fuel dispersal and loss of coolable geometry, and ultimately to core damage with the associated release of fission products. The data will be used to maintain safety by either confirming the adequacy of existing regulatory requirements or providing the basis for revising these requirements.

The NRC is committed to providing feedback to the regulatory process by analyzing the risk significance of nuclear power reactor operating experience and to reporting on the performance of nuclear power facilities. In FY 2001–FY 2002, the NRC will continue to maintain databases of licensee event reports, common cause failures, and equipment reliability and availability. These operational data will provide information on relevant operating experience that will be used to enhance plant inspection, perform technical reviews of proposed license amendments, and develop risk-based performance indicators. Risk-based performance indicators will be developed to provide plant-specific and industry performance indication of reactor systems, structures, and components (SSCs) that are the constituent contributors to risk, while insight studies will provide focused reviews of specific risk-important SSCs. Also, the Accident Sequence Precursor program will continue to provide analyses of the risk significance of operating experience on a plant-specific basis and trending information on industry performance. This work will improve both the realism and effectiveness of NRC's reactor oversight process.

Models used by the NRC and its licensees to estimate health effects caused by radiation exposure are updated as new data become available. As a result of a unique situation in the former Soviet Union, the U.S. has access to radiation exposure data for workers at levels far in excess of any seen in the U.S. These data are being analyzed to determine the impact of these exposures on the workers' health. In FY 2001, a final report of the results obtained from this research will be published, and in FY 2002, the results of this research will be used to validate or revise, as needed, the existing health effects models used by NRC and its licensees to estimate public exposure to

radiation or radioactive materials as a result of actual or postulated accidents. Results from the use of improved health effects models can be used to better plan for protective actions.

One key issue in using PRA for regulatory activities is that PRA quality can influence the regulatory or operational decision. PRA standards developed under sponsorship of standards-setting organizations (such as American Society of Mechanical Engineers, American Nuclear Society, and National Fire Protection Association), and endorsed by the NRC, are intended to be important mechanisms for ensuring needed quality. Versions of these standards will be completed in FY 2001. The availability of a recognized PRA standard would improve consistency and timeliness in the staff's review of requests for license amendments as the agency continues to implement risk-informed regulation. In addition, current PRA methods are not adequate to fully address certain key aspects of plant risk, including the effects of plant aging, quality assurance, human reliability, digital I&C, and fire. During FY 2001–FY 2002, research will be conducted to develop PRA methods for assessing the contribution of plant aging, quality assurance, digital I&C, human reliability, and fire to nuclear power plant risk to better define and reduce the uncertainty in these aspects of PRA. The results of this research will provide more complete and more quantitative estimates of risk to be used in licensing decisions and in more general uses of risk information (e.g., reactor oversight and Part 50 revisions).

The NRC has committed to continue to move toward a more risk-informed regulatory framework of its regulations and regulatory actions during FY 2001–FY 2002. To ensure uniform, risk-informed decisionmaking on licensing issues and rules, regulatory guidance is being developed and updated. A second major initiative is the work to analyze the technical requirements of 10 CFR Part 50 and to define potential revisions. In addition to PRA, engineering and thermal hydraulic analyses will be needed as essential elements of the technical basis for these revisions. Before the technical requirements in Part 50 are modified, in-depth analyses of these requirements are needed to understand the often complex interrelationships among the technical requirements, the reliability and functionality of the SSCs, and the contribution to plant risk to ensure that safety is maintained.

The NRC utilizes thermal-hydraulic, fuel behavior, severe accident, and neutronics codes to support a broad range of regulatory audit and regulatory assessment needs. To support these needs, the NRC has a program to consolidate its four thermal-hydraulic codes into one code, to consolidate its four severe accident codes into one code, to provide a graphic user interface (GUI) for use with these codes and to continue development and assessment activities to ameliorate identified code deficiencies and to make improvements in response to emerging technical issues. During FY 2001–FY 2002, development of the two consolidated codes will continue with the completion of these activities scheduled for FY 2003 and FY 2004, respectively. A beta version of the GUI for TRAC-M is scheduled for completion in FY 2001. During FY 2001–FY 2002, the development and assessment activities will continue to improve the usefulness of these codes in support of risk-informed initiatives and the resolution of thermal-hydraulic, fuel behavior and severe accident technical issues. The code improvements will enable the licensing office to more effectively interact

with applicants and licensees on the complex issues associated with plant performance under normal and accident conditions, review vendor and licensees' codes, and perform audit calculations.

The NRC utilizes a suite of thermal-hydraulic codes for the analysis of design basis loss-of-coolant accidents (LOCA) in support of NRC review and audits of licensee and vendor safety analyses. The current codes utilize thermal-hydraulic models with significant conservatism and uncertainties. During FY 2001–FY 2002 research will continue for confirming or revising existing LOCA acceptance criteria and analytical methods in 10 CFR 50.46 and 10 CFR Part 50, Appendix A and Appendix K. The outcomes of this research activity will be increased realism in support of regulatory and licensing decisions involving emergency core cooling, including power uprates, leading to reduced licensee burden.

Pressurized thermal shock (PTS) can occur in PWRs when severe overcooling of the pressure vessel inner wall is coupled with subsequent increases in vessel pressure. The current bases for establishing limits for prevention of PTS are embodied in the PTS rule (10 CFR 50.61). The analyses on which this rule is based originate from conservative methods and test data which have resulted in conservative limits. These limits can result in the unnecessary reduction of operational flexibility (P-T limits) and potential for prematurely limiting the life of the RPV PTS. During FY 2001–FY 2002, the NRC will continue experimental and analytical research to improve the technical bases for the current PTS criteria in the discipline areas of materials, thermal-hydraulics and risk assessment. In FY 2002, experiments will be performed at the Sandia National Laboratory Surtsey test facility to investigate containment performance relative to postulated PTS events. It is anticipated that integrated information from these research disciplines will enable a substantial reduction in the unnecessary conservatisms inherent in the current regulatory framework for PTS and P-T limits. The outcomes of this research will be reduced licensee burden and increased realism in support of regulatory and licensing decisions.

During FY 2001–FY 2002, NRC will continue to sponsor the Water Reactor Safety Information Meeting to review the progress, technical accomplishments and future needs of key research programs, facilitate open dialogue with stakeholders in commercial nuclear applications and engage stakeholders in providing feedback on the research in these areas. The NRC will continue to seek opportunities to increase stakeholder access to information on its research program by increasing the availability of information over the Internet.

In addition to the above issues, research will also continue during FY 2001–FY 2002 to address a number of other issues including: providing the technical bases and data to support licensing decisions related to nondestructive inspection methods and programs; development of an appropriate source term in a fission product testing facility such as Horizontal Induction/Vertical Induction at the Oak Ridge National Laboratory for analysis of radionuclide releases in an air environment for spent fuel analyses, providing analysis methods and supporting data needed to evaluate emerging piping issues and new applications of technology; completing the review and issuing an insights

report related to submittals concerning individual plant examination of externally initiated events; and issuing an insights report to identify any generic concerns that may warrant regulatory attention; continuing the collection and publication of licensee workers' radiation exposure data; continuing to participate in codes and standards development meetings to help assure promulgated codes and standards can be endorsed in the regulatory process; reviewing the effectiveness of regulatory requirements including the resolution of the generic issue on decay heat removal and the maintenance rule; conducting research on seismic hazard source identification and characterization, further development of probabilistic seismic hazard assessment; and taking advantage of recent data to ensure that adequate margins exist in current regulations. Generic issues will continue to evolve, be prioritized, and resolved. A limited level of effort is also planned to support DOE's Generation IV advanced reactor design initiative.

Program Outputs

The following program outputs have been identified for the Reactor Safety Research program.

OUTPUT MEASURES				
Output	**FY 1999 Actual**	**FY 2000 Actual**	**FY 2001 Target**	**FY 2002 Target**
Technical bases for safety and regulatory guidance and decisionmaking.	Target: Issue 39 products. Actual: Issued 45 products.	Target: Issue 45 products. Actual: Issued 47 products.	Issue 40 research products that respond to high- and medium-priority needs from the Commission and NRC's licensing organizations.	Issue 40 research products that respond to high- and medium-priority needs from the Commission and NRC's licensing organizations.
Definition: Research products are typically engineering codes/models used for regulatory analyses, or reports containing experimental or analytical results that form the technical basis for regulations, regulatory guides, new methods, the resolution of generic safety issues, and regulatory decisionmaking.				

Reactor Technical Training

	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	2,385	3,066	4,811	1,745
Contract Support and Travel	2,871	3,674	4,349	675
Total Budget Authority	5,256	6,740	9,160	2,420
FTE	25	30	44	14

The resource increase in FY 2002 for the Reactor Technical Training includes:

- Salaries and benefits increase resulting from the increase in FTE and the governmentwide FY 2002 pay raise.
- Contract support and travel increase primarily to support increased internal training to enhance staff capability, and the expansion of intern and rotational training programs to attract individuals with high potential and develop capabilities to meet future needs.
- FTE increase resulting from the expansion of internal and rotational training programs.

Nuclear reactor technical training is conducted to ensure that NRC staff possess the requisite knowledge, skill, and abilities and competencies to accomplish the mission and performance goals of the agency. Under this activity, technical training is provided for formal NRC staff qualification, development, and training programs in support of the reactor program. The NRC will continue to maintain the Technical Training Center and manage the technical training program for NRC staff. Curriculum areas in support of the training program will be maintained in reactor technology, probabilistic risk assessment, engineering support, radiation protection, security and safeguards, and regulatory skills to provide the technical and regulatory foundation to support staff decisions in the regulatory oversight process. Technical training will continue to be provided using the principles of the systems approach for training which is a standard, multiphase program that includes needs analysis, program design and development, implementation of training, and program evaluation.

A spectrum of reactor technology and regulatory skills training will be provided by NRC instructors for the General Electric, Westinghouse, Combustion Engineering, and Babcock and Wilcox reactor

designs to meet the agency's needs with the highest priority, including an integrated series of classroom and simulator courses for NRC staff. In FY 2002, 90 percent of the numbers and types of courses identified as requirements by the offices and regions will be provided. New training to support regulatory oversight process improvements will be designed, developed, and implemented. Contracted courses in support of the training program will be maintained in probabilistic risk assessment, engineering support, radiation protection, security and safeguards, fuel cycle technology, and regulatory skills to provide the technical and regulatory foundation to support staff decisions in the regulatory oversight process. Project management and oversight of contractors is provided to ensure contracted courses are implemented in accordance with contract requirements. Access to external sources of individual training and instruction will be provided when it is not cost effective to conduct in-house or contracted training so that staff can obtain knowledge and instruction from a variety of external experts or learning events. Technical training for the NRC staff is highly dependent on the full-scope simulators, classroom information technology systems, and office technology systems at the NRC Technical Training Center. The facility, infrastructure, and administrative support necessary to provide the technical training capability required to achieve and maintain the technical qualifications of the NRC staff will be maintained.

Beginning in FY 2001, the NRC will develop and implement an intern program to attract individuals with high potential to the workforce and develop a solid base of capability. The NRC will also develop and implement a process to acquire and maintain staff through recruitment efforts and staff development in the form of rotational assignments.

The agency projects that one-third of our engineers and scientists will be eligible for optional retirement by the end of FY 2005. Consequently, the agency will develop a plan of action to ensure that adequate attention is devoted to addressing and resolving the agency's core competency issues. Beginning in FY 2001, the NRC will begin to develop a plan of action to assess the scientific, engineering, and technical core competencies that the NRC needs and propose specific strategies for ensuring that they are maintained. The NRC will design a workforce plan to address critical skills gaps and guide the agency in the recruitment, development, and retention of a highly skilled diverse workforce. These new initiatives, which will be expanded in FY 2002, will support the organization's ability to deliver all of the agency's performance goals but is focused on improving efficiency and effectiveness.

Program Outputs

The following program outputs have been identified for the Reactor Technical Training program.

OUTPUT MEASURES				
Output	**FY 1999 Actual**	**FY 2000 Actual**	**FY 2001 Target**	**FY 2002 Target**
Numbers and types of reactor technical training courses offered. (FY 1998: 100 percent of the cumulative identified needs were met.)	Target: Numbers and types of courses offered will meet 90 percent of cumulative needs identified by offices and regions in semiannual needs survey. Actual: 99 percent of the cumulative identified needs were met.	Target: Numbers and types of courses offered will meet 90 percent of cumulative needs identified by offices and regions in semiannual needs surveys. Actual: Met 100 percent of the cumulative identified needs.	Numbers and types of courses offered will meet 90 percent of cumulative needs identified by offices and regions in semiannual needs surveys.	Numbers and types of courses offered will meet 90 percent of cumulative needs identified by offices and regions in semiannual needs surveys

Reactor Enforcement Actions

	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	1,665	1,669	1,630	-39
Contract Support and Travel	57	57	55	-2
Total Budget Authority	1,722	1,726	1,685	-41
FTE	17	16	15	-1

The resource decrease in FY 2002 for Reactor Enforcement Actions includes:

- Salaries and benefits decrease to reflect the decrease in FTE, offset by an increase resulting from the governmentwide FY 2002 pay raise.
- FTE decrease resulting from anticipated efficiencies with the maturity of the revised reactor oversight process.

The NRC's Reactor Enforcement program has undergone significant changes and resulted in an approach that reduces unnecessary regulatory burden, and is more predictable and consistent. The revised approach was fully implemented coincident with the implementation of the revised reactor oversight process (RROP) in April 2000. The fundamental change in the Reactor Enforcement program is that the significance of licensee performance issues is generally determined from a risk-informed process integral to the RROP rather than solely from the enforcement policy. The enforcement policy then provides for the disposition of any violations of regulatory requirements resulting from those performance issues in a manner that is commensurate with the significance of those issues.

Enforcement sanctions are a mechanism whereby violations are documented in inspection reports and licensees take corrective actions through their internal corrective action programs. The nature and extent of the enforcement action taken by the NRC reflect the seriousness of the violation involved. This program maintains safety by ensuring licensee compliance with safety and regulatory requirements. Approximately 1,500 enforcement issues are expected to be dispositioned during FY 2002. This reflects efficiencies from implementation of the new reactor oversight process and revised enforcement policy. Of this total, approximately 175 actions will be considered for escalated

enforcement such as formal issuance of Notices of Violation, Orders, or other significant enforcement action.

The Commission has revised its enforcement policy to be in alignment with the overall agency reactor oversight process, but further refinement is anticipated as lessons learned from initial implementation of the RROP are incorporated. Refinements to the enforcement policy have already resulted in a reduction in unnecessary regulatory burden by increasing the issuance of non-cited violations as compared to Notices of Violation. As additional refinements are implemented, it is expected that there will be increases in the effectiveness and efficiency of the enforcement program.

The NRC investigates and enforces substantial claims of discriminations alleged to the NRC and also monitors discrimination actions filed with the Department of Labor under Section 211 of the Energy Reorganization Act and develops enforcement actions where there are properly supported findings of discrimination. A Discrimination Task Group was initiated in July 2000 to evaluate and recommend improvements in our enforcement program. Recommendations of the task group will continue to be implemented in FY 2002 to improve efficiency and effectiveness of the NRC's handling of discrimination cases and to increase public confidence in NRC's review and decisionmaking process.

The NRC is evaluating the development of an enforcement policy that will address the use of Alternative Dispute Resolution in areas where NRC and licensees disagree over noncompliances but neither party desires to proceed through formal adjudication. As the agency evaluates the use of Alternative Dispute Resolution, it will continue to balance possible reduction in public confidence versus improvements in efficiency and reduction of unnecessary burden of formal adjudication. If adopted, implementation could occur in FY 2002.

Program Outputs

The following program outputs have been identified for the Reactor Enforcement Actions program.

OUTPUT MEASURES				
Output	**FY 1999 Actual**	**FY 2000 Actual**	**FY 2001 Target**	**FY 2002 Target**
Timeliness in completing enforcement actions. (FY 1998: Enforcement case average of 67.1 days for 90 percent of cases. Enforcement case average of 80.6 days for 100 percent of cases.)[19, 20]	Target: 90 percent of reactor enforcement cases will average 90 days or less. 100 percent of reactor enforcement cases will average 120 days, or less.[20, 21] Actual: Enforcement case average of 75.2 days for 90 percent of cases. Enforcement case average of 90.6 days for 100 percent of cases.	Target: 90 percent of reactor enforcement cases will average 90 days or less. Actual: Reactor cases averaged 78.3 days for 100 percent of reactor cases.	90 percent of reactor enforcement cases will average 90 days or less.[20]	Investigation cases:[21,22] 75 percent completed within 120 calendar days. 95 percent completed within 180 calendar days. 100 percent completed within 360 days of NRC processing time.[23] Non Investigation cases[22]: 80 percent completed within 90 calendar days. 100 percent completed within 180 calendar days.[24]

Reactor Investigations

	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	3,442	3,614	3,782	168
Contract Support and Travel	361	325	325	0
Total Budget Authority	3,803	3,939	4,107	168
FTE	31	31	31	0

The resource increase in FY 2002 for Reactor Investigations results from the governmentwide FY 2002 pay raise.

The NRC investigates allegations of wrongdoing by NRC reactor licensees, certificate holders, and others within its regulatory jurisdiction. All findings and conclusions that result from investigations are sent to the appropriate NRC organization for review of the issues involved and a determination as to whether enforcement action is warranted. Investigations that substantiate criminal violations concerning NRC licensees and others within the NRC's regulatory jurisdiction are referred to the U.S. Department of Justice for prosecutorial review. Providing thorough, objective, and timely wrongdoing investigations contributes to the agency goals of maintaining safety; increased public confidence; making activities and decisions more effective, efficient, and realistic; and reducing necessary regulatory burden.

In addition to managing its own caseload, the NRC works closely with other investigate agencies and organizations to ensure the timely and efficient exchange of information of mutual interest. In FY 2000, in its continuing efforts to improve, the Office of Investigations (OI) made significant strides toward increasing effectiveness, efficiency, and productivity in management, organizational, and process-related activities. These achievements were the result of participation in the NRC Allegation Review process and OI initiatives first identified through field office review visits, and other aspects of the continuing self-assessment program.

In FY 2002, the NRC anticipates investigating an inventory of approximately 210-240 reactor-related cases. In addition to managing its own caseload, the NRC works closely with other investigative agencies and organizations to ensure the timely and efficient exchange of information of mutual

interest. The NRC strives to improve effectiveness and efficiency through participation in the NRC Allegation Review process, and a nationwide self-assessment program.

Program Outputs

The following program outputs have been identified for the Reactor Investigations program.

OUTPUT MEASURES				
Output	**FY 1999 Actual**	**FY 2000 Actual**	**FY 2001 Target**	**FY 2002 Target**
Timeliness in completing investigations. (FY 1998: Completed cases, on average, in 6.3 months; 7.9 percent of cases open for more than 12 months.)[21]	Target: Complete cases, on average, in 9 months, or less. Maintain the average number of cases within the active case inventory for more than 12 months, at 9 percent or less. Actual: Completed cases, on average, in 6.3 months; 8.4 percent[25] of cases open for more than 12 months.	Target: Complete cases, on average, in 9 months, or less. Maintain the average number of cases within the active case inventory for more than 12 months, at 9 percent or less. Actual: Completed cases, on average, in 5.6 months; 6.0 percent of cases open for more than 12 months.	Complete cases, on average, in 9 months, or less. Maintain the average number of cases within the active case inventory for more than 12 months, at 9 percent or less.	Complete cases, on average, in 9 months, or less. Maintain the average number of cases within the active case inventory for more than 12 months, at 9 percent or less.

Reactor Legal Advice

	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	2,248	2,486	2,594	108
Contract Support and Travel	85	25	35	10
Total Budget Authority	2,333	2,511	2,629	118
FTE	21	22	22	0

The resource increase in FY 2002 for Reactor Legal Advice results from the governmentwide FY 2002 pay raise.

The Office of the General Counsel (OGC) provides legal advice and assistance to the NRC staff and the Commission with respect to all matters related to nuclear reactor safety and research, and the environmental impacts of nuclear reactor operation. This includes review of proposed licensing actions (such as those associated with initial licensing and subsequent license amendments, the adoption of improved technical specifications, license renewal, license transfer, and advanced reactor activities), enforcement actions, conduct of investigations, promulgation of NRC regulations and regulatory guides, responses to petitions for rulemaking, and regulatory interpretations. The OGC represents the NRC staff in administrative adjudications arising from proposed reactor licensing and enforcement actions; represents the Commission in lawsuits arising from adjudicatory and rulemaking decisions relating to reactors; provides legal advice and assistance with respect to all matters related to reactor research programs, including contractual advice; and provides legal analyses of regulations, statutes, and cases relevant to NRC activities. These activities support staff efforts to maintain safety by assuring that necessary actions are legally sustainable against challenge; contribute to improvements in efficiency and effectiveness by identifying and analyzing legally defensible ways to risk inform and streamline agency requirements and processes; and enhance public confidence by representing staff positions in agency proceedings in a clear and open manner, with corresponding avoidance of unnecessary regulatory burden on licensees and license applicants.

Reactor Adjudication

	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	848	1,035	1,078	43
Contract Support and Travel	288	328	342	14
Total Budget Authority	1,136	1,363	1,420	57
FTE	7	8	8	0

The resource increase in FY 2002 for Reactor Adjudication includes:

- Salaries and benefits increase resulting from the governmentwide FY 2002 pay raise.
- Contract support and travel increase to fund increased court reporting services and hearing space requirements in support of the license renewal hearings in the Reactor Adjudication program.

The Atomic Safety and Licensing Board Panel (ASLBP), a statutorily-authorized office of the NRC, conducts hearings as independent adjudicatory tribunals, usually at or near the site where the dispute arose. In FY 2002, ASLBP judges will hear and decide hearing petitions by interveners and licensees concerning public health, safety, and environmental issues arising out of the grant, suspension, revocation, amendment, or renewal of licenses to operate and decommission nuclear power plants. These hearings help assure that health, safety, and the environment are protected as well as increase public confidence in the agency's reactor licensing and enforcement processes, by allowing public participation to adjudicate claims made by interested persons. At the same time, the agency is striving to make these proceedings as efficient and effective as possible. In its 1998 statement on the Policy on Conduct of Adjudicatory Proceedings, the Commission reiterated its longstanding commitment to the expeditious completion of adjudicatory proceedings while still ensuring that hearings are fair and produce an adequate record for decision. The Commission directed its hearing boards and presiding officers to continue to employ measures and techniques to reduce the time for completing licensing and other proceedings.

ENDNOTES

1. Includes Browns Ferry Unit 1, which has no fuel loaded and requires Commission approval to restart.

2. Stated succinctly, risk-informed, performance-based regulation is an approach in which risk insights, engineering analysis and judgment, and performance history are used to (1) focus attention on the most important activities, (2) establish objective criteria based upon risk insights for evaluating performance, (3) develop measurable or calculable parameters for monitoring system and licensee performance, and (4) focus on the results as the primary basis of regulatory decisionmaking. This definition is contained in the Commission White Paper on this subject, which can be located at www.nrc.gov/NRC/COMMISSION/SRM/1998-144srm.html.

3. "Nuclear reactor accidents" is defined in the NRC Severe Accident Policy Statement (50 Federal Register 32138, August 8, 1985) as those accidents which result in substantial damage to the reactor core, whether or not serious offsite consequences occur.

4. "Significant radiation exposures" are defined as those that result in unintended permanent functional damage to an organ or a physiological system as determined by a physician in accordance with Abnormal Occurrence Criterion I.A.3.

5. Releases that have the potential to cause "adverse impact" are currently undefined. As a surrogate, we will use those that exceed the limits for reporting abnormal occurrences as given by Abnormal Occurrence Criterion 1.B.1 (normally 5,000 times Table 2 (air and water) of Appendix B, Part 20).

6. Such events have a 1/1000 (10^{-3}) or greater probability of leading to a reactor accident.

7. The agency provides oversight of plant safety performance on a plant-specific basis as well as on an industry-wide basis. As a refinement to the existing process, new parameters and criteria for measuring statistically significant adverse trends in industry-wide safety performance will be developed. In the interim, the NRC continues to use the same parameters as in past years. Future parameters to be monitored could include NRC-approved performance indicators, inspection findings, accident sequence precursor results, and other risk-related indications or measures of industry safety performance that will be developed and qualified for use in phases.

8. Over exposures are those that exceed limits as provided by 10 CFR 20.2203(a)(2), excluding instances of over exposures involving a shallow dose equivalent from a discrete radioactive particle in contact with the skin.

9. Releases for which a 30-day reporting requirement under 10 CFR 20.2203(a)(3) is required.

10. A 10 CFR 2.206 petition is a written request filed by any person to institute a proceeding to modify, suspend, or revoke a license, or for any other enforcement action. The petition specifies the action requested and sets forth the facts that constitute the basis for the request. The NRC evaluates the technical merits of the safety concern presented by the petition. Based on the facts determined by the NRC technical evaluation or investigation of the merits of the petition, the Director will issue a

decision to grant the petition, in whole or in part, or deny the petition. The Director's Decision explains the bases upon which the petition has been granted and identifies the actions that NRC staff has taken or will take to grant the petition in whole or in part. Similarly, if the petition is denied, the Director's Decision explains the bases for the denial and discusses all matters raised by the petitioner in support of the request.

11. The start time of the 120 days is the date that the Petition Review Board determines that the proposed petition satisfies the criteria of NRC Management Directive (MD) 8.11, "Review Process for 10 CFR 2.206 Petitions" and acknowledges by letter the petitioner's request. For petitions received after October 1, 2000, the end time is the date of the proposed Director's Decision. Supplements to the petition which require extension of the schedule will reset the beginning of the metric to the date of issuance of a new acknowledgment letter.

12. The FY 2000 target dates for Calvert Cliffs and Oconee reflect an adjustment in the schedule from 30 months to 25 months. The 30-month target for the license renewal performance measure includes sufficient time for a potential hearing. As soon as the NRC is certain that no hearings will be held, the schedule for reviewing a license renewal is set at 25 months. No hearings were held for Calvert Cliffs or Oconee and the schedules were adjusted accordingly.

13. The target was exceeded due to an increased effort to close out generic-related tasks.

14. The target decreases to reflect the significant reduction in the inventory.

15. For FY 2000, the actual number of examination candidates is 352, compared to an estimated target of 565 candidates. The difference is due to attrition of operator license candidates during the training period from the projected enrollment provided by the licensees. The number of examination sessions, vice examination candidates, is more predictable (at approximately 50 initial examination sessions at power reactors per year). Budget values are primarily based on number of exam sessions, with a small adjustment based on the number of candidates per exam session. Thus, the output measure target for FY 2001 and FY 2002 has been changed to the estimated number of examination sessions, vice the number of examination candidates.

16. The 30-month target for the license renewal performance measure includes sufficient time for a potential hearing. As soon as the NRC is certain that no hearings will be held, the schedule for reviewing a license renewal is set at 25 months. No hearings were held for Calvert Cliffs or Oconee and the schedules were adjusted accordingly.

17. The target was exceeded as a result of an increased focus on timeliness, improved tracking software, and a decline in the number of allegations received by the NRC that concern reactor licensees or their contractors.

18. The 180 day target reflects the implementation of the revised reactor oversight process (RROP), which began in April 2000. Inspections associated with allegation reviews are combined as much as possible with scheduled inspections to use resources effectively and efficiently and to protect the identity of the alleger. The new inspection program under the RROP is more risk-informed and focuses on the

relatively small number of plants which evidence performance problems. While this reduces the regulatory impact on plants that perform well, it also offers less flexibility for NRC to schedule additional inspections to address allegations.

19. The measuring period starts on the latest of the following dates: (1) inspection exit date, (2) the date the results of an agency investigation are forwarded to the staff, (3) the date that the Department of Justice (DOJ) says NRC may proceed, for cases referred to the DOJ, or (4) the date of the Department of Labor decision that is the basis for the action.

20. Prior to FY 2000, timeliness was not calculated by strategic arena. FY 1999 figures represent timeliness of reactor and materials combined.

21. The measuring period starts on the day the case is opened which is defined as the day the staff reaches consensus that the issue involves potential significant enforcement action. This day will in most cases be the first panel date, but there will be cases where the first panel defers due to insufficient information and there will be cases that are opened without a panel.

22. For FY 2002, the Office of Enforcement has developed performance measures that account for 100 percent of work and do not rely on averages. The measures were divided between cases involving Office of Investigations investigations and those cases developed from the inspection program. Cases involving investigations normally involve wrongdoing or discrimination and by their nature are more resource intensive and less timely. Accordingly, the performance measure for cases involving investigations provides for more staff time.

23. NRC processing time is defined as that time from the date the case is opened to the issuance of an enforcement action or other appropriate disposition less: (1) any time the NRC could not act due to the case residing with DOL, DOJ, other government entity or where the licensee requests a lengthy deferment, and (2) any time the NRC could not act due to processing of FOIA requests.

24. Infrequently, NRC processing time may need to be used in this parameter to account for due process time granted to licensees to conduct lengthy testing, experimentation, or analysis to demonstrate information pertinent to the enforcement decision.

25. Adjusted percentage excluding several cases with extensive DOJ involvement that were held open for an extended period beyond the control of the NRC.

NUCLEAR MATERIALS SAFETY

NUCLEAR MATERIALS SAFETY

The Nuclear Materials Safety strategic arena encompasses NRC efforts to ensure that NRC-regulated aspects of nuclear fuel cycle facilities and nuclear materials activities are handled in a manner that adequately protects public health and safety and promotes common defense and security. This arena encompasses more than 20,000 specific and 150,000 general licensees that are regulated by the NRC and 32 Agreement States. This diverse regulated community includes: uranium extraction; uranium conversion; uranium enrichment; nuclear fuel fabrication; fuel research and pilot facilities; and large and small users of nuclear material for industrial, medical, or academic purposes. The last group—the large and small users of nuclear materials—includes: radiographers, hospitals, private physicians, nuclear gauge users, large and small universities, and others. This arena also includes all regulatory activities carried out by the NRC and the Agreement States to ensure that nuclear materials and facilities are used in a manner that protects public health and safety and the environment, and protects against radiological sabotage and theft or diversion of special nuclear materials. The Atomic Energy Act (AEA) of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and the Uranium Mill Tailings Radiation Control Act of 1978, as amended, (UMTRCA), provide the foundation for regulating the Nation's civilian uses of nuclear materials.

The scope of regulatory activities carried out under this arena includes regulation and guidance development; nuclear materials research; licensing/certification, inspection, and enforcement activities; identification and resolution of safety and safeguards issues; regulation of uranium recovery activities; operating experience evaluation; incident investigation; threat assessment; emergency response; technical training; and investigation of alleged wrongdoing by licensees, applicants, certificate holders, and contractors.

BUDGET OVERVIEW

	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	40,290	40,101	42,512	2,411
Contract Support and Travel	11,447	12,362	12,526	164
Total Budget Authority	51,737	52,463	55,038	2,575
FTE	399	377	382	5

The budget request of $55.0M and 382 FTE supports licensing and inspection activities for approximately 24 nuclear fuel cycle facilities, two gaseous diffusion enrichment facilities, and approximately 5,000 nuclear materials licenses. Of the increase, $2.4M is for increased salaries and

benefits primarily associated with the governmentwide FY 2002 pay raise, and includes additional staff associated with a new intern program as part of the Materials Technical Training program. The remaining increase of $0.2M is primarily to support materials safety research activities that will expand NRC's risk assessment program in the Nuclear Materials Safety arena.

MEASURING RESULTS - STRATEGIC AND PERFORMANCE GOALS

This strategic arena includes strategic goals, performance goals and measures, and strategies. The **strategic goals** represent the agency's fundamental mission and the overall outcome the NRC wants to achieve. The **performance goals** are the key contributors to achieving the strategic goals and focus on outcomes over which the agency has control. The **performance measures** indicate whether the NRC is achieving its performance goals and establish the basis for performance management. These measures establish how far and how fast the agency will move in the direction established by the performance goals. The **strategies** describe how the NRC will achieve its performance goals and their associated measures. The strategies provide the direct link between what the agency wants to achieve (i.e., goals) and the key activities NRC will conduct to achieve these goals.

Our Strategic Goal

STRATEGIC GOAL: Prevent radiation-related deaths and illnesses, promote the common defense and security, and protect the environment in the use of source, byproduct, and special nuclear material.[1]

Four Performance Goals and Their Implementing Strategies

1. To **maintain safety, protection of the environment, and the common defense and security**, the NRC will employ the following strategies:

    - We will continue to improve the regulatory framework[2] to increase our focus on safety and safeguards, including incremental use of risk-informed[3] and, where appropriate, less prescriptive performance-based[3] regulatory approaches to maintain safety.

    - We will continue authorizing licensee activities only after determining that these proposed activities will be conducted consistent with the regulatory framework.

    - We will confirm that licensees understand and carry out their primary responsibility for conducting activities consistent with the regulatory framework.

- We will respond to operational events involving potential safety or safeguards consequences.

- We will maintain safety by continuing to evolve along with Agreement States materials programs into a single "National Materials Program" by encouraging the States to continue to pursue a more active role in the regulatory process.

2. To **increase public confidence,** the NRC will employ the following strategies:

   - We will make public participation in the regulatory process more accessible. We will listen to their concerns and involve them more fully in the regulatory process.

   - We will communicate more clearly. We will add more focus, clarity, and consistency to our message, be timely, and present candid and factual information in the proper context with respect to the risk of the activity.

   - We will continue to enhance the NRC's accountability and credibility by being a well-managed, independent regulatory agency. We will increase efforts to share our accomplishments with the public.

   - We will continue to foster an environment in which safety issues can be openly identified without fear of retribution.

3. To **make the NRC activities and decisions more effective, efficient, and realistic,** the NRC will employ the following strategies:

   - We will continue to improve the regulatory framework to increase our effectiveness, efficiency, and realism.

   - We will identify, prioritize, and modify processes based on effectiveness reviews to maximize opportunities to improve those processes.

   - We will improve efficiency and effectiveness by continuing to evolve along with Agreement States materials programs into a single "National Materials Program" by encouraging the States to join NRC in pursuing an active role in the regulatory process.

4. To **reduce unnecessary regulatory burden on stakeholders,** the NRC will employ the following strategies:

- We will continue to improve our regulatory framework in order to reduce unnecessary regulatory burden.
- We will improve and execute our programs and processes in ways that reduce unnecessary costs to our stakeholders.
- We will actively seek stakeholder input to identify opportunities for reducing unnecessary regulatory burden.

Performance Measures

The actual data reported for some of our strategic goal measures and the maintain safety performance goal measures are subject to change as a result of NRC analysis of reported information as well as the receipt of newly reported information. Changes to this data will be reported and explained in future performance plan submissions.

Strategic Goal

The following measures are associated with the Nuclear Materials Safety arena strategic goal.

MEASURES	PERFORMANCE	
	Target	Actual
No deaths resulting from acute radiation exposures from civilian uses of source, byproduct, or special nuclear materials, or deaths from other hazardous materials used or produced from licensed material.	FY 2002: 0 FY 2001: 0 FY 2000: 0 FY 1999: 0	 0 0
No more than six events per year resulting in significant radiation or hazardous material exposures[4] from the loss or use of source, byproduct, and special nuclear materials.	FY 2002: 6 or less FY 2001: 6 or less FY 2000: 6 or less FY 1999: 6 or less	 0 4[5]
No events resulting in releases of radioactive material resulting from civilian uses of source, byproduct, or special nuclear materials that cause an adverse impact on the environment.[6]	FY 2002: 0 FY 2001: 0 FY 2000: 0 FY 1999: 0	 0 0

MEASURES	PERFORMANCE	
	Target	Actual
No losses, thefts, or diversion of formula quantities of strategic special nuclear material; radiological sabotages; or unauthorized enrichment of special nuclear material regulated by the NRC.[7]	FY 2002: 0 FY 2001: 0 FY 2000: 0 FY 1999: 0	 0 0
No unauthorized disclosures or compromise of classified information causing damage to national security.[8]	FY 2002: 0 FY 2001: 0 FY 2000: 0 FY 1999: 0	 0 0

Performance Goals (PG)[9]

The following measures are associated with the Nuclear Materials Safety arena performance goals. The associated performance goal is identified by the acronym PG and the goal number as identified in the previous section.

MEASURES	PERFORMANCE	
	Target	Actual
No more than 350 losses of control of licensed material per year.[10] (PG1)	FY 2002: 350 or less FY 2001: 350 or less FY 2000: 356 or less FY 1999: N/A	 201 227[11]
No occurrences of accidental criticality. (PG1)	FY 2002: 0 FY 2001: 0 FY 2000: 0 FY 1999: 0	 0 0
No more than 40 events per year resulting in radiation over exposures[12] from radioactive material that exceed applicable regulatory limits. (PG1)	FY 2002: 40 or less FY 2001: 40 or less FY 2000: 19 or less FY 1999: N/A	 11 26[13]
No more than 45 medical events per year.[14] (PG1)	FY 2002: 45 or less FY 2001: 45 or less FY 2000: 43 or less FY 1999: N/A	 29 35[15]

MEASURES	PERFORMANCE	
	Target	Actual
No more than 6 releases per year to the environment of radioactive material from operating facilities that exceed the regulatory limits.[16] (PG1)	FY 2002: 6 or less FY 2001: 6 or less FY 2000: 39 or less FY 1999: N/A	 2 3[15]
No non-radiological events that occur during the NRC-regulated operations that cause impacts on the environment that cannot be mitigated within applicable regulatory limits, using reasonably available methods.[17] (PG1)	FY 2002: 0 FY 2001: 0 FY 2000: 0 FY 1999: 0	 0 0
No more than five substantiated cases per year of attempted malevolent use of source, byproduct, or special nuclear material. (PG1)	FY 2002: 5 or less FY 2001: 5 or less FY 2000: 5 or less FY 1999: N/A	 2 2[18]
No breakdowns of physical protection or material control and accounting systems resulting in a vulnerability to radiological sabotage, theft, diversion, or unauthorized enrichment of special nuclear material.[19] (PG1)	FY 2002: 0 FY 2001: 0 FY 2000: 0 FY 1999: 0	 0 0
Complete the milestones relating to collecting, analyzing, and trending information for measuring public confidence. (PG2) **Milestones:** FY 2001 - Conduct semiannual evaluations of all public meeting feedback forms to determine any trends in NRC public meetings. FY 2002 - Develop recommendation for continued use of public meeting feedback form or for another method of assessing public confidence.	FY 2002: Will meet target FY 2001: Will meet target New measure in FY 2001	

MEASURES	PERFORMANCE	
	Target	Actual
Complete all of the public outreaches. (PG2) **Milestones:** Feburary 2001 - Issue first mixed oxide (MOX) fuel newsletter. May 2001 - Conduct environmental impact statement public scoping meeting. May, July, September 2001 - Conduct MOX followup public meetings. FY 2002 - Specific milestones are under development and will be identified in the FY 2003 President's Budget to Congress.	FY 2002: Will meet target FY 2001: Will meet target New measure in FY 2001	
Complete the milestones specific to the agency allegation program effectiveness assessment plan. (PG2) **Milestones:** October 2000 - Participate in agency's pilot program April 2002 - Analysis of pilot program sent to Commission	FY 2002: Will meet target FY 2001: Will meet target New measure in FY 2001	
Issue Director's Decisions for petitions filed to modify, suspend, or revoke a license under 10 CFR 2.206[20] within an average of 120 days.[21] (PG2)	FY 2002: 120 days FY 2001: 120 days New measure in FY 2001	

MEASURES	PERFORMANCE	
	Target	Actual
Complete those specific materials milestones in the Risk-Informed Regulation Implementation Plan. (PG3) **Milestones:** October 27, 2000 - Risk-Informed Regulation Implementation Plan (RIR-IP) sent to the Commission November 17, 2000 - Commission briefed on RIR-IP August 2001 - Develop final criteria and milestones. FY 2002 - Execute milestones identified in FY 2003 Annual Performance Plan.	FY 2002: Will meet target FY 2001: Will meet target New measure in FY 2001	
Complete at least two key process improvements per year in selected program and support areas that increase efficiency, effectiveness, and realism. (PG3)	FY 2002: 2 key processes completed FY 2001: 2 key processes completed New measure in FY 2001	
Complete those specific milestones to reduce unnecessary regulatory burden. (PG4) **Milestones:** FY 2001 - Staff will complete Part 35 rulemaking (medical). FY 2002 - Staff will complete at least one rulemaking primarily designed to reduce unnecessary regulatory burden. (There are several proposed rulemaking items in the current queue that would support this goal. One of the candidates is a proposed rule related to Special Nuclear Material Accountability.)	FY 2002: Will meet target FY 2001: Will meet target New measure in FY 2001	

MEASURES	PERFORMANCE	
	Target	Actual
Reduce paperwork and record keeping imposed by the NRC on its licensees by at least 25 percent over a period of 5 years. (PG4)	FY 2002: 10 percent cumulative reduction from FY 2000 baseline FY 2001: 5 percent reduction from FY 2000 baseline New measure in FY 2001	

ACCOMPLISHMENTS

- Completed approximately 4,000 licensing actions and 1,700 inspections for fuel facility and materials licensees.

- Worked effectively with the nuclear materials community to ensure that nuclear safety and safeguards were not adversely affected by potential Year 2000 (Y2K) problems.

- Issued a final Standard Review Plan in anticipation of a license application for a mixed oxide (MOX) fuel fabrication facility. The NRC held public meetings to describe our role and to obtain comments and questions regarding the proposed MOX facility and plans for the use of MOX fuel in commercial power reactors.

- Analyzed the nuclear criticality accident at Tokai-mura, Japan, and determined that no changes to NRC's regulatory program for fuel cycle facilities were needed. NRC disseminated lessons learned to stakeholders and provided a report to the Congress and other stakeholders.

- Issued, for public comment, a draft Standard Review Plan for the review of the Department of Energy (DOE) plans for achieving regulatory compliance at sites with contaminated groundwater under Title I of the Uranium Mill Tailings Radiation Control Act and issued a Standard Review Plan for the review of a reclamation plan for mill tailings sites under Title II of the Uranium Mill Tailings Radiation Control Act.

- Improved the efficiency and timeliness of the nuclear materials licensing process that will result in improved service to stakeholders. Completed a major portion of the materials licensing guidance consolidation project by issuing 20 NUREG documents in draft or final form. This will assist licensees by providing an up-to-date electronic reference for preparing

licensing submissions. This will also make it easier for NRC and Agreement State license reviewers to complete their reviews in a more timely, efficient, and uniform fashion. Initiated efforts to streamline the materials inspection process (i.e., a pilot temporary inspection procedure for some medical licensees). Completed 1,600 materials inspections with the program focused on those licensees engaged in activities with the highest risk, and those licensees with previous performance problems.

- Completed a number of changes to NRC's rules and regulations that will improve the regulatory framework of the Nuclear Materials Safety arena, including 10 CFR Part 39 (well-logging), Part 70 (special nuclear material), and Part 72 (spent fuel storage). The revision to Part 70 will make the regulations for fuel cycle facilities more risk-informed and performance-based and will ensure that the regulatory burden imposed by the regulation is commensurate with the health and safety benefit.

- Developed a comprehensive rule (10 CFR Parts 31 and 32) to improve NRC's control of generally-licensed (GL) devices and a new computer database (General License Device Tracking System) to track GL information and facilitate registration of certain GL devices.

- Conducted three public workshops, one open meeting with the steel industry, and held two open Commission briefings to provide an opportunity for public input on the Commission's approach to the issues surrounding the control of solid materials at licensed facilities.

- Issued, for public comment, a report on potential radiation doses associated with source and byproduct material that are currently exempt from NRC regulations and some potential candidates for exemption from licensing requirements. The results of this study provide an assessment tool that NRC will use to examine the radiological impact of current regulations and to determine if regulatory changes are needed.

- Conducted integrated safety and safeguards exercises with the Federal Bureau of Investigation, Department of Energy, Federal Emergency Management Agency, States, licensees, and local government and emergency responders.

- Oklahoma became the 32nd Agreement State when NRC staff completed the review of an application from Oklahoma for an Agreement. The Agreement became effective on September 29, 2000, in accordance with the State's requested schedule.

- Issued a revised policy statement on the medical uses of NRC-regulated radioactive material to put greater emphasis on higher risk procedures, and correspondingly less emphasis on procedures posing lower risk to the patient, workers and the public. The policy statement affirms the Commission's determination to continue its role in regulating the use of certain

radioactive material in medicine with the goal of providing adequate radiation protection for workers, the public, and patients. The policy statement focuses the Commission's direction on radiation safety issues and furthers the objective of utilizing industry and professional standards that define acceptable levels of radiation safety.

BUDGET AUTHORITY AND FULL-TIME EQUIVALENT BY PROGRAM

Summary	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Program ($K)				
Fuel Facilities Licensing and Inspection	14,723	15,295	16,038	743
Nuclear Materials Users Licensing and Inspection	23,769	24,921	25,540	619
State and Tribal Programs	3,597	3,534	4,043	509
Materials Safety Research	1,090	1,785	2,509	724
Materials Incident Response	218	224	235	11
Materials Technical Training	953	1,107	1,751	644
Materials Enforcement Actions	895	950	880	-70
Materials Investigations	1,301	1,362	1,422	60
Materials Legal Advice	1,529	1,708	1,781	73
Materials Adjudication	1,361	804	839	35
Work for Other Federal Agencies	2,301	773	0	-773
Total Budget Authority	51,737	52,463	55,038	2,575
Full-Time Equivalent Employment by Program				
Fuel Facilities Licensing and Inspection	107	111	111	0
Nuclear Materials Users Licensing and Inspection	192	187	184	-3
State and Tribal Programs	30	28	31	3
Materials Safety Research	7	7	8	1
Materials Incident Response	2	2	2	0
Materials Technical Training	2	2	7	5
Materials Enforcement Actions	9	9	8	-1
Materials Investigations	11	11	11	0
Materials Legal Advice	14	15	15	0
Materials Adjudication	10	5	5	0
Work for Other Federal Agencies	15	0	0	0
Total FTE	399	377	382	5

JUSTIFICATION OF PROGRAM REQUESTS

The Nuclear Materials Safety strategic arena is comprised of 11 program areas. Program descriptions and output measures for each program follow.

Fuel Facilities Licensing and Inspection

	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	10,721	11,730	12,278	548
Contract Support and Travel	4,002	3,565	3,760	195
Total Budget Authority	14,723	15,295	16,038	743
FTE	107	111	111	0

The resource increase in FY 2002 for Fuel Facilities Licensing and Inspection includes:

- Salaries and benefits increase as a result of the governmentwide FY 2002 pay raise.
- Contract support and travel increase reflecting increased activities to support license reviews for uranium fuel cycle facilities, increased tracking and reporting requirements associated with the U.S./European Atomic Energy Community Agreement for Cooperation, and initiatives to support threat assessment. These increases are partially offset by a decrease in the need for certification at uranium enrichment facilities.

The NRC licenses and inspects all commercial nuclear fuel facilities involved in the processing and fabrication of uranium ore into reactor fuel as part of the agency's nuclear fuel cycle safety and safeguards mission. Detailed health, safety, safeguards, and environmental licensing reviews and inspections of licensee programs, procedures, operations, and facilities are conducted to ensure safe and secure operations. Each of the 24 fuel cycle facilities must have a license that specifies the materials the licensee may possess, sets restrictions on how the materials may be used, and establishes additional licensee responsibilities (such as worker protection, environmental controls, and financial assurance), as appropriate.

NUCLEAR MATERIALS SAFETY

The NRC conducts its Fuel Facilities Licensing program in a manner that will continue to improve the effectiveness and efficiency of the licensing process. NRC will continue to authorize licensee activities only after determining that proposed activities will be conducted consistent with the regulatory framework. In addition to completing the review and evaluation of approximately 100 license applications (amendments, renewals, and reviews) for nuclear fuel cycle facilities each year during FY 2001–FY 2002, the NRC also expects to receive major amendments for a high-enriched uranium downblending facility for specialized uranium fuels and associated oxide conversion and pellet fabrication facilities. Timeliness goals have been established for safety-related and safeguards-related licensing actions to minimize the burden and costs to licensees associated with operational delays, while maintaining a focus on safety.

The NRC sets basic standards for the conduct of licensed activities at fuel cycle facilities through rulemaking, augmented by regulatory guidance documents that specify acceptable approaches for meeting the standards. Rulemaking will focus on safety and safeguards, including the use of risk-informed and, where appropriate, less prescriptive regulatory approaches to maintain safety. In FY 2001, the NRC will initiate implementation of new requirements in 10 CFR Part 70 to upgrade the fuel cycle facility program.

To ensure that special nuclear materials are appropriately accounted for and controlled by the licensees, the NRC, in conjunction with DOE, will continue to support the operation and maintenance of the Nuclear Materials Management Safeguards System used to track the movement of domestic and foreign special nuclear materials under the safeguards control and special accounting procedures of the U.S. Government and U.S. treaties and obligations. Reports generated by this system are used to confirm material transactions, physical inventories and shipper-receiver difference evaluations in the domestic arena, and to satisfy the terms of U.S./International Atomic Energy Agency (IAEA) safeguards agreements and certain bilateral and multilateral cooperative international agreements. In addition, the NRC will work with the IAEA, the European Atomic Energy Community, and other countries to track and report on the transfer of nuclear materials.

The NRC conducts routinely scheduled safety and safeguards inspections of eight major fuel cycle facilities each year to provide reasonable assurance that licensees conduct and maintain safe nuclear operations and provide adequate protection of the workers, the public, the environment, and the common defense and security. NRC inspection activities will confirm that licensees understand and carry out their primary responsibilities for conducting activities consistent with the regulatory framework. NRC will continue the development of a revised oversight program with extensive stakeholder input, including pilot testing of a risk-informed baseline inspection program. Development of the revised oversight program will support not only the goal to maintain safety, it will also support the goals to increase public confidence, increase effectiveness and efficiency of the oversight process, and reduce unnecessary regulatory burden.

Uranium enrichment is the process used to increase the relative weight percentage of uranium-235 in reactor fuel to make it efficient for use in power reactors. Enrichment can be accomplished using a number of different technologies including gaseous diffusion, centrifuge, and atomic vapor laser isotope separation. The NRC is responsible for regulating the operational safety and safeguards aspects of enrichment facilities in the United States.

In FY 2001 and FY 2002, the NRC will review amendments submitted by the United States Enrichment Corporation (USEC) for its two gaseous diffusion uranium enrichment plants located in Paducah, Kentucky and Portsmouth, Ohio. Throughout this period, the NRC will continue to review submittals from USEC in support of increasing enrichment activities at Paducah. In FY 2002, the NRC will review amendments to support USEC's proposed shutdown of the Portsmouth plant. The NRC expects that its oversight responsibility for the Portsmouth gaseous diffusion plant (GDP) will continue until responsibility is transferred to the Department of Energy. While DOE and USEC have not finalized their plans for Portsmouth, DOE has indicated verbally that it plans to place part of the facility into cold standby, and that USEC will continue to operate the cylinder transfer facility. The transfer facility at Portsmouth is expected to remain under NRC oversight for the next 4 to 5 years. In FY 2002 and beyond, NRC expects to continue limited oversight at the Portsmouth facility, because USEC plans to keep the Portsmouth cylinder transfer facility operational to support the GDP at Paducah. In FY 2002, the NRC will conduct initial licensing reviews in preparation for a license application that USEC proposes to submit for NRC review in FY 2003 for a new enrichment plant that uses an advanced enrichment technology. The NRC also provides security policy and classification guidance support for the protection of National Security Information and Restricted Data for licensing, certifying, or regulating uranium enrichment facilities.

Routinely scheduled safety and safeguards inspections of the two gaseous diffusion plants are conducted each year to provide reasonable assurance that licensees conduct and maintain safe nuclear operations and provide adequate protection of the workers, the public, the environment, and the common defense and security. The NRC's goal is to conduct timely safety and safeguards inspections that consider risk and performance information at these facilities. NRC inspection activities will confirm that licensees understand and carry out their primary responsibilities for conducting activities consistent with the regulatory framework.

The FY 1999 Defense Authorization Act (P.L. 105-261) gave NRC statutory licensing authority over any MOX fuel fabrication facility constructed by DOE or its contractors to convert excess weapons plutonium into MOX reactor fuel. The MOX facility will be located at DOE's Savannah River Site. In FY 2001, the NRC will initiate review of the first portion of the license application (construction authorization) from the DOE contractor responsible for the design, construction, and operation of the MOX fuel fabrication facility. FY 2001 activities will include receipt of an application for construction approval, announcement of the opportunity for hearing, performance of an acceptance

review, development of information requests, and initiation of a Safety Evaluation Report (by discipline) and an Environmental Impact Statement to support construction. In FY 2002, activities will include completion of the Safety Evaluation Report and the Environmental Impact Statement.

NRC efforts for uranium recovery are governed by the Atomic Energy Act of 1954, as amended and the Uranium Mill Tailings Radiation Control Act of 1978, as amended. Under the AEA, the NRC is responsible for licensing the activities involved with the concentration of uranium from ore into source material.

The UMTRCA establishes two programs to protect health and the environment: Title I and Title II. The Title I program establishes a joint Federal/State-funded program for remedial action at abandoned mill tailings sites, with ultimate Federal ownership under license from NRC. Under Title I, the NRC must evaluate the DOE's designs and concur that DOE's actions meet standards set by the Environmental Protection Agency (EPA). The Title II program deals with sites under license to the NRC or Agreement States, as provided by the AEA. Under Title II, the NRC has the authority to control radiological and non-radiological hazards associated with byproduct material, and to ensure that sites licensed by NRC and Agreement States meet all applicable standards and requirements before termination of the license.

During FY 1999–FY 2000, NRC re-evaluated the uranium recovery licensing and inspection program using its strategic planning process to sharpen the program's goals, measures, targets, and planned activities. To achieve the performance goal of maintaining safety and protection of the environment, the uranium recovery program will focus during the planning period on continuing safety oversight of operating and inactive uranium mills and extraction facilities, performing licensing reviews, including plans for site reclamation and groundwater cleanup, conducting selective facility inspections, and developing a new rule solely for uranium recovery facilities. To achieve the performance goal of increasing public confidence, the NRC will continue to seek feedback and clarify NRC policies at its annual stakeholder meeting, hold public meetings on controversial issues, involve stakeholders in the process to develop a new rule for uranium recovery facilities, and be responsive to allegations and 2.206 petitions. To achieve the performance goals of improving efficiency, effectiveness, and realism, the program will develop standard review plans for in-situ uranium extraction facilities and Title I groundwater cleanup reviews, implement streamlining initiatives in licensing reviews, promote performance-based licenses, and standardize license conditions and licenses. Finally, to achieve the performance goal of reducing unnecessary regulatory burden, the NRC will implement recent Commission direction to reduce dual regulation of groundwater and consolidate control of waste water at in-situ uranium extraction facilities and clarification of the regulatory framework regarding disposal of certain low radioactivity waste materials at uranium recovery facilities.

For licensed uranium mills, the NRC's performance goal is to prevent exposures or releases of radioactive materials that exceed applicable regulatory limits. To contribute to the achievement of this goal, in FY 2001–FY 2002 the NRC will complete the review of seven applications for alternate concentration limits or Corrective Action Plans for groundwater cleanup at licensed sites. This effort will include the preparation of safety evaluations and environmental assessments. The NRC is proceeding with the development of a new set of regulatory requirements solely applicable to uranium recovery facilities. The new rulemaking process is intended to: (1) update the additional technical requirements for in-situ extraction facilities; (2) clarify existing requirements and remove inconsistencies; and (3) codify criteria that will allow uranium mill tailings sites to be used for the disposal of contaminated soil from other NRC-licensed sites undergoing decommissioning. The new rule is expected to be promulgated in the years beyond FY 2002.

Each year, during FY 2001–FY 2002, the NRC will complete the review of approximately 60 requests for license amendments and one new license application. The NRC will also conduct the review of approximately two construction completion reports each year in FY 2001–FY 2002 to ensure compliance with the applicable requirements. These reports must be approved before termination of site-specific licenses.

Through its inspection program for uranium recovery sites, the NRC will verify acceptable implementation of licensee commitments, and confirm that facilities are being operated or decommissioned in compliance with applicable requirements. The lead for inspections will be the NRC regional office. However, support will be provided by NRC headquarters staff for technical disciplines that are not available in the region. In addition, NRC headquarters will be the lead for inspections verifying acceptable completion of construction work related to tailings reclamation. The NRC's goal for FY 2001–FY 2002 is to complete core inspections with less than 10 percent overdue as scheduled in the Region IV Uranium Recovery Inspection Schedule.

Long-term control of uranium mill tailings through NRC licensing ensures that future generations will not be adversely affected by the disposal of these materials. NRC will accomplish this by terminating the specific license of Title II reclaimed uranium mill tailings impoundments after the licensees demonstrate regulatory compliance, and licensing DOE for long-term care of these sites under the general license provisions. This effort covers mills under site-specific license to NRC and Agreement States. Other work that will be completed in this area during FY 2001 is the NRC evaluation of DOE's post-licensing actions for Title I and II sites at uranium mill tailings impoundments already under long-term care by DOE.

As part of its mission to ensure the protection of public health and safety, and common defense and security, the NRC must maintain the ability to ensure that licensed nuclear activities are properly protected against radiological sabotage and theft of special nuclear material or malevolent use of nuclear material. In its continuing effort to evaluate the threat environment, the NRC will assess

reported information on potential or actual threats worldwide; adversary characteristics and intentions and capabilities of terrorist groups; and any domestic or foreign events for relevancy to the U.S. domestic nuclear threat environment and provide management recommendations on changes to licensee security posture.

During FY 2001–FY 2002, the NRC staff will undertake a number of regulatory initiatives to further implement the NRC's Strategic Plan goals. In FY 2001, the staff will develop communications plans which will integrate and complement specific public confidence strategies, and will expand outreach efforts during FY 2002 to effectively communicate with stakeholders on NRC's application of risk assessment and risk management. During FY 2001–FY 2002, in order to ensure that fuel facility and uranium recovery licensing and oversight activities and decisionmaking efforts are conducted effectively, efficiently, and with realistic objectives, efforts will begin to review activities and identify, prioritize, and modify work processes and procedures, as appropriate, to maximize opportunities for improvement. NRC will also undertake efforts to reduce unnecessary regulatory burden by using risk-informed approaches to focus attention on areas of highest safety priority and ensure that realistic decisions are made in the development of the regulatory framework.

Program Outputs

The following program outputs have been identified for the Fuel Facilities Licensing and Inspection program.

OUTPUT MEASURES				
Output	**FY 1999 Actual**	**FY 2000 Actual**	**FY 2001 Target**	**FY 2002 Target**
Timeliness of fuel cycle licensing actions (amendments, renewals, new applications, and reviews).[22]	New measure in FY 2001.	New measure in FY 2001.	For licensing actions received after October 1, 2000, complete 75 percent of licensing actions within 180 days from date of acceptance; complete all licensing actions within 3 years from date of acceptance.	For licensing actions received after October 1, 2000, complete 75 percent of licensing actions within 180 days from date of acceptance; complete all licensing actions within 3 years from date of acceptance.

OUTPUT MEASURES				
Output	**FY 1999 Actual**	**FY 2000 Actual**	**FY 2001 Target**	**FY 2002 Target**
Timeliness of safety and safeguards inspections. (FY 1998: Completed 100 percent on time.)	Target: Complete 90 percent of the safety and safeguards inspections scheduled in the Fuel Cycle Master Inspection Plan on time. Actual: Completed 98 percent on time.	Target: Complete 90 percent of the safety and safeguards inspections scheduled in the Fuel Cycle Master Inspection Plan on time. Actual: Completed 100 percent on time.	Complete core inspections as scheduled in the Fuel Cycle Master Inspection Plan and the Region IV Uranium Recovery Inspection schedule with less than 10 percent overdue. [23]	Complete core inspections as scheduled in the Fuel Cycle Master Inspection Plan and the Region IV Uranium Recovery Inspection schedule with less than 10 percent overdue.
Timeliness of uranium recovery licensing actions.* (FY 1998: Completed 100 percent.) *Previously identified in the Uranium Recovery Licensing and Inspection Program in the Nuclear Waste Safety arena.	Target: Conduct reviews such that the number of application reviews completed either meets or exceeds the budget estimates. Actual: Completed 93 of the targeted 94 reviews (99 percent).	Target: Conduct reviews such that the number of application reviews completed either meets or exceeds the budget estimates. Actual: Completed 100 percent of the budgeted number of reviews.	Beginning in FY 2001, these uranium recovery actions will be included in output measure target "Timeliness of licensing actions." [24]	Beginning in FY 2001, these uranium recovery actions will be included in output measure target "Timeliness of licensing actions."

OUTPUT MEASURES				
Output	**FY 1999 Actual**	**FY 2000 Actual**	**FY 2001 Target**	**FY 2002 Target**
Timeliness of safety inspections of uranium recovery facilities.* (FY 1998: Completed 43 inspections; 40 were budgeted - 108 percent.) *Previously identified in the Uranium Recovery Licensing and Inspection Program in the Nuclear Waste Safety arena.	Target: Complete 80 percent of the inspections planned annually. Actual: Completed 22 of the targeted 25 inspections (88 percent).	Target: Complete 80 percent of the inspections planned annually. Actual: Completed 95 percent of planned inspections.	Beginning in FY 2001, the uranium recovery inspections will be included in output measure target "Timeliness of safety and safeguards inspections." [24]	Beginning in FY 2001, the uranium recovery inspections will be included in output measure target "Timeliness of safety and safeguards inspections."

Nuclear Materials Users Licensing and Inspection

	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	18,914	19,447	20,046	599
Contract Support and Travel	4,855	5,474	5,494	20
Total Budget Authority	23,769	24,921	25,540	619
FTE	192	187	184	-3

The resource increase in FY 2002 for Nuclear Materials Users Licensing and Inspection includes:

- Salaries and benefits increase as a result of the governmentwide FY 2002 pay raise, partially offset by the decrease in FTE.

- FTE decrease primarily due to the completion of the 10 CFR Part 35 (Medical Use of Byproduct Material) implementation activities in FY 2001.

The resources in this program do not decrease in FY 2002 as a result of an increase in the number of Agreement States. While NRC expects to transfer approximately 150 licenses to Minnesota late in FY 2002, the combination of the timing, the effort to effect the transfer, and the relatively small number of licenses involved will have relatively little impact on NRC resources.

Currently, the NRC licenses and inspects activities related to approximately 5,000 specific licenses for use of nuclear byproduct and other radioactive material. These uses include medical diagnosis and therapy, medical and biological research, academic training and research, industrial gauging and nondestructive testing, production of radiopharmaceuticals, and fabrication of such commercial products as smoke detectors and other sealed sources and devices. Detailed health and safety reviews and inspections of licensee procedures and facilities provide reasonable assurance of safe operations and the development of safe products.

To execute its mandate to license safe use of nuclear materials, the NRC reviews and makes decisions on approvals of new license applications, amendments, and renewals to existing materials licenses in a timely and efficient fashion. The NRC plans to complete the review of approximately

3,600 licensing actions including applications for new licenses, license amendments, renewals, and sealed source and device designs for use of radioactive material in FY 2001–FY 2002. Timeliness goals have been established to ensure that NRC minimizes the burdens and costs to licensees that are associated with operational delays, while maintaining a focus on safety. During FY 2001–FY 2002, the NRC will continue to consolidate into NUREG documents the information presently contained in regulatory guidance documents and technical assistance reports as they relate to the Nuclear Materials Safety program. Beginning in FY 2001, the guidance consolidation will become less labor-intensive, as the first round of documents is completed, and systematic updating begins. The NRC expects to realize efficiencies in FY 2001 as a result of guidance consolidation for materials licensing. In FY 2001, these efficiencies will result in lower costs to review new applications and renewals.

The NRC routinely inspects materials licensees on frequencies that are based on the risk associated with licensee operations and licensee past performance to assure that licensees are using nuclear material in a safe manner, maintaining accountability of materials, and protecting public health and safety. The NRC will conduct approximately 1,500 routine health and safety inspections and closeout inspections of materials licensees in FY 2001–FY 2002. If conditions are noted that could cause unnecessary exposures or releases, NRC will take appropriate enforcement action. In FY 2001–FY 2002, the NRC will continue to implement the NRC General License Registration Program to include the necessary features for registering licensees' devices and perform followup activities, including onsite inspections with some of the licensees. This program includes more followups of non-responding general licensee registrants. These inspection program initiatives focus our regulatory oversight in areas most important to maintaining safety.

The NRC develops regulations and regulatory guidance applicable to materials licensees in order to maintain and improve NRC's regulatory framework, and refine the underlying basis for risk-informed approaches. To improve the efficiency of this process, the NRC established a working group to implement a risk-informed, performance-based approach for managing the nuclear materials and nuclear waste programs. Each year during FY 2001–FY 2002, the NRC expects to review six to eight petitions for materials rulemaking and develop and complete 12 to 15 materials rulemaking actions. The NRC expects to develop Office of Management and Budget (OMB) Clearance packages for five to eight new rulemakings and 12 to 15 OMB Clearance renewals. This includes support for regulatory analyses, cost-benefit studies, environmental assessments, maintenance of rulemaking database, policy development, and public outreach. During this period, the NRC will continue to complete rulemakings in accordance with the timeliness goals and schedules in the Rulemaking Activity Plan. The goal for decisions on the course of action for resolution of rulemaking petitions received after October 1998, is that these will be accomplished within 12 months from the date the notice of receipt of the petition is published in the *Federal Register*. During FY 2001–FY 2002, the NRC's Regulatory Product Development Center, which serves as a testing laboratory for the creation and validation of new systems and new operational methodologies,

will continue to support and facilitate the analysis, evaluation, and redesign of programs and business systems, and will facilitate creating, revising, and consolidating regulatory requirements and guidance documents. The capacity for rulemaking and guidance development and revision provides more predictability and structure, making NRC's regulatory guidance more effective and realistic, while allowing us to reduce unnecessary regulatory requirements, thereby reducing unnecessary regulatory burden on stakeholders.

To identify generic issues resulting from incidents and events, the NRC analyzes operational experience from NRC and Agreement State licensees to determine the root causes of certain incidents and events, identify safety concerns that may warrant regulatory action, and make that information available to licensees and the public. This includes operational events, such as over exposure to radioactive materials, and medical events involving nuclear material. The NRC also responds to incidents and allegations through reactive inspections, allegation followup activities, investigations, and enforcement actions, to ensure that licensees conduct activities in a manner that assures public health and safety and protection of the environment.

The NRC collects nuclear materials event data from NRC licensees and Agreement States, codes the event data, and enters the data into the Nuclear Materials Events Database (NMED). This database is available to NRC and Agreement State staff. Nuclear Materials Event Data are systematically screened and reviewed for significant health and safety lessons. Enhancements will continue to be made to the NMED system to collect additional event information, accommodate more users, and provide online registration of "orphan sources" (i.e., radioactive sources that are not under the control of a licensee that require removal to protect public health and safety from a radiological threat).

In addition to conducting a regulatory program to ensure the safe use of nuclear materials by NRC licensees, the NRC plans to take an active role to address orphan sources. In FY 2001, the NRC plans to initiate an orphan source program to address situations in which non-licensees find themselves in the possession of radioactive sources they did not seek to possess. This will allow NRC to maintain safety (i.e., fewer abandoned sources), while reducing the unnecessary costs for those storing these sources. The NRC and Agreement States respond to orphan source incidents through reactive inspections and investigations.

During FY 2001–FY 2002, the NRC staff will undertake a number of regulatory initiatives to further implement the NRC's Strategic Plan goals. In FY 2001, the staff will continue with its public confidence efforts, and will expand outreach efforts during FY 2002 to effectively communicate with stakeholders on NRC's application of risk assessment and risk management. During FY 2001–FY 2002, in order to ensure that Nuclear Materials Users Licensing and Inspection activities and decisionmaking efforts are conducted effectively, efficiently, and with realistic objectives, efforts will begin to review activities and identify, prioritize, and modify work processes and procedures,

as appropriate, to maximize opportunities for improvement. NRC will also undertake efforts to reduce unnecessary regulatory burden by using risk-informed approaches to focus attention on areas of highest safety priority and ensure that realistic decisions are made in the development of the regulatory framework.

Program Outputs

The following program outputs have been identified for the Nuclear Materials Users Licensing and Inspection program.

OUTPUT MEASURES				
Output	**FY 1999 Actual**	**FY 2000 Actual**	**FY 2001 Target**	**FY 2002 Target**
Timeliness of reviews of applications for new materials licenses and license amendments. (FY 1998: Completed 82 percent of reviews for new applications and amendments within 90 days.)	Target: Complete 80 percent of the reviews for new applications and amendments within 90 days. Actual: Completed 86 percent of new application and amendment reviews within 90 days.	Target: Complete 80 percent of the reviews for new applications and amendments within 90 days. Actual: Completed 95 percent of the reviews for new applications and amendments within 90 days.	Complete 80 percent of the reviews for new applications and amendments within 90 days. Complete all of these reviews within 1 year.	Complete 80 percent of the reviews for new applications and amendments within 90 days. Complete all of these reviews within 1 year.
Timeliness of reviews of applications for materials license renewals and sealed source and device designs. (FY 1998: Completed 94 percent of renewals and reviews for sealed source and device within 180 days.)	Target: For license renewals and sealed source and device reviews received after October 1, 1997, complete 80 percent of these renewals and reviews within 180 days. Actual: Completed 66 percent of sealed source and device renewals and reviews within 180 days. Redirected focus to completion of cases over 180 days old, and successfully eliminated these old cases.	Target: For license renewals and sealed source and device reviews, complete 80 percent of these renewals and reviews within 180 days. Actual: Completed 92 percent of renewals and sealed source and device reviews within 180 days.	For license renewals and sealed source and device reviews, complete 80 percent of these renewals and reviews within 180 days. Complete all these reviews within 2 years.	For license renewals and sealed source and device reviews, complete 80 percent these renewals and reviews within 180 days. Complete all these reviews within 2 years.

OUTPUT MEASURES				
Output	**FY 1999 Actual**	**FY 2000 Actual**	**FY 2001 Target**	**FY 2002 Target**
Timeliness of safety inspections of materials licensees. (FY 1998: Less than 1 percent overdue.)	Target: Complete core inspections[25] with less than 10 percent overdue as defined in Inspection Manual Chapter 2800. Actual: Completed core inspections with less than 1 percent overdue.	Target: Complete core inspections with less than 10 percent overdue as defined in Inspection Manual Chapter 2800. Actual: Completed core inspections with less than 3 percent overdue.	Complete core inspections with less than 10 percent overdue as defined in Inspection Manual Chapter 2800.	Complete core inspections with less than 10 percent overdue as defined in Inspection Manual Chapter 2800.
The Nuclear Materials Events Database (NMED) which contains information about nuclear materials events reported to the NRC by NRC licensees and Agreement States, will be maintained by entering materials event information in a timely manner. (FY 1998: Materials event information entered within the specified time 90 percent of the time.)	Target: Materials event information from morning reports, event notifications, and preliminary notifications of occurrences will be entered into NMED within 2 working days from the date of the document 90 percent of the time, and NMED records will be updated within 2 working weeks of the date of receipt 90 percent of the time. Actual: Materials Event information was entered into NMED within 2 working days more than 90 percent of the time. Three out of four quarters of NMED records were updated within 2 working weeks more than 90 percent of the time; during the third quarter, the target of 2 weeks was met 80 percent of the time.	Target: Materials event information from morning reports, event notifications, and preliminary notifications of occurrences will be entered into NMED within 2 working days from the date of the document 90 percent of the time, and NMED records will be updated within 2 working weeks of the date of receipt 90 percent of the time. Actual: Entered 577 of 581 records within 2 working days (99 percent). Updated 1,264 of 1,280 records within 2 working weeks (99 percent).	Target: Materials event information from morning reports, event notifications, and preliminary notifications of occurrences will be entered into NMED within 2 working days from the date of the document 90 percent of the time, and NMED records will be updated within 2 working weeks of the date of receipt 90 percent of the time.	Target: Materials event information from morning reports, event notifications, and preliminary notifications of occurrences will be entered into NMED within 2 working days from the date of the document 90 percent of the time, and NMED records will be updated within 2 working weeks of the date of receipt 90 percent of the time.

State and Tribal Programs

	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	3,126	3,117	3,584	467
Contract Support and Travel	471	417	459	42
Total Budget Authority	3,597	3,534	4,043	509
FTE	30	28	31	3

The resource increase in FY 2002 for State and Tribal Programs includes:

- Salaries and benefits increase as a result of the increase in FTE and the governmentwide FY 2002 pay raise.

- FTE increase to support NRC's preparation for the transfer of approximately 1,150 materials licenses to new Agreement States (approximately 150 licenses to Minnesota late in FY 2002 and approximately 750 licenses to Pennsylvania and 250 to Wisconsin in FY 2003), and to provide continuing oversight, coordination, and technical support to a growing number of Agreement States.

The NRC provides for cooperation, oversight, technical assistance, and liaison with States, local governments, Indian tribes, and interstate organizations. This ensures program compatibility and adequate protection of public health and safety from the hazards associated with the use of radioactive materials in Agreement States, and ensures that nuclear safety policy and program information is shared with States and State organizations. At the present time, there are 32 Agreement States. This number is expected to grow to 33 by the end of FY 2002 as Minnesota becomes a new Agreement State.

Under the Agreement State program, the NRC provides assistance to States seeking Agreement State status; conducts training courses, workshops, and meetings for Agreement State staff; evaluates technical licensing and inspection issues from Agreement States; evaluates State rule changes; participates in activities conducted by the Conference of Radiation Control Program Directors, Inc.; and provides early and substantive involvement of the States in NRC rulemaking and other

regulatory efforts (sometimes using NRC/Agreement State working groups). For uranium recovery licenses in Agreement States, the NRC makes the determination that all applicable standards and regulations have been met prior to the State terminating the license. The NRC also coordinates with Agreement States on the reporting of event information and on responses to allegations reported to NRC involving Agreement States.

The NRC, with Agreement State participants, also conducts periodic Integrated Materials Performance Evaluation Program (IMPEP) reviews of Agreement States and regional office programs for adequacy to ensure public health and safety and compatibility of Agreement State programs with NRC programs. IMPEP uses a common process that is applicable to both Agreement State and NRC regional materials programs.

Under the State Liaison Program, the NRC coordinates activities of interest to State, local, Indian tribal governments, and other Federal agencies with NRC offices; and keeps the Commission and staff informed of significant State actions. The NRC regularly consults with the Governor-appointed State Liaison Officers to identify NRC regulatory initiatives affecting States and to keep the NRC apprised of State activities.

This interaction between NRC and Agreement States makes both parties more effective and efficient in their respective roles, and helps maintain safety in a uniform level nationally.

Materials Safety Research

	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	796	835	999	164
Contract Support and Travel	294	950	1,510	560
Total Budget Authority	1,090	1,785	2,509	724
FTE	7	7	8	1

The resource increase in FY 2002 for Materials Safety Research includes:

- Salaries and benefits increase resulting from the governmentwide FY 2002 pay raise.
- Contract support, travel, and FTE increase resulting from the expansion of NRC's risk assessment in the Nuclear Materials Safety arena consisting of development of probabilistic risk assessment tools and guidance to risk-inform the materials regulations.

The NRC conducts materials safety research to support the NRC's efforts to ensure that NRC-regulated aspects of nuclear fuel cycle facilities and nuclear materials activities are handled in a manner that adequately protects public health and safety. This research program is carried out in one program area. The Materials Safety Research program is directly aligned to the NRC's performance goals and addresses issues as discussed on the following pages.

Dose estimates to individuals and groups are developed to assess the potential impacts of regulatory decisions. Current regulatory standards are based on risk assessments that assume the adverse health effects increase linearly with radiation exposure. Risk estimates are primarily based on assumptions about health effects at high doses, as data on health effects at low doses do not currently exist. The regulatory consequence of this assumption is that the agency's requirements for acceptable radiation exposure limits may be unnecessarily conservative. Two potential sources of information to better estimate health effects at low radiation levels are epidemiological studies and molecular or cellular studies. New information continues to accumulate in both areas. During FY 2001–FY 2002, this research will examine these data and reevaluate the current health effects models. The results of this work will reduce modeling uncertainty in NRC and licensee estimates of adverse health effects

caused by long-term exposures to low levels of radiation, resulting in more realistic assessments. In addition, work will be conducted to provide individual and collective dose estimates to support regulatory decisions on the release from regulatory control of materials contaminated with low levels of radioactivity.

The agency has made considerable progress in moving forward with risk-informed regulation in the Nuclear Reactor Safety arena. The NRC will expand the use of risk assessments in the Nuclear Materials Safety arena as well. Consistent with the strategic plan, the agency will develop probabilistic risk assessment (PRA) tools and guidance to risk inform the regulatory framework for materials licensees, develop or adapt PRA methods for use in materials risk analyses, perform materials risk studies, and support the development of guidance for materials risk regulatory activities. The outcome of this research will be improved effectiveness and realism of agency regulation in the Nuclear Materials Safety arena by better focusing staff and licensee resources on the most risk-significant issues.

Regulatory decisions often rely on conservative assumptions because there is insufficient information on the amount, form, concentration and location of radioactive materials that may be contaminating an area. Work on this issue will improve the information available and thus result in increased realism in analyses supporting regulatory decisions. Specifically, in FY 2002, this research will identify available instrumentation and measurement techniques for assessing low levels of radioactivity, volumetric contamination, and difficult sampling or measurement geometries. In addition, information will be provided to support decisions on the recycle/reuse of soils with low levels of contamination.

Program Outputs

The following program outputs have been identified for the Materials Research program.

OUTPUT MEASURES				
Output	**FY 1999 Actual**	**FY 2000 Actual**	**FY 2001 Target**	**FY 2002 Target**
Technical bases for safety and regulatory guidance and decisionmaking.	Target: Issue 6 research products that respond to high and medium priority needs from the Commission and NRC's licensing organizations. Actual: Issued 6 research products.	Target: Issue 3 research products Actual: Issued 4 research products.[26]	Issue 3 research products that respond to high and medium priority needs from the Commission and NRC's licensing organizations.	Issue 3 research products that respond to high and medium priority needs from the Commission and NRC's licensing organizations.
Definition: Research products are typically engineering codes/models used for regulatory analyses, or reports containing experimental or analytical results, that form the technical basis for regulations, regulatory guides, new methods, the resolution of generic safety issues, and regulatory decisionmaking.				

Materials Incident Response

	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	202	214	225	11
Contract Support and Travel	16	10	10	0
Total Budget Authority	218	224	235	11
FTE	2	2	2	0

The resource increase in FY 2002 for Materials Incident Response results from the governmentwide FY 2002 pay raise.

Materials incident response activities are conducted to maintain incident and accident investigation programs to ensure that safety-significant operational events involving nuclear materials and fuel cycle facilities are investigated in a timely, systematic, and technically sound manner and that information is obtained on the causes of the events so that NRC can take timely and effective corrective actions. Emergency response activities are also conducted to ensure NRC is prepared to carry out its role in a radiological emergency involving radiological materials and fuel cycle facilities, licensee responses are consistent with licensee responsibilities and NRC responses are coordinated with other Federal response activities and State and local government activities.

During FY 2002, the Incident Investigation Program (IIP) will be maintained in a high state of readiness to establish and support an Incident Investigation Team (IIT) at any time. The Incident Investigation Manual (NUREG-1303), which provides formal guidance on the conduct of IITs, will be revised if necessary, to address investigation and programmatic deficiencies if any. IIT rosters will be revised, as needed. IITs will be established and supported, and findings will be documented as staff followup actions.

In FY 2002, the NRC will continue to provide oversight and interaction to maintain high Headquarters Operations Center (HOC) reliability and facility availability. The emergency response program will continue to be updated based on lessons learned. The on-call response coordination team member position will be continuously staffed to initiate the callout process when the HOC is activated. Response team readiness will be maintained. The staff will continue its interfaces with

other Federal agencies involved in radiological incident response. The NRC will respond to new initiatives, including Presidential Decision Directives, while maintaining its role in the principal Federal response plans (Federal Response Plan, Federal Radiological Emergency Response Plan, and National Contingency Plan). The NRC's incident response staff will participate in exercises, drills, major organizational meetings, and training sessions with State coordination as a focus. The training will be conducted in the most expeditious and efficient way possible.

In FY 2002, the NRC staff will continue to improve the conceptual design of emergency response courses, prepare and revise training documents, and schedule, track, and conduct training for headquarters and regional responders. In this way, the efficiency and effectiveness of headquarters and regional responder training will be significantly improved. Training outside the exercise environment will continue to be provided in order to improve responder technical skills. The NRC will conduct one materials exercise in FY 2002.

During FY 2002, the HOC will be continuously staffed by Headquarters Operations Officers. They will take initial notifications of events and will document reported events for further review within the agency. During non-working hours (for other NRC staff), they will take allegation and materials event reports and will screen any initial reports for the decisionmaking process to activate the agency emergency response.

During FY 2002, the Regional Incident Response program will be maintained at a high level of readiness at all times. To accomplish this, the NRC regional offices (regions) will train response personnel as required to maintain technical and administrative skills, participate periodically in drills and exercises, maintain response equipment in a state of operational readiness, maintain response procedures current, and implement program improvements resulting from lessons learned. The regions will designate sufficient staff to participate as response team members to implement program objectives, keeping in mind program efficiencies. In addition, the regions will continually evaluate ways to improve response through upgrades to equipment, resources, and facilities. The regions will work with NRC headquarters, other Federal agencies, licensees, and State and local governments to maintain a high level of cooperation necessary for response to emergencies.

Program Outputs

The following program outputs have been identified for the Materials Incident Response program.

OUTPUT MEASURES				
Output	**FY 1999 Actual**	**FY 2000 Actual**	**FY 2001 Target**	**FY 2002 Target**
Emergency Response Performance Index.	Target: 90 percent. Actual: 99.5 percent.	Target: 95 percent. Actual: 99.3 percent.	99 percent.	99 percent.
Definition: Index provides the single overall measure of the degree to which the agency believes it is ready to respond to an emergency situation. It serves as a method for measuring disparate activities that comprise the elements of the Incident Response Program. It will be determined by averaging the degree of satisfaction of the following program functions: Response Organization Staffing, Response Facility Availability, Communications Reliability, Response Organization Training, 24-Hour Notification Point, Timeliness of Activation Decision, and Timeliness of Activation. If the overall index falls below or approaches its target value of 99 percent for FY 2001 and FY 2002, management will determine what is contributing most to the decline and conduct appropriate corrective measures on the basis of this review.				

Materials Technical Training

	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	191	199	729	530
Contract Support and Travel	762	908	1,022	114
Total Budget Authority	953	1,107	1,751	644
FTE	2	2	7	5

The resource increase in FY 2002 for Materials Technical Training includes:

- Salaries and benefits increase resulting from the increase in FTE and the governmentwide FY 2002 pay raise.
- Contract support and travel increase primarily to support increased internal training to enhance staff capability.
- FTE increase to establish an agency intern program that will attract individuals with high potential and that will develop staff capabilities to meet future needs.

Nuclear materials technical training is conducted to ensure that NRC staff possess the requisite knowledge, skills, abilities, and competencies to accomplish the mission and performance goals of the agency. Under this activity, technical training is provided for formal NRC staff qualification, development, and training programs in support of the nuclear materials and fuel cycle programs. Similar training is also provided in support of the Agreement State program. The NRC will continue to maintain the Technical Training Center and manage the technical training program for NRC staff. Curriculum areas will be maintained in radiation protection, fuel cycle technology, security and safeguards, probabilistic risk assessment, and regulatory skills. Technical training will continue to be provided using the principles of the systems approach for training, which is a standard, multiphase program that includes needs analysis, program design and development, implementation of training, and program evaluation.

NRC instructors conduct a spectrum of classroom courses in radiation protection and regulatory skills, and administer self-study courses in the fuel cycle technology in support of formal qualification requirements. In FY 2002, 90 percent of the numbers and types of courses required by the offices and regions will be provided. Contracted courses will be maintained in radiation protection, fuel cycle technology, security and safeguards, probabilistic risk assessment, and regulatory skills to provide the technical and regulatory foundation to support staff decisions in the regulatory oversight process. Project management and oversight of contractors is provided to ensure contracted courses are implemented in accordance with contract requirements. Access to external sources of individual training and instruction is provided when it is not cost effective to conduct in-house or contracted training so that staff can obtain knowledge and instruction from a variety of external experts or learning events. Support for requests for external training that meet formal training requirements, address individual performance problems, maintain current skills, and prepare employees for future skill needs will be continued.

Beginning in FY 2002, the NRC will develop and implement an intern program to attract individuals with high potential to the workforce and develop a solid base of capability.

The agency projects that one-third of its engineers and scientists will be eligible for optional retirement by the end of FY 2005. Consequently, the agency will develop a plan of action to assess the scientific, engineering, and technical core competencies that the NRC needs and propose specific strategies for ensuring that they are maintained. The NRC will design a workforce plan to address critical skills gaps and guide the agency in the recruitment, development, and retention of a highly skilled diverse wokforce. This new initiative is designed to support the achievement of all the agency's performance goals, but is focused on improving efficiency and effectiveness.

Program Outputs

The following program outputs have been identified for Materials Technical Training program:

OUTPUT MEASURES				
Output	**FY 1999 Actual**	**FY 2000 Actual**	**FY 2001 Target**	**FY 2002 Target**
Numbers and types of materials technical training courses offered. (FY 1998: Met 100 percent of cumulative needs.)	Target: Numbers and types of courses offered will meet 90 percent of cumulative needs identified by offices and regions in semiannual needs surveys. Actual: Met 100 percent of the cumulative identified needs.	Target: Numbers and types of courses offered will meet 90 percent of cumulative needs identified by offices and regions in semiannual needs surveys. Actual: Met 100 percent of cumulative identified needs.	Numbers and types of courses offered will meet 90 percent of cumulative needs identified by offices and regions in semiannual needs surveys.	Numbers and types of courses offered will meet 90 percent of cumulative needs identified by offices and regions in semiannual needs surveys.

Materials Enforcement Actions

	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	880	936	866	-70
Contract Support and Travel	15	14	14	0
Total Budget Authority	895	950	880	-70
FTE	9	9	8	-1

The resource decrease in FY 2002 for Materials Enforcement Actions results from decreased personnel costs as staffing is reduced to reflect anticipated efficiencies that result from streamlining the materials enforcement process.

The NRC's Materials Enforcement program is used as a deterrent to emphasize the importance of compliance with requirements and to encourage prompt identification and comprehensive correction of violations. The basic enforcement sanctions are a mechanism whereby violations are stated in inspection documentation and licensees take corrective actions through their internal corrective action programs. The nature and extent of the enforcement action taken by the NRC reflect the seriousness of the violation involved. This program maintains safety by ensuring licensee compliance with safety and regulatory requirements.

In FY 2002, the number of materials enforcement actions is expected to decrease as a result of additional Agreement States. Of the total, approximately 100-125 enforcement actions (projection based on FY 2000 data) are expected to be considered for significant enforcement action, as the Commission makes changes in the enforcement policy and reviews the threshold for considering actions. This assumes more efficient and effective implementation of the program based on historical data reflecting recent experience and ongoing efforts to adopt a more risk-oriented enforcement approach in the Nuclear Materials Safety arena.

The NRC investigates and enforces substantial claims of discrimination alleged to the NRC and also monitors discrimination actions filed with the Department of Labor under Section 211 of the Energy Reorganization Act and develops enforcement actions where there are properly supported findings of discrimination. A Discrimination Task Group was initiated in July 2000 to evaluate and

recommend improvements in our enforcement program. Recommendations of the task group will continue to be implemented in FY 2002 to improve efficiency and effectiveness of the NRC's handling of discrimination cases and to increase public confidence in NRC's review and decisionmaking process.

The NRC is evaluating the development of an enforcement policy that will explicitly provide for Alternative Dispute Resolution in areas where NRC and licensees disagree over noncompliances but neither party desires to proceed through formal adjudication. As the agency evaluates the use of Alternative Dispute Resolution, it will continue to balance possible reduction in public confidence versus improvements in efficiency and reduction of unnecessary burden of formal adjudication. If adopted, implementation could occur in FY 2002.

Program Outputs

The following program outputs have been identified for Materials Enforcement Actions program.

OUTPUT MEASURES				
Output	**FY 1999 Actual**	**FY 2000 Actual**	**FY 2001 Target**	**FY 2002 Target**
Timeliness in completing enforcement actions. (FY 1998: Enforcement case average of 67.1 days for 90 percent of cases. Enforcement case average of 80.6 days for 100 percent of cases.)[27, 28]	Target: Complete 90 percent of materials enforcement cases in an average of 90 days or less. Complete 100 percent of materials enforcement cases in an average 120 days or less. Actual: Completed 90 percent of enforcement cases in an average of 75.2 days per case. Completed 100 percent of materials enforcement cases in an average of 90.6 days per case.[28,29]	Target: Complete 90 percent of materials enforcement cases in an average of 90 days or less. Actual: Materials cases averaged 63.2 days.[27]	90 percent of materials enforcement cases will average 90 days or less.	Investigation cases:[29,30] 75 percent completed within 120 calendar days. 95 percent completed within 180 calendar days. 100 percent completed within 360 days of NRC processing time.[31] Non-Investigation cases:[29] 80 percent completed within 90 calendar days. 100 percent completed within 180 calendar days.[32]

Materials Investigations

	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	1,221	1,282	1,342	60
Contract Support and Travel	80	80	80	0
Total Budget Authority	1,301	1,362	1,422	60
FTE	11	11	11	0

The resource increase in FY 2002 for Materials Investigations results from the governmentwide FY 2002 pay raise.

The NRC investigates allegations of wrongdoing by NRC licensees, certificate holders, and others within its regulatory jurisdiction. All findings and conclusions that result from investigations are sent to appropriate NRC organizations for review of the issues involved and a determination as to whether enforcement action is warranted. Investigations that substantiate criminal violations concerning NRC licensees and others within the NRC's regulatory jurisdiction are referred to the Department of Justice for prosecutorial review. Providing thorough, objective, and timely wrongdoing investigations contributes to the agency goals of maintaining safety; increasing public confidence; making activities and decisions more effective, efficient, and realistic; and reducing unnecessary regulatory burden.

In addition to managing its own caseload, the NRC works closely with other investigative agencies and organizations to ensure the timely and efficient exchange of information of mutual interest. In FY 2000, in its continuing efforts to improve, the Office of Investigations (OI) made significant strides toward increasing effectiveness, efficiency, and productivity in management, organizational, and process-related activities. These achievements were the result of participation in the NRC Allegation Review process and OI initiatives first identified through field office review visits, and other aspects of the continuing self-assessment program.

In FY 2002, the Office of Investigations anticipates investigating an inventory of approximately 100-130 materials-related cases, and completing cases, on average, in nine months or less. In addition to managing its own caseload, the NRC works closely with other investigative agencies and

organizations to ensure the timely and efficient exchange of information of mutual interest. The NRC strives to improve effectiveness and efficiency through participation in the NRC Allegation Review process and in a nationwide self-assessment program.

Program Outputs

The following program outputs have been identified for Materials Investigations program.

OUTPUT MEASURES				
Output	**FY 1999 Actual**	**FY 2000 Actual**	**FY 2001 Target**	**FY 2002 Target**
Timeliness in completing investigations. (FY 1998: Completed cases, on average, in 6.3 months. 7.9 percent of cases open for more than 12 months.)[28]	Target: Complete cases, on average, in 9 months or less. Maintain the average number of cases within the active case inventory for more than 12 months, at 9 percent or less. Actual: Completed cases, on average, in 6.3 months. 8.4 percent[33] for cases more than 12 months old.	Target: Complete cases, on average, in 9 months or less. Maintain the average number of cases within the active case inventory for more than 12 months, at 9 percent or less. Actual: Completed cases, on average, in 5.3 months or less; 9 percent of cases open for more than 12 months.	Complete cases, on average, in 9 months or less. Maintain the average number of cases within the active case inventory for more than 12 months, at 9 percent or less.	Complete cases, on average, in 9 months or less. Maintain the average number of cases within the active case inventory for more than 12 months, at 9 percent or less.

Materials Legal Advice

	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	1,499	1,695	1,769	74
Contract Support and Travel	30	13	12	-1
Total Budget Authority	1,529	1,708	1,781	73
FTE	14	15	15	0

The resource increase in FY 2002 for Materials Legal Advice results from the governmentwide FY 2002 pay raise.

The Office of the General Counsel (OGC) provides legal advice and assistance to NRC's staff and the Commission with respect to all matters related to the regulation of nuclear materials. OGC's legal support includes legal advice and assistance on NRC's licensing, inspection, and enforcement activities concerning the application of regulatory requirements to particular factual situations as presented by headquarters or regional offices, including legal review of licenses, amendments, certificates, environmental documents and inspection reports, enforcement, and contractual matters that may arise in performing these activities. OGC also provides legal analyses and interpretations of regulations, statutes, and cases relevant to materials activities; represents the NRC staff in adjudications arising from proposed licensing and enforcement actions and represents the Commission in lawsuits arising from adjudicatory and rulemaking decisions relating to materials; and provides legal advice and assistance for any rulemaking activities in the materials area. These activities support staff efforts to maintain safety by ensuring that necessary actions are legally sustainable against challenge and by identifying legally defensible changes to the regulatory framework to improve the focus on safety; contribute to improvements in efficiency and effectiveness by helping the staff develop licensing requirements that are better defined, clearer and transparent; and enhance public confidence through clear, thorough, and legally sound explication and defense of agency programs, with corresponding avoidance of unnecessary regulatory burden on licensees and license applicants.

Materials Adjudication

	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	1,211	646	674	28
Contract Support and Travel	150	158	165	7
Total Budget Authority	1,361	804	839	35
FTE	10	5	5	0

The resource increase in FY 2002 for Materials Adjudication includes:

- Salaries and benefits increase resulting from the governmentwide FY 2002 pay raise.
- Contract support and travel increase resulting from increased court reporting services and travel costs in support of the Materials Adjudication program.

The Atomic Safety and Licensing Board Panel (ASLBP), a statutorily-authorized office of the NRC, conducts hearings as independent adjudicatory tribunals, usually at or near the site at which the dispute arose. ASLBP's administrative judges sit alone and in three-member boards; they hear and decide requests to grant, suspend, revoke, or amend nuclear materials licenses that address issues involving health, safety, and the environment. In FY 2002, ASLBP judges will also preside over materials enforcement and decommissioning cases. ASLBP hearings help assure that health, safety, and the environment are protected, as well as increase public confidence in the agency's nuclear materials licensing and enforcement processes, by allowing public participation to adjudicate claims made by interested persons.

Work for Other Federal Agencies

	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	1,529	0	0	0
Contract Support and Travel	772	773	0	-773
Total Budget Authority	2,301	773	0	-773
FTE	15	0	0	0

Resources to assist the Department of Energy in the technical review of the Tank Waste Remediation System at Hanford, Washington have been eliminated from the NRC budget in FY 2002. Should NRC receive legislative authority to regulate the Hanford facility, resources would need to be restored to the NRC budget.

ENDNOTES

1. For fuel cycle activities, this extends to other hazardous materials used with, or produced from, licensed material, consistent with proposed amendments to 10 CFR Part 70. It also includes exposures from uranium recovery activities under the Uranium Mill Tailing Radiation Control Act.

2. In this context, the regulatory framework consists of several interrelated aspects. They are: (1) the NRC's mandate from Congress in the form of enabling legislation; (2) the NRC's rules in Title 10 of the Code of Federal Regulations; (3) the regulatory guides and review plans that amplify those regulations; (4) the body of technical information, obtained from research performed by the NRC or by others and from evaluation of operational experience, that supports the positions in the rules and guides and review plans; (5) the licensing and inspection procedures utilized by the staff; and (6) the enforcement guidance.

3. Stated succinctly, risk-informed, performance-based regulation is an approach in which risk insights, engineering analysis and judgment, and performance history are used to (1) focus attention on the most important activities, (2) establish objective criteria based upon risk insights for evaluating performance, (3) develop measurable or calculable parameters for monitoring system and licensee performance, and (4) focus on the results as the primary basis of regulatory decisionmaking. This definition is contained in the Commission White Paper on this subject, which can be located at www.nrc.gov/NRC/COMMISSION/SRM/1998-144srm.html.

4. Significant exposures are defined as those that result in unintended permanent functional damage to an organ or a physiological system as determined by a physician. Hazardous material exposures only apply to fuel cycle and uranium recovery activities in the Nuclear Materials Safety arena.

5. The metric was not in place in FY 1999. The metric was developed for FY 2000. The performance plan numbers for FY 1999 as shown in the FY 2001 Budget Estimates and Performance Plan, NUREG-110, Volume 16, were based on the best information available as of October/November 1999 as reported in the Nuclear Materials Events Database. Data were collected for FY 1999 on a retrospective basis based upon data available at that time, to provide a context for future comparisons. Metrics fluctuate over time based on additional reports from Agreement States and subsequent analyses of the events by consultants, licensees, States, and/or NRC, based on definitions in this footnote. Revised FY 1999 figure is based on data as of 9/00.

6. Releases that have the potential to cause "adverse impact" are currently undefined. As a surrogate, we will use those that exceed the limits for reporting abnormal occurrences as given by abnormal occurrence criteria 1.B.1 (normally 5,000 times Table 2 (air and water) of Appendix B, Part 20). This information is available in the Abnormal Occurrence Report to Congress, NUREG-0090, which can be located at http://www.nrc.gov/NRC/NUREGS/SR0090/V22/sr0090V22.pdf.

7. In accordance with Appendix G to 10 CFR Part 73 and 10 CFR 74.11(a).

8. In accordance with the requirements of 10 CFR 95.57.

9. The safety metrics may be modified based on more accurate historical performance for FY 1998 and FY 1999. A recent analysis of FY 1999 event data from the Nuclear Materials Event Database showed fluctuations in the historical data on which these measures had been based.

10. Material entering the public domain in an uncontrolled manner. The Nuclear Materials Event Data base contains the list of these events as reported by the NRC licensees and, through the Agreement States, their licensees.

11. The metric was not in place in FY 1999. The metric was developed for FY 2000. The performance plan numbers for FY 1999 as shown in the FY 2001 Budget Estimates and Performance Plan, NUREG-1100, Volume 16, were based on the best information available as of October/November 1999 as reported in the Nuclear Materials Events Database. Data were collected for FY 1999 on a retrospective basis based upon data available at that time, to provide a context for future comparisons. Metrics fluctuate over time based on additional reports from Agreement States and subsequent analyses of the events by consultants, licensees, States, and/or NRC, based on definitions in this footnote. Revised FY 1999 figure is based on data as of 10/00.

12. Over exposures are those maximum annual exposures that exceed limits as provided by 10 CFR 20.2203(a)(2). For fuel cycle activities, this extends to other hazardous materials used with, or produced from, licensed material, consistent with proposed amendments to 10 CFR 70. Reportable chemical exposures are those that exceed license commitments. It would also include chemical exposures involving uranium recovery activities under the Uranium Mill Tailing Radiation Control Act.

13. The metric was not in place in FY 1999. The metric was developed for FY 2000. The performance plan numbers for FY 1999 as shown in the FY 2001 Budget Estimates and Performance Plan, NUREG-1100, Volume 16, were based on the best information available as of October/November 1999 as reported in the Nuclear Materials Events Database. Data were collected for FY 1999 on a retrospective basis based upon data available at that time, to provide a context for future comparisons. Metrics fluctuate over time based on additional reports from Agreement States and subsequent analyses of the events by consultants, licensees, States, and/or NRC, based on definitions in this footnote. Revised FY 1999 figure is based on data as of 1/01.

14. Medical events as reported under 10 CFR Part 35.

15. The metric was not in place in FY 1999. The metric was developed for FY 2000. The performance plan numbers for FY 1999 as shown in the FY 2001 Budget Estimates and Performance Plan, NUREG-1100, Volume 16, were based on the best information available as of October/November 1999 as reported in the Nuclear Materials Events Database. Data were collected for FY 1999 on a retrospective basis based upon data available at that time, to provide a context for future comparisons. Metrics fluctuate over time based on additional reports from Agreement States and subsequent analyses of the events by consultants, licensees, States, and/or NRC, based on definitions in this footnote. Revised FY 1999 figure is based on data as of 1/01.

16. Releases for which a 30-day reporting requirement under 10 CFR 20.2203(a)(3) is required. This measure also includes chemical releases from regulated activity under the Uranium Mill Tailing Radiation Control Act.

17. This involves chemical releases from NRC regulated activities under the Uranium Mill Tailings Radiation Control Act.

18. The metric was not in place in FY 1999. The metric was developed for FY 2000. The performance plan numbers for FY 1999 as shown in the FY 2001 Budget Estimates and Performance Plan, NUREG-1100, Volume 16, were based on the best information available as of October/November 1999 as reported in the Nuclear Materials Events Database. Data were collected for FY 1999 on a retrospective basis based upon data available at that time, to provide a context for future comparisons. Metrics fluctuate over time based on additional reports from Agreement States and subsequent analyses of the events by consultants, licensees, States, and/or NRC, based on definitions in this footnote. Revised FY 1999 figure is based on data as of 10/00.

19. We recognize that no explicit reporting requirements exist for substantiated breakdowns of programs. The NRC relies on its safeguards inspection findings and licensee notifications.

20. A 10 CFR 2.206 petition is a written request filed by any person to institute a proceeding to modify, suspend, or revoke a license, or for any other enforcement action. The petition specifies the action requested and sets forth the facts that constitute the basis for the request. The NRC evaluates the technical merits of the safety concern presented by the petition. Based on the facts determined by the NRC technical evaluation or investigation of the merits of the petition, the Director will issue a decision to grant the petition, in whole or in part, or deny the petition. The Director's Decision explains the bases upon which the petition has been granted and identifies the actions that NRC staff has taken or will take to grant the petition in whole or in part. Similarly, if the petition is denied, the Director's Decision explains the bases for the denial and discusses all matters raised by the petitioner in support of the request.

21. The start time of the 120 days is the date that the Petition Review Board (PRB) determines that the proposed petition satisfies the criteria of NRC Management Directive (MD) 8.11, "Review Process for 10 CFR 2.206 Petitions" and acknowledges by letter the petitioner's request. For petitions received after October 1, 2000, the end time is the date of the proposed Director's Decision. Supplements to the petition which require extension of the schedule will reset the beginning of the metric to the date of issuance of a new acknowledgment letter.

22. New measure added to be consistent with other programs in the Nuclear Materials Safety arena and to provide a more complete picture of major activities.

23. Revised measure reports the same information as previously reported, except that it specifies only core inspections and is expressed more clearly. Reactive inspections are excluded since timeliness of unforseen safety issues cannot be planned in advance. The revised target also simplifies tracking and reporting of inspection performance.

24. The target was changed to be consistent with the other targets in the Fuel Facilities Licensing and Inspection program.

25. Core inspections include all initial inspections (the first inspection after a license is issued to a licensee) and all routine inspections of priority 1, 2, or 3 licensees. The inspection priority assigned to a licensee reflects the frequency of a routine inspection and is based on the potential radiation hazard of the licensee's programs.

26. The target decreases beginning in FY 2000 to reflect the move of spent fuel related work from the Nuclear Materials Safety arena to the Nuclear Waste Safety arena.

27. The measuring period starts on the latest of the following dates: (1) inspection exit date, (2) the date the results of an agency investigation are forwarded to the staff, (3) the date that the Department of Justice (DOJ) says NRC may proceed, for cases referred to the DOJ, or (4) the date of the Department of Labor decision that is the basis for the case.

28. Prior to FY 2000, timeliness was not calculated by strategic arena. FY 1999 figures represent timeliness of reactor and materials cases combined.

29. The measuring period starts on the day the case is opened which is defined as the day the staff reaches consensus that the issue involves potential significant enforcement action. This day will in most cases be the first panel date, but there will be cases where the first panel defers due to insufficient information and there will be cases that are opened without a panel.

30. For FY 2002, the Office of Enforcement has developed performance measures that account for 100 percent of work and do not rely on averages. The measures were divided between cases involving Office of Investigations investigations and those cases developed from the inspection program. Cases involving investigations normally involve wrongdoing or discrimination and by their nature are more resource intensive and less timely. Accordingly, the performance measure for cases involving investigations provides for more staff time.

31. NRC processing time is defined as that time from the date the case is opened to the issuance of an enforcement action or other appropriate disposition less: (1) any time the NRC could not act due to the case residing with DOL, DOJ, other government entity or where the licensee requests a lengthy deferment, and (2) any time the NRC could not act due to processing of FOIA requests.

32. Infrequently, NRC processing time may need to be used in this parameter to account for due process time granted to licensees to conduct lengthy testing, experimentation, or analysis to demonstrate information pertinent to the enforcement decision.

33. Adjusted percentage to exclude several cases with extensive Department of Justice involvement that were held open for an extended period beyond the control of NRC.

NUCLEAR WASTE SAFETY

NUCLEAR WASTE SAFETY

The NRC has regulatory oversight for the transportation of radioactive materials and the interim storage of spent nuclear fuel both at and away from reactor sites to maintain operational safety of spent fuel in storage and full-core off-load capability at operating reactor sites, and to prepare for dry storage at decommissioned reactors. NRC also has regulatory oversight for the long-term storage and disposal of high-level waste (HLW). Our HLW regulatory activities are mandated by the Atomic Energy Act of 1954, as amended, and by the Energy Reorganization Act of 1974, and are further set out in the Nuclear Waste Policy Act of 1982, as amended (NWPA), and the Energy Policy Act of 1992. The NWPA specifies a detailed approach for the long-range undertaking of HLW disposal, with the U.S. Environmental Protection Agency responsible for developing standards (which the NRC is required to implement) and the Department of Energy (DOE) responsible for characterizing the site and developing the repository, subject to NRC regulatory oversight. In 1987, the NWPA was amended, directing the DOE to characterize only one site at Yucca Mountain in the State of Nevada. Likewise, the NRC's activities under the NWPA now focus on a potential Yucca Mountain repository. NRC efforts also address decommissioning, waste safety research, and spent fuel storage and transportation licensing. The NRC's low-level radioactive waste activities associated with the disposal of waste are conducted in accordance with the Low-Level Radioactive Waste Policy Act of 1980, amended in 1985.

4

BUDGET OVERVIEW

			FY 2002 Estimate	
Summary	**FY 2000 Enacted**	**FY 2001 Enacted**	**Request**	**Change from FY 2001**
Budget Authority by Function ($K)				
Salaries and Benefits	26,330	29,231	30,787	1,556
Contract Support and Travel	27,552	30,057	32,370	2,313
Total Budget Authority	53,882	59,288	63,157	3,869
FTE	259	266	271	5

The budget request of $63.2M and 271 FTE supports activities associated with decommissioning of nuclear reactors and other facilities, storage of spent nuclear fuel, transportation of radioactive materials, and disposal of radioactive wastes. Of the increase, $1.6M is for increased salaries and benefits primarily associated with the governmentwide FY 2002 pay raise, and the remaining increase of $2.3M reflects the increased activities associated with receipt of DOE's proposed license application expected by the DOE to be

submitted during FY 2002[1] and the preparation of an increased number of Environmental Impact Statements associated primarily with sites and facilities undergoing decommissioning.

MEASURING RESULTS - STRATEGIC AND PERFORMANCE GOALS

This strategic arena includes strategic goals, performance goals and measures, and strategies. The **strategic goals** represent the agency's fundamental mission and the overall outcome the NRC wants to achieve. The **performance goals** are the key contributors to achieving the strategic goals and focus on outcomes over which the agency has control. The **performance measures** indicate whether the NRC is achieving its performance goals and establish the basis for performance management. These measures establish how far and how fast the agency will move in the direction established by the performance goals. The **strategies** describe how the NRC will achieve its performance goals and their associated measures. The strategies provide the direct link between what the agency wants to achieve (i.e., goals) and the key activities NRC will conduct to achieve these goals.

Our Strategic Goal

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

Four Performance Goals and Their Implementing Strategies

1. To **maintain safety, protection of the environment, and the common defense and security**, the NRC will employ the following strategies.

    - We will continue developing a regulatory framework to increase our focus on safety, including the incremental use of risk-informed[2] and, where appropriate, less prescriptive performance-based[2] regulatory approaches to maintain safety.

    - We will continue authorizing licensee activities only after determining that these proposed activities will be conducted consistent with the regulatory framework.

    - We will confirm that licensees understand and carry out their primary responsibility for conducting activities consistent with the regulatory framework.

    - We will respond to operational events involving potential safety or safeguards consequences.

- We will evaluate new information from research, new safety issues, changing external factors, international programs, and licensee operational experience so that improvements can be made to maintain an adequate regulatory framework.

- We will keep pace with the national high-level waste management program. We will apply the regulatory framework to prelicensing reviews and consultations with DOE to resolve the issues most important to repository safety and prepare for addressing a potential licensing decision within the statutory time period.

2. To **increase public confidence,** the NRC will employ the following strategies.

   - We will make public participation in the regulatory process more accessible. We will listen to their concerns and involve them more fully in the regulatory process.

   - We will communicate more clearly. We will add more focus, clarity, and consistency to our message, be timely, and present candid and factual information in the proper context with respect to the risk of the activity.

   - We will continue to enhance the NRC's accountability and credibility by being a well-managed, independent regulatory agency. We will increase efforts to share our accomplishments with the public.

   - We will continue to foster an environment where safety issues can be openly identified without fear of retribution.

3. To **make the NRC activities and decisions more effective, efficient, and realistic**, the NRC will employ the following strategies:

   - We will continue to improve the regulatory framework to increase our effectiveness, efficiency, and realism.

   - We will identify, prioritize, and modify processes based on effectiveness reviews to maximize opportunities to improve those processes.

4. To **reduce unnecessary regulatory burden on stakeholders,** the NRC will employ the following strategies:

   - We will continue to improve our regulatory framework in order to reduce unnecessary regulatory burden.

- We will improve and execute our programs and processes in ways that reduce unnecessary costs to our stakeholders.

- We will actively seek stakeholder input to identify opportunities for reducing unnecessary regulatory burden.

Performance Measures

Strategic Goal

The following measures are associated with the Nuclear Waste Safety arena strategic goal.

MEASURES	PERFORMANCE	
	TARGET	ACTUAL
No deaths resulting from acute radiation exposures from radioactive waste.	FY 2002: 0 FY 2001: 0 FY 2000: 0 FY 1999: 0	 0 0
No events resulting in significant radiation exposures[3] from radioactive waste.	FY 2002: 0 FY 2001: 0 FY 2000: 0 FY 1999: 0	 0 0
No releases of radioactive waste causing an adverse impact on the environment.[4]	FY 2002: 0 FY 2001: 0 FY 2000: 0 FY 1999: 0	 0 0
No losses, thefts, diversions, or radiological sabotages[5] of special nuclear material or radioactive waste.	FY 2002: 0 FY 2001: 0 FY 2000: 0 FY 1999: 0	 0 0

Performance Goals (PG)

The following measures are associated with the Nuclear Waste Safety arena performance goals. The associated performance goal is identified by the acronym PG and the goal number as identified in the previous section.

MEASURES	PERFORMANCE	
	TARGET	ACTUAL
No events resulting in radiation over exposures[6] from radioactive waste that exceed applicable regulatory limits. (PG1)	FY 2002: 0 FY 2001: 0 FY 2000: 0 FY 1999: 0	 0 0
No breakdowns of physical protection resulting in a vulnerability to radiological sabotage, theft, diversion, or loss of special nuclear materials or radioactive waste.[7] (PG1)	FY 2002: 0 FY 2001: 0 FY 2000: 0 FY 1999: 0	 0 0
No radiological releases[8] to the environment from operational activities that exceed the regulatory limits. (PG1)	FY 2002: 0 FY 2001: 0 FY 2000: 0 FY 1999: 0	 0 0
No instances where radioactive waste and materials under the NRC's regulatory jurisdiction cannot be handled, transported, stored, or disposed of safely now or in the future. (PG1)	FY 2002: 0 FY 2001: 0 FY 2000: 0 FY 1999: 0	 0 0

MEASURES	PERFORMANCE	
	TARGET	ACTUAL
Complete the milestones relating to collecting, analyzing, and trending information for measuring public confidence. (PG2) **Milestones:** FY 2001 - Conduct semiannual evaluations of all public meeting feedback forms to determine any trends in NRC public meetings. FY 2002 - Develop recommendation for continued use of public meeting feedback form or for another method of assessing public confidence.	FY 2002: Will meet target FY 2001: Will meet target New measure in FY 2001	
Complete all of the public outreaches. (PG2) **Milestones:** FY 2001 - Conduct public meetings in Nevada on Yucca Mountain hearing process. FY 2002 - Specific milestones are under development and will be identified in the FY 2003 President's Budget to Congress.	FY 2002: Will meet target FY 2001: Will meet target New measure in FY 2001	
Complete the milestones specific to the agency allegation program effectiveness assessment plan. (PG2) **Milestones:** October 2000 - Start survey pilot program April 2002 - Analysis of pilot program sent to Commission	FY 2002: Will meet target FY 2001: Will meet target New measure in FY 2001	

MEASURES	PERFORMANCE	
	TARGET	ACTUAL
Issue Director's Decisions for petitions filed to modify, suspend, or revoke a license under 10 CFR 2.206[9] within an average of 120 days.[10] (PG2)	FY 2002: 120 days FY 2001: 120 days New measure in FY 2001	
Complete those specific waste milestones in the Risk-Informed Regulation Implementation Plan. (PG3) **Milestones:** October 27, 2000 - Risk-Informed Regulation Implementation Plan (RIR-IP) sent to the Commission November 17, 2000 - Commission briefed on RIR-IP. August 2001 - Develop final criteria and milestones. FY 2002 - Execute milestones identified in FY 2003 Annual Performance Plan	FY 2002: Will meet target FY 2001: Will meet target New measure in FY 2001	
Complete at least two key process improvements per year in selected program and support areas that increase efficiency, effectiveness, and realism. (PG3)	FY 2002: 2 key processes completed FY 2001: 2 key processes completed New measure in FY 2001	

MEASURES	PERFORMANCE	
	TARGET	ACTUAL
Complete all major prelicensing milestones needed to prepare for a licensing review of the potential Yucca Mountain repository, consistent with DOE's schedules and before DOE submits its license application.[11] (PG3) **Milestones:** 1) Final regulation in 10 CFR Part 63 (previously FY 2000, currently FY 2001) FY 2001, if a final EPA standard for the potential Yucca Mountain repository is issued, Part 63 will be conformed to it, 2) Yucca Mountain Review Plan (FY 2001), 3) Site Characterization Sufficiency Comments (FY 2001, in response to a DOE request), 4) Comments on DOE's draft Environmental Impact Statement (FY 2000), and 5) Resolution of key technical issues at the staff level (FY 2000– FY 2002).	FY 2002: Will meet target FY 2001: Will meet target FY 2000: Will meet target New measure in FY 2000	Of the three major milestones scheduled to be completed in FY 2000, two were completed. The milestone "Final regulation in 10 CFR Part 63" was not completed due to a lack of resolution of complex issues concerning Yucca Mountain standards.
Complete those specific milestones to reduce unnecessary regulatory burden. (PG4) **Milestones:** FY 2001 - Staff will review and make Recommendations for improving the Part 72 Cask Certification Process, including the resolution of the Nuclear Energy Institute (NEI) petition. FY 2002 - Will implement FY 2001 recommendations for the Part 72 Cask Certification Process, including the NEI petition.	FY 2002: Will meet target FY 2001: Will meet target New measure in FY 2001	

ACCOMPLISHMENTS

- Provided comments to DOE on its proposed revision to the guidelines for the siting of DOE's proposed High-Level Waste Repository.

- Provided comments to DOE on its draft Environmental Impact Statement for the proposed Yucca Mountain High-Level Waste Repository.

- Resolved 12 subissues in technical exchanges with DOE to address the Key Technical Issues (KTI's) which are most important to licensing the potential high-level waste repository should an application be received.

- Approved removal of three Site Decommissioning Management Plan (SDMP) sites from the current list, reducing the number of sites from 26 to 23. The SDMP list contains sites that are complicated by technical, financial, and/or other challenges that must be addressed before decommissioning can be completed.

- Completed review of 15 environmental assessments for SDMP sites, fuel cycle facilities, and uranium recovery facilities.

- Held seven workshops to receive stakeholder input related to the development of decommissioning guidance, including a standard review plan, to support the License Termination Rule. Staff issued the Standard Review Plan to provide clear guidance on complying with provisions in the License Termination Rule.

- Issued a site-specific safety evaluation report, published the Draft Environmental Impact Statement, and held several public meetings on the application for the Private Fuel Storage facility to be located on the reservation of the Skull Valley Band of Goshute Indians.

- Completed three rulemakings to improve the efficiency of the spent nuclear fuel storage and transportation cask certification process. For example, two of the rules have increased the flexibility for certificate holders. 10 CFR 72.48 was expanded to include certificate holders and thus has reduced the need for the certificate holder to submit an amendment application, when the Certificate of Compliance (CoC) holder desires to change the cask design. In addition, the scope of specific license hearings was reduced when the applicant uses a cask design that was approved by the NRC or is under review. Furthermore, guidance was provided on which sections of Part 72 apply to specific licensees, general licensees, and certificate holders. This has reduced the need

for applicants to raise questions on the applicability of a particular regulation to their activities.

- Held a series of public meetings and workshops with stakeholders describing the Package Performance Study and Spent Fuel Risk Study, and the proposed rulemaking conforming U.S. regulations for transportation of radioactive materials (10 CFR Part 71) with international standards (International Atomic Energy Act Standard ST-1).

- Held four public meetings as well as four public workshops in FY 2000 to gather public recommendations and comments on which issues they would like addressed in the Package Performance and Spent Fuel Risk Studies. Various members of the involved public complimented the NRC on the high level of involvement as well as the public's ability to provide recommendations before the studies were conducted.

- Developed an assessment for Commission review on the viability of entombment as a decommissioning option for nuclear power reactors by reviewing and evaluating regulatory issues, and holding a public workshop to discuss the issues associated with the entombment option.

- Completed development of probabilistic versions of Residual Radiation and Residual Radiation Build codes developed by Argonne National Laboratory for evaluation of contaminated DOE sites. The new codes provide the capability to estimate uncertainty of key parameters and provide the staff with enhanced capability to carry out site specific dose assessments at decommissioning sites. These new tools will enhance the staff's ability to conduct realistic dose assessments of decommissioning plans in a timely manner.

- Completed characterization phase of research on radioactive slags. This work provided the licensing office with an identification of the key mineral components of slags, specified those which contained radioactive species, and established degradation rates for these mineral phases by looking at current and archeological slags. This effort supports the goal of obtaining more realistic assessments of radiation exposure.

- Published a *Federal Register* notice (64 FR 68005) reaffirming the results of the Commission's first review of its Waste Confidence Decision, originally issued on August 31, 1984 (49 FR 34658). A 1990 review of the initial decision determined that spent fuel could be safely stored and managed under existing processes through the first quarter of the 21st century and 30 years beyond the licensed life for power reactor operation. In its 1990 review, the Commission stated that its next review of the waste confidence issues would occur in ten years. As the ten year period for review

approaches, the Commission is of the view that experience and developments since 1990 confirm the Commission's 1990 Waste confidence findings. Thus, the Commission has decided that a comprehensive evaluation of the Waste Confidence Decision at this time is not necessary. The Commission would consider undertaking a comprehensive evaluation when the impending repository development and regulatory activities have run their course or if significant and pertinent unexpected events occur, raising substantial doubt about the continuing validity of the 1990 Waste Confidence findings.

- Received a letter from Virginia Electric and Power Company (Virginia Power) formally notifying the Commission of Virginia Power's intent to submit a license renewal application for its Surry independent spent fuel storage installation (ISFSI). This will be the first ISFSI license renewal. Virginia Power plans to submit its application for ISFSI license renewal in April 2002. The Surry ISFSI's current 20 year license expires in 2006.

BUDGET AUTHORITY AND FULL-TIME EQUIVALENT BY PROGRAM

Summary	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Program ($K)				
High-Level Waste Regulation	19,150	21,552	23,650	2,098
Spent Fuel Storage and Transportation Licensing and Inspection	11,632	12,140	11,802	-338
Regulation of Low-Level Waste	872	438	432	-6
Regulation of Decommissioning	14,033	15,480	15,811	331
Waste Safety Research	6,924	6,515	8,100	1,585
State and Tribal Programs	109	1,886	2,016	130
Waste Training and Development	71	135	145	10
Non-High-Level Waste Safety Legal Advice	1,091	1,142	1,201	59
Total	53,882	59,288	63,157	3,869
Full-Time Equivalent Employment by Program				
High-Level Waste Regulation	55	60	69	9
Spent Fuel Storage and Transportation Licensing and Inspection	71	71	69	-2
Regulation of Low-Level Waste	7	3	3	0
Regulation of Decommissioning	96	99	92	-7
Waste Safety Research	19	21	25	4
State and Tribal Programs	1	2	3	1
Waste Training and Development	0	0	0	0
Non-High-Level Waste Safety Legal Advice	10	10	10	0
Total FTE	259	266	271	5

JUSTIFICATION OF PROGRAM REQUESTS

The Nuclear Waste Safety strategic arena is comprised of eight programs. Program descriptions and output measures for each program follow.

High-Level Waste Regulation

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

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

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

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

determining whether the DOE license application[1] for a potential geologic repository at Yucca Mountain, Nevada, complies with the applicable regulatory standards.

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

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

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

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

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

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

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

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

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

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

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

Program Outputs

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

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

OUTPUT MEASURES				
Output	**FY 1999 Actual**	**FY 2000 Actual**	**FY 2001Target**	**FY 2002 Target**
Establish a site-specific, performance-based regulation applicable to the proposed repository at Yucca Mountain. (FY 1998: Not applicable.)	Target: Publish a proposed site-specific, performance-based regulation applicable to the proposed repository at Yucca Mountain. Actual: The proposed regulation was published on 2/22/99.	Target: Publish a final site-specific, performance-based regulation applicable to the proposed repository at Yucca Mountain. Actual: Target was not met due to a lack of resolution of complex issues concerning Yucca Mountain standards.	Publish a final site-specific, performance-based regulation applicable to the proposed repository at Yucca Mountain. (Note: this target is from FY 2000). If a final EPA standard is issued, conform Part 63 to EPA's site specific environmental protection standard.	None.
Comment on DOE's program. (FY 1998: Not applicable.)	Target: Comment on DOE's Viability Assessment. Actual: Provided comments to DOE on the Viability Assessment on 6/2/99.	Target: Comment on DOE's draft Environmental Impact Statement. Actual: Completed comment on DOE's draft Environmental Impact Statement on 2/22/00.	If requested by DOE, provide DOE with preliminary site sufficiency comments.	If license application is provided in FY 2002[1] complete acceptance review of license application within 90 days and if acceptable, docket.

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

Spent Fuel Storage and Transportation Licensing and Inspection

	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	7,224	7,689	7,823	134
Contract Support and Travel	4,408	4,451	3,979	-472
Total Budget Authority	11,632	12,140	11,802	-338
FTE	71	71	69	-2

The resource increase in FY 2002 for Spent Fuel Storage and Transportation Licensing and Inspection includes:

- Salaries and benefits increase resulting from the governmentwide FY 2002 pay raise.
- Contract support and travel decrease to reflect efficiencies anticipated from regulatory improvements.
- FTE decrease to reflect efficiencies anticipated from regulatory improvements.

Approximately three million shipments of radioactive materials are made each year in the United States. Regulating the safety and security of these shipments is a responsibility shared by a number of different Federal agencies including the NRC. To carry out its regulatory responsibilities for spent fuel and non-spent fuel storage and transportation, the NRC certifies both transport container package designs and spent fuel storage cask designs, and licenses and inspects interim storage of spent fuel at both reactor and away-from-reactor sites. This helps ensure that licensees transport nuclear materials in packages that will provide a high degree of safety and that licensees provide safe interim storage of spent reactor fuel. NRC's transportation activities are closely coordinated with those of the Department of Transportation (DOT) and, as appropriate, with the DOE and the Federal Emergency Management Agency. NRC's transportation activities also include reviewing transportation plans, performing physical security reviews and surveys for shipments of nuclear material, and relaying to DOT notifications from licensees and carriers of planned import, export, or domestic shipment of nuclear material.

The NRC has undertaken initiatives to improve efficiency, effectiveness, and timeliness, while assuring the safety of spent fuel in storage and transport. These include initiating process changes to enhance and focus technical reviews; developing new technical review guidance documents; implementing process improvements to reduce the time needed in storage cask certification rulemaking; starting a lessons learned process for major licensing completions; working with other NRC offices in an effort to ensure consistency in NRC's regulations, programs and practices; and establishing a dialogue with our internal and external stakeholders through meetings, conferences, and workshops.

The industry's spent fuel storage activities require detailed health, safety, and environmental reviews of storage system designs and the associated procedures and facilities to ensure safe operations. Licensed utilities are responsible for the interim storage of their spent fuel until a Federal repository is available. All utilities have either installed or are planning to install high-density racks in their existing spent fuel pools. However, even with these modifications, pools are reaching capacity. To provide for "full-core" reserve, many utilities are constructing ISFSI facilities, which generally consist of a passive storage system using dry cask technology.

In the course of its licensing, certification, and regulatory activities, the NRC reviews applications submitted by the Departments of Energy and Transportation and by commercial vendors for transport container package designs in order to certify new designs, renew approved designs, and to resolve newly identified concerns associated with approved designs. The NRC plans to complete 74 transport application reviews in both FY 2001 and FY 2002. These reviews will independently evaluate an applicant's assertion that its design complies with the regulations and can safely be used to transport radioactive materials. The NRC also reviews spent fuel storage cask designs and facilities for the interim storage of spent fuel at both reactor and away-from-reactor sites to maintain safety of spent fuel in storage and full-core off-load capability at operating reactor sites, and to maintain safety of spent fuel at decommissioned reactors. NRC expects to complete 25 licensing actions each year in FY 2001 and FY 2002. This represents a decrease from past levels, due to the complexity of the current caseload. Increased loadings in the cask, higher enrichment and higher burnup of fuel, use of new materials, and preferential loading of the casks with varying heat load distributions are some of the reasons the caseload is growing more complex to review each year. Therefore, the review effort for each application is expected to increase in FY 2001 and FY 2002. These spent fuel-related licensing actions include the review of applications for new cask designs and new site-specific facilities proposed amendments, topical reports, exemption requests, and the preparation of safety evaluation reports and environmental assessments.

The NRC considers and decides petitions by intervenors and applicants concerning public health, safety, and environmental issues arising out of applications for construction and operation of independent spent fuel storage installations.

The NRC is currently conducting a technical and environmental review to license the Private Fuel Storage, ISFSI facility located on the Skull Valley Band of Goshute Indian Reservation, approximately 50 miles west of Salt Lake City, Utah. This review is expected to be completed by February 2001, with a licensing decision by December 2001. In late FY 2001, subject to receipt of an application, the NRC plans to begin the technical and environmental review to license the Owl Creek Energy Project ISFSI facility to be located in Freemont County, Wyoming and will continue the review in FY 2002. Centralized interim spent fuel storage facilities, like these, rather than dispersed storage at reactor sites, would allow for more focused inspection and surveillance by NRC and are expected to offer resource efficiencies.

The NRC will continue efforts during FY 2001–FY 2002 to revise transportation (10 CFR Part 71) and storage (10 CFR Part 72) regulations to make them more risk-informed, to incorporate consensus standards as appropriate, and to address emerging technical, regulatory/licensing, and policy issues. In addition, in FY 2001, the staff will issue a proposed rule to modify 10 CFR Part 72 to gain further efficiencies in the process for issuing Part 72 Certificates of Compliance. This effort will support the goal of making NRC activities and decisions more effective, efficient, and realistic, and will result in more timely decisions for the applicant.

The NRC will undertake a number of efforts to increase public confidence and address stakeholder concerns about the safety of spent fuel transportation. In FY 2001, the NRC will complete the update of the survey of unclassified radioactive material shipments in the United States. The updated shipment survey will provide a current basis for the number, type, and frequencies of nuclear material transportation shipments in the United States and will be used in future risk studies. During FY 2001–FY 2002, the NRC will continue the update of the "Package Performance Study: Update of Spent Fuel Shipping Container Performance in Severe Highway and Railway Accidents" (formerly referred to as the Modal Study). This study will update NRC's evaluation of the level of protection provided by certified spent nuclear fuel transportation package designs under accident conditions for railway and highway transport. While the shipment of spent nuclear fuel in NRC-certified packages has an excellent safety record, the cask systems currently under review have changed since the original Modal Study was issued in 1987. Additionally, with the possibility for future increases in the number of shipments, the NRC staff will address stakeholder concerns regarding the safety of spent nuclear fuel packages and shipments in the Package Performance Study. The Package Performance Study will focus on modeling and analysis to evaluate severe-accident probabilities and effects, and will likely include partial or full-scale package testing.

NRC's oversight of the industry's spent fuel storage and transportation activities requires inspections of licensee and vendor activities and facilities to confirm that licensees understand

and carry out their primary responsibility for conducting activities consistent with the regulatory framework. In the course of its FY 2001–FY 2002 regulatory and inspection activities, the NRC will conduct approximately ten safety inspections each year of licensees, vendors, certificate holders, applicants, designers, and fabricators of NRC-certified spent fuel storage systems and transport packages. Inspection efforts include onsite inspections of the various storage systems at reactor sites.

During FY 2001–FY 2002, the NRC staff will undertake a number of regulatory initiatives to further implement the NRC's Strategic Plan goals. In FY 2001, the staff will develop a communications plan which will integrate and complement specific public confidence strategies, and will expand outreach efforts during FY 2002 to effectively communicate with stakeholders on NRC's application of risk assessment and risk management. During FY 2001–FY 2002, in order to ensure that Spent Fuel Storage and Transportation Licensing and Inspection activities and decisionmaking efforts are conducted effectively, efficiently, and with realistic objectives, efforts will begin to review activities and identify, prioritize, and modify work processes and procedures, as appropriate, to maximize opportunities for improvement. NRC will also undertake efforts to reduce unnecessary regulatory burden by using risk-informed approaches to focus attention on areas of highest safety priority and ensure that realistic decisions are made in the development of the regulatory framework.

Program Outputs

The following program outputs have been identified for the Spent Fuel Storage and Transportation Licensing and Inspection program.

OUTPUT MEASURES				
Output	**FY 1999 Actual**	**FY 2000 Actual**	**FY 2001 Target**	**FY 2002 Target**
Transport container design review completions.[13] (FY 1998: Completed 115.)	Target: Complete 120 design reviews Actual: Completed 126 design reviews.	Target: Complete 74[14] design reviews. Actual: Completed 96 design reviews.	Complete 74[15] design reviews.	Complete 74 design reviews.

OUTPUT MEASURES				
Output	**FY 1999 Actual**	**FY 2000 Actual**	**FY 2001 Target**	**FY 2002 Target**
Storage container and installation design review completions.[13] (FY 1998: Completed 16.)	Target: Complete 25 design reviews. Actual: Completed 43 design reviews.	Target: Complete 30 design reviews. Actual: Completed 62 design reviews.	Complete 25[16] design reviews.	Complete 25 design reviews.

Regulation of Low-Level Waste

	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	665	328	322	-6
Contract Support and Travel	207	110	110	0
Total Budget Authority	872	438	432	-6
FTE	7	3	3	0

The resources in FY 2002 for Regulation of Low-Level Waste (LLW) remain relatively constant.

LLW results from many commercial, medical, and industrial processes. The classification of nuclear waste depends on its origin, level of radioactivity, and potential hazard. Due to its radioactivity, disposal of LLW requires special handling to avoid the health and environmental hazards associated with radiation. To adequately protect against these hazards, the NRC regulates the management, storage, and disposal of low-level radioactive waste.

The Low-Level Radioactive Waste Policy Act of 1980, amended in 1985, made States responsible for providing for the disposal of commercially-generated low-level waste within their borders. The Act encourages States to enter into compacts that would allow several States to dispose of waste at a regional disposal facility. Most States have entered into compacts but no States have active programs to construct and operate new disposal facilities at this time. In addition, with the exception of the Envirocare facility in Utah, no new disposal facilities have been opened since passage of the Act. The three operating disposal facilities are located in Agreement States (i.e., South Carolina, Washington, and Utah). The NRC does not expect to receive an application for a disposal facility license in the near future. The NRC plans to maintain its capability to perform low-level waste performance assessment modeling through technical reviews associated with the Site Decommissioning Management Program. This will ensure that NRC is prepared to respond to any application for a low-level waste disposal facility from a non-Agreement State.

During FY 2001–FY 2002, the NRC will provide technical support to the States, as requested, to resolve specific technical issues concerning low-level waste storage and disposal. The NRC will also provide information to the States through appropriate forums such as the National Conference of State Legislatures, Conference of Radiation Control Program Directors, and the Organization of Agreement States. In FY 2002, NRC will develop technical support for a proposed rule to establish provisions for disposal of low-activity mixed waste in Resource Conservation and Recovery Act (RCRA) Subtitle C facilities, consistent with a standard being developed by the U.S. Environmental Protection Agency. The NRC will continue its support of international low-level waste programs through its review of International Atomic Energy Agency safety standards and guides and by hosting visits and technical exchanges with counterparts from foreign countries.

Because of the costs associated with offsite disposal, some licensees have chosen to store waste onsite pending the development of new disposal facilities or dispose of waste onsite. The NRC receives several requests each year for onsite disposal and conducts safety and environmental reviews of these requests as received. Other licensees allow their waste to decay in storage, or store waste while awaiting processing and shipment for disposal. The NRC will address technical issues related to such storage practices as they arise. NRC will also conduct reviews of license applications for the import/export of LLW.

During FY 2001–FY 2002, the NRC staff will undertake a number of regulatory initiatives to further implement the NRC's Strategic Plan goals. Efforts will continue to expand outreach efforts to more effectively communicate with stakeholders, to review activities to ensure that decisionmaking is done effectively and efficiently and with realistic objectives, and to use risk-informed approaches in developing the regulatory framework.

Program Outputs

The following program outputs have been identified for the Regulation of Low-Level Waste program.

OUTPUT MEASURES				
Output	**FY 1999 Actual**	**FY 2000 Actual**	**FY 2001Target**	**FY 2002 Target**
Maintenance of the regulatory framework for low-level waste disposal.	There was no FY 1999 target for this measure.	Target: Complete Branch Technical Position on Low-Level Waste Disposal Facility Performance Assessment. Actual: NMSS completed a NUREG on Low-Level Waste Disposal Facility Performance Assessment (formerly referred to as "Branch Technical Position on Low-Level Waste Disposal Facility Performance Assess-ment").	None.[17]	Initiate technical support for a proposed rule to establish conditions for disposal of low activity mixed waste in Resource Conservation and Recovery Act (RCRA) Subtitle C facilities.
Low-Level Waste Licensing actions.[18]	There was no FY 1999 target for this measure.	There was no FY 2000 target for this measure.	Complete 90 percent of the licensing actions--import/export licensing reviews, on-site disposal reviews submitted by licensees per 10 CFR 20.2002--within 180 days. Complete all within 1 year from date of acceptance.[19]	Complete 90 percent of the licensing actions--import/export licensing reviews, on-site disposal reviews submitted by licensees per 10 CFR 20.2002--within 180 days. Complete all within 1 year from date of acceptance.[19]

Regulation of Decommissioning

	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	9,829	10,654	10,334	-320
Contract Support and Travel	4,204	4,826	5,477	651
Total Budget Authority	14,033	15,480	15,811	331
FTE	96	99	92	-7

The resource increase in FY 2002 for Regulation of Decommissioning includes:

- Salaries and benefits decrease to reflect decrease in staffing because fewer plants are being decommissioned, partially offset by the governmentwide FY 2002 pay raise.
- Contract support and travel increase to support an increased number of Environmental Impact Statements (EISs) associated primarily with sites and facilities undergoing decommissioning.
- FTE decrease to reflect the fewer number of plants being decommissioned.

Decommissioning involves removing radioactive contamination in buildings, equipment, groundwater, and soil to such levels that a facility can be released from service for either unrestricted or restricted use. This program includes both power reactors and materials and fuel facilities activities. With respect to power reactor decommissioning, planned activities fall into three general areas: (1) rule and regulatory guidance development, (2) licensing and project management, and (3) inspection. These efforts support all of the reactor safety goals. The rulemaking and regulatory guidance activities are effective in achieving the goals of reducing unnecessary regulatory burden, increasing effectiveness and efficiency, as well as increasing public confidence. Licensing, project management, and inspection efforts increase public confidence that licensee operations are being conducted safely.

During FY 1999–FY 2000, NRC re-evaluated the decommissioning program using its strategic planning process to sharpen the program's goals, measures, and targets. To achieve the

performance goal of maintaining safety, protection of the environment, and the common defense and security, the decommissioning program will focus during the planning period on resolving key issues, including institutional control, preparing an Environmental Impact Statement (EIS) standard review plan, conducting reviews of decommissioning plans, conducting environmental reviews and preparing EISs as appropriate, and completing remediation and removal of sites from the SDMP. To achieve the performance goals of improving efficiency, effectiveness, and realism, the program will implement a phased review of decommissioning plans, complete the decommissioning pilot study to recommend streamlining approaches, reduce the scope and frequency of inspections, where appropriate, and develop guidance on EISs. In addition, to achieve the performance goal of reducing unnecessary regulatory burden, the NRC will complete the decommissioning pilot study noted above, provide guidance on the institutional control issue, and conduct interactions with licensees to discuss guidance on preparing decommissioning plans and environmental inputs. Finally, to achieve the performance goal of increasing public confidence, increased emphasis will be placed on conducting stakeholder workshops to seek licensee, industry, and public input; public outreach for restricted release sites where public interest is high; and conducting public scoping meetings for all environmental reviews requiring an EIS.

In FY 2001–FY 2002, the NRC will continue to enhance the reactor decommissioning program to add stability, predictability, and efficiency to the power reactor decommissioning process through rule and guidance document development. These activities include the completion of guidance documents that implement the decommissioning rule, implement the experience gained from plants undergoing the decommissioning process, and implement the Commission's direction on DSI-24, "Decommissioning - Power Reactors." The NRC intends to risk-inform rulemaking in the decommissioning area, and based on the risk results, integrate rulemaking on topics including emergency planning, insurance, staffing, training, backfits, and security. In the longer term, the NRC intends to restructure the decommissioning rules to make them clearer and more consistent. The staff will take regulatory action to address plant-specific licensing actions and exemption requests to facilitate timely decommissioning while formal rulemakings to resolve generic issues proceed.

In FY 2001–FY 2002, the NRC will conduct decommissioning licensing and inspection activities for 19 commercial power reactors currently in the decommissioning process. Decommissioning project managers provide the overall management of activities pertaining to the regulation of assigned nuclear power plants and serve as headquarters point of contact with licensees, other NRC staff, and the public on safety and safeguards matters concerning specific nuclear power plants. Licensing actions require NRC review and approval before they can be implemented by licensees. These actions include: issuance of licenses, amendments of licenses, NRC-originated orders, exemptions, reliefs, and notices of enforcement discretion. Other project management activities include conducting public meetings in support of the

decommissioning process, reviewing licensee Post Shutdown Decommissioning Activity Reports, coordinating with State and local contacts, and responding to correspondence.

By conducting inspections, the NRC evaluates the licensee's ability to store or dismantle and decontaminate the power reactor plant in a safe manner maintaining the licensed configuration of the facility and managing the use of decommissioning funds as described in the regulations. The NRC's core inspection program for reactors undergoing decommissioning examines four areas: (1) facility management and cost controls, (2) decommissioning support activities, (3) spent fuel safety, and (4) radiological safety. Special inspections of major decommissioning activities using subject matter experts are also conducted.

In FY 2001–FY 2002, the NRC will manage the national program for materials and fuel cycle decommissioning including program oversight, guidance development, licensing, and casework reviews of submittals including: decommissioning plans, environmental reports, final radiological survey reports, financial assurance certifications and funding plans, and related license amendments and license termination requests.

The NRC provides increased attention to sites that present complex decontamination issues. Through the implementation of its SDMP, NRC gives special attention to timely cleanup of approximately 20 known materials and fuel facility sites through the implementation of its SDMP efforts. At these sites, buildings, former disposal areas, piles of tailings, groundwater, and soil are contaminated with low levels of uranium, thorium, or other radionuclides. Consequently, they represent varying degrees of radiological hazard, cleanup complexity, and associated costs. A few additional sites are expected to be added to this list as a result of the NRC's review of all files of licenses that have been terminated to ensure that facilities were properly decontaminated and to identify any additional contamination that may require remediation. In addition, it is anticipated that additional sites will be added to the list as a result of licensee decisions to cease licensed operations. In addition to these complex[20] sites, NRC terminates several hundred licenses per year for routine[21] sites.

The NRC has implemented a risk-informed approach (i.e., one in which the regulatory effort and requirements match the safety risks) for reviewing decommissioning activities at licensed facilities. This approach relies on a series of assessments to determine whether additional characterization, remediation, and confirmatory surveys are necessary. Included in this review are SDMP sites and other routine and non-routine materials and fuel cycle facilities. In FY 2001, the NRC will begin a phased approach to conducting its decommissioning plan reviews for SDMP and complex sites that propose restricted release. Institutional control and financial assurance issues will be reviewed first before additional decommissioning reviews or preparation of EISs begin.

The NRC will also continue decommissioning oversight activities related to the DOE's West Valley facility in accordance with the West Valley Demonstration Project Act. This is a highly complex site that requires careful consideration. During FY 2001, NRC will finalize a Commission policy statement for decommissioning criteria for West Valley. During FY 2001–FY 2002, NRC will review the Decontamination and Waste Management EIS documents, review the draft Decommissioning EIS, and evaluate West Valley Demonstration Project Act activities, work plans, and safety documents.

The NRC will continue to interact with the EPA during FY 2001–FY 2002 to resolve issues of mutual concern related to the regulation of radionuclides in the environment to avoid unnecessary duplication of regulatory requirements. As part of the effort to resolve issues of mutual concern, NRC will continue to be an active participant in the Interagency Steering Committee on Radiation Standards (ISCORS). In addition to NRC and EPA, ISCORS member agencies include the Departments of Energy, Defense, Transportation, Health and Human Services, and Labor (Occupational Health and Safety Administration). Topics being addressed by ISCORS include harmonization of risk goals and assessment methods, management of mixed low-level and hazardous wastes, radioactive contamination of sewer sludge, risks associated with naturally-occurring radioactive material, implementation of NRC's decommissioning criteria, and standards for recycling.

In FY 2001–FY 2002, the NRC will maintain an inspection program to ensure the safety of decommissioning and to assess compliance with NRC regulations and license conditions at material and fuel cycle facilities listed in the SDMP and other non-routine decommissioning projects. Inspections will include routine radiation protection inspections, in-process inspections during decommissioning, and accompaniments during licensee-conducted final radiological surveys to assess the adequacy of the licensee's remediation process. The NRC will operate its regional laboratories to analyze samples collected during these inspections.

In FY 2001–FY 2002, the NRC will continue to perform its environmental review efforts through an organizational unit that is devoted solely to these efforts. The NRC will prepare a Standard Review Plan for environmental reviews in FY 2001. In FY 2001–FY 2002, the NRC will prepare and/or review EISs and environmental assessments in support of licensing and decommissioning actions for fuel cycle and spent nuclear fuel activities, sites listed on the SDMP, and other non-routine decommissioning projects. Consistent with NRC's phased approach for reviewing new decommissioning plans, preparation of EISs will only begin after institutional control and financial assurance issues have been resolved with the licensee.

The NRC will continue to operate the Computerized Risk Assessment and Data Analysis Lab to assist NRC staff in the review of applicant site characterization activities and engineered

facilities and in performance assessments for licensing decisions in support of the Nuclear Waste Safety program.

During FY 2001–FY 2002, the NRC staff will undertake a number of regulatory initiatives to further implement the NRC's Strategic Plan goals. In FY 2001, the staff will develop a communications plan which will integrate and complement specific public confidence strategies, and will expand outreach efforts during FY 2002 to effectively communicate with stakeholders on NRC's application of risk assessment and risk management. During FY 2001–FY 2002, in order to ensure that Regulation of Decommissioning activities and decisionmaking efforts are conducted effectively, efficiently, and with realistic objectives, efforts will begin to review activities and identify, prioritize, and modify work processes and procedures, as appropriate, to maximize opportunities for improvement. NRC will also undertake efforts to reduce unnecessary regulatory burden by using risk-informed approaches to focus attention on areas of highest safety priority and ensure that realistic decisions are made in the development of the regulatory framework.

Program Outputs

The following program outputs have been identified for the Regulation of Decommissioning program.

OUTPUT MEASURES				
Output	**FY 1999 Actual**	**FY 2000 Actual**	**FY 2001Target**	**FY 2002 Target**
Cleanup problem materials and fuel facility sites listed in the Site Decommissioning Management Plan (SDMP). (FY 1998: 3 sites were removed from SDMP list.)	Target: Remove 3 sites from the SDMP list after satisfactory cleanup. Actual: 3 sites were removed from SDMP list.	Target: Remove 3 sites from the SDMP list after satisfactory cleanup. Actual: Three sites (Pesses, Minnesota Mining and Water-town) have been removed.	Remove 1 site from the SDMP list after satisfactory cleanup.	Remove 1 site from the SDMP list after satisfactory cleanup.

Waste Safety Research

	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	2,158	2,508	3,122	614
Contract Support and Travel	4,766	4,007	4,978	971
Total Budget Authority	6,924	6,515	8,100	1,585
FTE	19	21	25	4

The resource increase in FY 2002 for Waste Safety Research includes:

- Salaries and benefits increase resulting from the increase in FTE and the governmentwide FY 2002 pay raise.
- Contract support and travel increase to continue work in the areas of material behavior of spent fuel and safety-related components and to begin two new initiatives related to dry cask storage. Provides funds to conduct Phase III of the Package Performance Study.
- FTE increase to continue work in the areas of material behavior of spent fuel and safety-related components and to begin work on two new initiatives related to dry cask storage.

The Waste Safety Research program supports the NRC's activities associated with decommissioning of nuclear reactors and other facilities, and the interim storage and transportation of spent nuclear fuel. Research activities will continue to provide the technical basis to confirm the adequacy of regulations and guidance to maintain safety in areas such as decommissioning and interim spent fuel storage, while in other areas, such as the transportation of spent nuclear fuel casks, will focus on identifying where unnecessary conservatism can be eliminated or reduced and public confidence can be increased. The Waste Safety Research program, which is comprised of three major program areas, is directly aligned to the NRC's performance goals and addresses issues as discussed on the following pages.

Before an NRC-licensed site is decommissioned, the licensee must show that the site does not exceed specified dose limits. Monitoring strategies and methods are needed to assist NRC and

its licensees in detecting potential contamination of soil and groundwater prior to license termination and release of the site for unrestricted use. Monitoring strategies and methods will also be used to assure that decommissioned sites that require long-term monitoring (such as those where radioactively contaminated materials are stored on site) continue to comply with license termination criteria and requirements. During FY 2001 and FY 2002, research will be conducted to develop monitoring strategies and technical methods to demonstrate compliance with NRC requirements for decommissioned sites. To support efficiency, modeling tools will be developed that take advantage of the work of other Federal agencies in the areas of contaminant migration in soil and human exposure to these contaminants. These modeling tools will optimize the design of monitoring strategies (including the choice of monitoring equipment and the selection and placement of monitoring locations) to assess site performance over time.

There are two licensing issues associated with the long-term storage of spent nuclear fuel: the first is the renewal of existing dry cask storage licenses and CoC for intermediate-burnup fuel, the second is the licensing of dry casks storage for high-burnup fuel. License renewals of dry storage systems for spent nuclear fuels and high-level radioactive waste requires the development of a technical basis for ensuring continued safe performance under the extended service conditions, 20 to 100 years. Verification of the past performance of selected components of these systems is required as part of developing that technical basis. During FY 2002, work will continue in the areas of material behavior of spent nuclear fuel and safety-related components by examining a cask and its contents that have been in dry storage for approximately 15 years. Destructive and nondestructive examinations on fuel rods that have been in dry storage will be performed to determine their long-term storage behavior. Results from the examinations performed on these rods will be compared with those from a controlled environment to determine if there are any differences between the conditions of the two cladding. FY 2002 activities associated with high-burnup fuel include the monitoring of the operating conditions of a cask containing high-burnup spent fuel and comparing these data with analyses and cask thermal design limits. Also, destructive and nondestructive examinations will be performed on high-burnup fuel to determine the long-term behavior and to ensure cladding integrity under typical storage and temperature conditions. In addition, development will continue on appropriate models and analysis methods to evaluate the nuclide inventories and source characteristics of high-burnup fuels. The results of this research will judge and maintain safety margins by providing the licensing office with the technical basis for reviewing applications to renew existing dry cask storage licenses, and to confirm or revise existing regulations pertaining to the dry storage of high-burnup fuel. The outcomes of this research will also maintain safety through the application of more accurate models for predicting the material behavior of spent fuel in dry cask storage and transportation systems.

A significant cost in the nuclear fuel cycle is the cost for storage and transportation of spent nuclear fuel (SNF). In the transportation and storage of SNF, criticality safety is a major factor which limits the number of SNF rods which can be co-located in close proximity. In irradiated fuel assemblies the reactivity of the spent fuel is considerably lower than fresh fuel. Currently, however, only limited credit is allowed for the effects of this irradiation or "fuel burnup" on reactivity. As a result, conservative limits are imposed on the number of SNF rods which can be placed in close proximity in SNF packages. More realistic analyses of criticality to account for irradiated fuel reduces the conservatism in criticality calculations and enables increased co-location of spent fuel. Hence the desire on the part of the nuclear power industry for additional "burnup credit." The purpose of this research is to develop the technical basis for licensing spent fuel transportation packages utilizing a methodology which allows additional credit for fuel burnup. During FY 2001–FY 2002, efforts will continue to develop the methodology which will be validated using experimental data. The research will also adequately characterize the uncertainties in all of the factors that contribute to the reduced reactivity. The licensing office will use the information produced by this research to serve as the basis for licensing.

NRC must license ISFSI sites, for the long-term storage of spent nuclear fuel and high-level radioactive waste in dry casks, until a high-level waste repository is available for permanent storage. However, criteria for reviewing and accepting sites and designs for ISFSIs, particularly as related to seismic design margins, are currently drawn from nuclear plant seismic licensing criteria and are believed to be unnecessarily conservative for application to ISFSIs. For example, the current position in the Standard Review Plan for Dry Cask Storage Systems (NUREG-1536) does not allow the cask to move or tip during a postulated design earthquake. This position was adopted because the simultaneous sliding and tipping of a dry cask storage system is a complex technical issue and there are no guidelines to address how much sliding and tipping is likely to take place, how the casks could impact on each other, and how the internals of the cask would be affected seismically. There is a need to obtain a better understanding of the seismic behavior of dry cask storage systems because of applications in areas of high seismicity—the western United States. During FY 2002, this research will continue to provide information and tools to the licensing office to independently confirm and verify seismic stability analyses (tipping and overturning) of spent fuel storage cask systems. Technical expertise will also be provided to the licensing office in support of their revision of regulations and regulatory guidance pertaining to ISFSIs. These research results will be used by the licensing office to develop seismic stability criteria specifically tailored for ISFSIs, thereby reducing unnecessary regulatory burden associated with dry cask storage siting.

Assessment of radiation exposure, including environmental transport of radioactivity from decommissioned sites, waste disposal, and mill tailings, is fundamental to a large number of NRC decisions. The use of generic, non-site specific information in existing screening models

causes unnecessary burden to NRC licensees because exposure levels are often overestimated. In this case, the licensee may be required to conduct a more extensive site survey to gather site-specific data and confirm conformance with NRC requirements. During FY 2001 and FY 2002, research will be conducted to develop tools to better estimate dose from residual radioactivity. New models will be developed as needed. These analytical tools will reduce unnecessary conservatism through the systematic selection of process models and input parameters for specific applications. The outcome of these activities will be more realistic assessments of potential exposures from radioactive materials released to the environment, thus ensuring that safety is maintained while reducing unnecessary regulatory burden.

The data, assumptions, and analysis that have been used to support the NRC regulatory positions of the safety of transporting highly radioactive spent nuclear fuel are dated. For example, the transportation routes and the population distributions along those routes have changed considerably since the earlier risk studies and the analysis techniques are significantly improved.

The risk of transporting highly radioactive spent nuclear fuel from nuclear power plants to a centralized storage facility or to an underground repository has recently received increased NRC and public attention because of the possible increase in the number of shipments. Risk to the public from transportation accidents depends on accident rates, number of shipments, and the likely consequences and severity of the accidents. Despite the previous NRC studies and the exceptional safety record, some stakeholders have questions and concerns regarding the safety of spent nuclear fuel transport packages. Several groups have criticized the NRC's casks standards and the earlier study as being insufficient to adequately demonstrate safety during severe accidents.

The outcome of the Phase I (FY 2000 and FY 2001) of the Package Performance Study (PPS) is expected to be a recommendation that confirmatory experiments and testing of transportation casks be performed. This will be based on NRC studies and the enhanced public participation and involvement approach being used to help design the PPS. The ongoing public interactions will help to ensure that stakeholders' concerns are effectively identified and understood. FY 2002 activities include design and preparation of the experiments to test transportation casks under severe transportation accident conditions—severe impact and fire scenarios. Activities are also planned to update the transportation accident analysis code, Radioactive Transport Risk Analysis. These activities would allow NRC to develop a realistic regulatory framework that is effective and efficient; and would satisfy the objective of the public participation to ensure that the PPS is designed to resolve both the technical and public confidence issues.

Program Outputs

The following program outputs have been identified for the Waste Safety Research program.

OUTPUT MEASURES				
Output	**FY 1999 Actual**	**FY 2000 Actual**	**FY 2001Target**	**FY 2002 Target**
Technical bases for safety and regulatory guidance and decisionmaking.	Target: Issue 3 research products. Actual: Issued 5 products.	Target: Issue 5 research products. Actual: Issued 5 products.	Issue 6 research products that respond to high- and medium-priority needs from the Commission and NRC's licensing organizations.[22]	Issue 6 research products that respond to high- and medium-priority needs from the Commission and NRC's licensing organizations.
Definition: Research products are typically engineering codes/models used for regulatory analyses, or reports containing experimental or analytical results, that form the technical basis for regulations, regulatory guides, new methods, the resolution of generic safety issues, and regulatory decisionmaking.				

State and Tribal Programs

	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	109	236	366	130
Contract Support and Travel	0	1,650	1,650	0
Total Budget Authority	109	1,886	2,016	130
FTE	1	2	3	1

The resource increase in FY 2002 for State and Tribal Programs includes:

- Salaries and benefits increase resulting from the increase in FTE and the governmentwide FY 2002 pay raise.

- FTE increase to manage the peak workload associated with the grant program that was established in FY 2001 to assist the Agreement States with the closeout of formerly NRC-licensed sites located within their borders where the original owner or successor cannot be found or does not have sufficient funds available.

The NRC provides guidance to the Agreement States in the areas of decommissioning and low-level waste. The NRC will continue its program initiated in FY 2001 to assist the Agreement States in their review and closure of the sites identified through NRC's review of its formerly licensed sites.

The Agreement States have jurisdiction over formerly NRC-licensed sites within their borders. A number of Agreement States have indicated that they do not have sufficient funding to conduct the activities required to close out these sites if the owner or successor cannot be found or does not have sufficient funds. In response to this problem, NRC is requesting funds for use by Agreement States through grants or cooperative agreements to assist in the remediation of formerly NRC-licensed sites. The grant program is scheduled to begin in FY 2001. The Commission is also requesting authorization to provide funds to Agreement States for their work on formerly NRC-licensed sites that was incurred before the establishment of the requested grant program. This will help ensure all Agreement States are treated fairly.

Waste Training and Development

	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	0	0	0	0
Contract Support and Travel	71	135	145	10
Total Budget Authority	71	135	145	10
FTE	0	0	0	0

The resource increase in FY 2002 for Waste Training and Development includes an increase in contract support and travel resulting from an increase in external training to enhance staff capability.

Waste training is conducted to ensure that NRC staff possess the requisite knowledge, skill, abilities, and competencies to support the waste program and accomplish the mission and performance goals of the agency. Training will continue to be provided using the principles of the systems approach for training which is a standard, multiphase program that includes needs analysis, program design and development, implementation of training, and program evaluation.

Non-High-Level Waste Safety Legal Advice

	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	1,071	1,130	1,179	49
Contract Support and Travel	20	12	22	10
Total Budget Authority	1,091	1,142	1,201	59
FTE	10	10	10	0

The resource increase in FY 2002 for Non-High-Level Waste Safety Legal Advice includes an increase in salaries and benefits resulting from the governmentwide FY 2002 pay raise.

The Office of the General Counsel (OGC) will continue to provide legal advice and assistance to the Commission and NRC staff on low-level waste and transportation of radioactive materials and waste, storage of spent reactor fuel, and in the decommissioning of reactor and materials facilities. The OGC will represent the agency in related administrative and judicial proceedings. These activities support staff efforts to maintain safety by ensuring that necessary actions are legally sustainable against challenge. The activities contribute significantly to improvements in the efficiency and effectiveness of the agency's operations, and to public confidence in the overall integrity of the agency's decisionmaking processes, with a corresponding avoidance of unnecessary regulatory burden on licensees and those doing business with the NRC.

ENDNOTES

1. As stated in DOE's 1999 Draft Environmental Impact Statement. Pre-licensing issue resolution will continue at the staff level until DOE's license application is submitted.

2. Stated succinctly, risk-informed, performance-based regulation is an approach in which risk insights, engineering analysis and judgment, and performance history are used to: (1) focus attention on the most important activities, (2) establish objective criteria based upon risk insights for evaluating performance, (3) develop measurable or calculable parameters for monitoring system and licensee performance, and (4) focus on the results as the primary basis of regulatory decisionmaking. This definition is contained in the Commission White Paper on this subject, which can be located at www.nrc.gov/NRC/COMMISSION/SRM/1998-144srm.html.

3. Significant radiation exposures are defined as those that result in unintended permanent functional damage to an organ or a physiological system as determined by a physician.

4. Releases that have the potential to cause "adverse impact" are currently undefined. As a surrogate, we will use those that exceed the limits for reporting abnormal occurrences as given by AO criteria 1.B.1 (normally 5,000 times Table 2 (air and water) of Appendix B, Part 20).

5. In accordance with Appendix G to 10 CFR part 73 and 10 CFR 74.11(a).

6. Over exposures are those that exceed limits as provided by 10 CFR 20.2203(a)(2).

7. We recognize that no explicit reporting requirements exist for substantiated breakdown determination. The NRC relies on its safeguards inspection findings and licensee notifications.

8. Releases for which a 30 day reporting requirement under 10 CFR 20.2203(a)(3) is required. This measure includes only to radiological releases.

9. A 10 CFR 2.206 petition is a written request filed by any person to institute a proceeding to modify, suspend, or revoke a license, or for any other enforcement action. The petition specifies the action requested and sets forth the facts that constitute the basis for the request. The NRC evaluates the technical merits of the safety concern presented by the petition. Based on the facts determined by the NRC technical evaluation or investigation of the merits of the petition, the Director will issue a decision to grant the petition, in whole or in part, or deny the petition. The Director's Decision explains the bases upon which the petition has been granted and identifies the actions that NRC staff has taken or will take to grant the petition in whole or in part. Similarly, if the petition is denied, the Director's Decision explains the bases for the denial and discusses all matters raised by the petitioner in support of the request.

10. The start time of the 120 days is the date that the Petition Review Board (PRB) determines that the proposed petition satisfies the criteria of NRC Management Directive 8.11, "Review Process for 10 CFR 2.206 Petitions" and acknowledges by letter the petitioner's request. For petitions received

after October 1, 2000, the end time is the date of the proposed Director's Decision. Supplements to the petition which require extension of the schedule will reset the beginning of the metric to the date of a new acknowledgment letter.

11. Prelicensing activities such as this constitute informal conferences between a prospective applicant and the staff and are not part of a potential licensing proceeding.

12. Commission directed staff to conform Revision 1 of the Yucca Mountain Review Plan to Part 63 before publishing it.

13. During FY 1999, only non-spent fuel transportation cases, certified in accordance with 10 CFR Part 71, were included in output measure 1 while spent fuel transportation cases, certified in accordance with 10 CFR Part 71, and spent fuel storage cases, licensed in accordance with 10 CFR Part 72, were included in output measure 2. Beginning in FY 2000, NRC will be including both non-spent fuel and spent fuel transportation cases, certified in accordance with 10 CFR Part 71, in output measure 1, and spent fuel storage cases, licensed in accordance with 10 CFR Part 72, in output measure 2.

14. The target decreases from FY 1999 levels to reflect markedly fewer receipts than initially forecast.

15. The target decreases from FY 1999 levels to reflect the significant reduction in backlogged actions.

16. The target decreases in FY 2001 to reflect recalculation of labor rate based on complexity of current caseload.

17. It is possible that EPA will not start its rule for mixed waste disposal in RCRA cells in the next year or so. There are also issues between NRC and EPA that may be difficult to resolve; thus, this target is being moved from FY 2001 to FY 2002. Given the uncertainty of activity on the EPA rule this year, no target has been set for FY 2001.

18. The addition of an output measure for low-level waste licensing actions is based on receipt of requests for import/export licensing reviews from the Office of International Programs, and for approvals of 10 CFR 20.2002 disposals each year.

19. A very small percentage of licensing actions may involve hearings, or occasionally, delays on the part of the applicant or licensee. While these are not the rule, they may comprise a small number of the licensing actions each year.

20. Complex sites - Sites on the U.S. NRC's Site Decommissioning Management Plan list of sites or those sites where the decommissioning involves major technical or policy issues that must be resolved before the site can be released in accordance with NRC requirements.

21. Routine sites - Sites at which the submission of a decommissioning plan (DP) is not required under NRC's regulations and sites where a DP is required, but where the decommissioning does not involve

major technical or policy issues that must be resolved before the site can be released in accordance with NRC's requirements.

22. The target increases beginning in FY 2001 to reflect the move of spent fuel related work to the Nuclear Waste Safety arena from the Nuclear Materials Safety arena.

INTERNATIONAL NUCLEAR SAFETY SUPPORT

INTERNATIONAL NUCLEAR SAFETY SUPPORT

The International Nuclear Safety Support strategic arena encompasses international nuclear safety and regulatory policy formulation, import/export licensing for nuclear materials and equipment, treaty implementation, international information exchange, international safety and safeguards assistance, and deterring nuclear proliferation. The agency's international activities support broad U. S. national interests, as well as the NRC's domestic mission. The legal basis for these activities is the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, the Nuclear Non-Proliferation Act of 1978, other statutes, executive orders, treaties and conventions.

BUDGET OVERVIEW

Summary	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	4,130	4,159	4,474	315
Contract Support and Travel	562	620	645	25
Total Budget Authority	4,692	4,779	5,119	340
FTE	39	38	39	1

5

The budget request of $5.1M and 39 FTE supports NRC maintaining a program of international cooperation to help enhance the safe, secure, and environmentally acceptable civilian uses of nuclear energy both in the U.S. and throughout the world. This includes work with international organizations such as the International Atomic Energy Agency and the Nuclear Energy Agency, the issuance of 85-125 import/export licenses per year and support for Agency for International Development-related work for the countries of the Former Soviet Union and Central and Eastern Europe. As the regulator of the world's largest civilian nuclear program, the NRC has extensive regulatory experience to contribute to international programs in areas such as nuclear reactor safety, nuclear safety research, radiation protection, nuclear materials safety and safeguards,[1] waste management, and decommissioning of nuclear facilities. The NRC can learn, in turn, from the regulatory experience of other countries. NRC gains access to non-U.S. safety information through interaction with foreign entities thereby leveraging NRC resources. Additionally, NRC supports the development and implementation of international regulatory standards, policies, and practices. Of the increase $0.3M is for increased salaries and benefits primarily associated with the governmentwide FY 2002 pay raise.

MEASURING RESULTS - STRATEGIC GOAL

This strategic arena includes a strategic goal, performance measures, and strategies. The **strategic goal** represents the agency's fundamental mission and the overall outcome the NRC wants to achieve. The **performance measures** indicate whether the NRC is achieving its strategic goal and establish the basis for performance management. These measures establish how far and how fast the agency will move in the direction established by the strategic goal. The **strategies** describe how the NRC will achieve its strategic goal and its associated measures. The strategies provide the direct link between what the agency wants to achieve (i.e., goals) and the key activities NRC will conduct to achieve these goals.

Our Strategic Goal

Support U.S. interests in the safe and secure use of nuclear materials and in nuclear nonproliferation.

Implementing Strategies

- We will continue to take a proactive[2] role in strengthening safety, safeguards, and nonproliferation worldwide.
- We will focus appropriate agency activities and resources on significant international nuclear safety obligations and on U.S. and NRC international priorities.
- We will enhance integration of international activities in the NRC.

Performance Measures

	PERFORMANCE	
MEASURES	**TARGET**	**ACTUAL**
Fulfills 100 percent of the significant[3] obligations over which the NRC has regulatory authority arising from statutes, treaties, conventions, and Agreements for Cooperation.[4]	FY 2002: 100 percent FY 2001: 100 percent FY 2000: 100 percent FY 1999: 100 percent	 100 percent 100 percent

INTERNATIONAL NUCLEAR SAFETY SUPPORT

	PERFORMANCE	
MEASURES	**TARGET**	**ACTUAL**
No significant proliferation incidents attributable to some failure of the NRC.	FY 2002: 0 FY 2001: 0 FY 2000: 0 New measure in FY 2000	0
No significant safety or safeguards events that result from the NRC's failure to implement its international commitments.	FY 2002: 0 FY 2001: 0 FY 2000: 0 New measure in FY 2000	0
Outcomes in international forums are consistent with U.S. Government objectives identified as pertinent to and actively supported by the NRC at least 60 percent of the time.	Measure deleted [5]	

ACCOMPLISHMENTS

- Deployed the Year 2000 Early Warning System (YEWS) in cooperation with the international community as a means for nuclear facility operators to report any observed date-changed effects at their nuclear facilities. U.S. nuclear power plant staff monitored YEWS for potential problems overseas, and it was acknowledged internationally as one of the most useful real-time reporting mechanisms during the rollover period.

- Completed action on a proposed export of highly enriched uranium to the Netherlands. This case was subject to restrictions imposed by the Energy Policy Act of 1992 and to commitments recently made by the U. S. Government and the European Commission.

- In the area of cooperation with multilateral organizations, the agency arranged for an International Atomic Energy Agency-led Operational Safety Review Team (OSART) mission to the North Anna Nuclear Power Plant in Virginia. The focus of the OSART, the first in the U.S. in over four years, was to review the safety and reliability of plant operation.

- Completed staff reviews for and issued 156 import/export authorizations (NRC licenses or amendments) including significant license actions such as approving the export of highly

enriched uranium to Canada for use in isotope production. Staff reviews were completed within 60 days.

- Conducted bilateral assistance activities in nuclear safety and safeguards with Russia, Ukraine, Armenia, Kazakhstan, and countries of central and eastern Europe.

- Developed and implemented NRC assistance activities to the Kazakhstani Atomic Energy Committee on issues associated with the safe shutdown and decommissioning of the BN-350 sodium-cooled fast breeder reactor near Aktau, Kazakhstan.

- Negotiated 8 bilateral exchange arrangements between NRC and appropriate foreign counterparts to ensure that an effective framework for NRC's international exchanges is in place.

- Led the U.S. delegation in March 2000 in successfully advocating sunsetting of the G-24 Nuclear Safety Assistance Coordination mechanism.

- Facilitated over 100 foreign visits to NRC from 28 countries, plus Taiwan, including five international agencies. Five assignees from four countries were placed with the NRC technical staff for on-the-job training during FY 2000.

BUDGET AUTHORITY AND FULL-TIME EQUIVALENT BY PROGRAM

Summary	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Participation in International Activities	4,692	4,779	5,119	340
FTE	39	38	39	1

The resource increase for International Nuclear Safety Support in FY 2002 includes:

- Salaries and benefits increase resulting from the increase in FTE and the governmentwide FY 2002 pay raise.
- FTE increase attributable to anticipated increasing workload associated with the international Convention on Nuclear Safety.

Program Outputs

The following program outputs have been identified for the International Nuclear Safety Support arena.

OUTPUT MEASURES				
Output	**FY 1999 Actual**	**FY 2000 Actual**	**FY 2001 Target**	**FY 2002 Target**
Negotiate/renew bilateral exchange arrangements between NRC and appropriate foreign counterparts to ensure that an effective framework for NRC's international exchanges is in place (FY 1998: Completed 7 arrangements.)	Target: Negotiate/ renew 5 arrangements. Actual: Completed 4 arrangements with the fifth arrangement awaiting the appointment of a new executive official in South Africa.	Target: Negotiate/ renew 5 arrangements. Actual: Completed 8 arrangements in FY 2000.	Negotiate/renew 3-6 arrangements.	Negotiate/renew 3-6 arrangements.
Issuance of NRC licenses. (FY 1998: Completed 90 staff reviews. 100 percent were completed within 60 days.)	Target: Complete reviews for and issue as appropriate, approximately 75-100 NRC import/ export authorizations (NRC licenses or amendments). Staff reviews will be completed for 90 percent of the cases within 60 days. Actual: Completed 103 staff reviews. 100 percent were completed within 60 days.	Target: Complete reviews for and issue as appropriate, approximately 75-100 NRC import/ export authorizations (NRC licenses or amendments). Staff reviews will be completed for 90 percent of the cases within 60 days. Actual: Completed over 156 staff reviews. 100 percent were completed within 60 days.	Complete reviews for and issue as appropriate, approximately 85-125 NRC import/export authorizations (NRC licenses or amendments). Staff reviews will be completed for 100 percent of the cases within 120 days.	Complete reviews for and issue as appropriate, approximately 85-125 NRC import/export authorizations (NRC licenses or amendments). Staff reviews will be completed for 100 percent of the cases within 120 days.

OUTPUT MEASURES				
Output	**FY 1999 Actual**	**FY 2000 Actual**	**FY 2001 Target**	**FY 2002 Target**
Reviews of Executive Branch proposed Part 810 licenses, subsequent arrangements, and Section 123 Agreements for Cooperation. (FY 1998: Completed 34 staff reviews. 100 percent were completed within 60 days.)	Target: Complete staff reviews within 60 days for all cases involving non-nuclear weapon states. Actual: Completed 23 staff reviews. 100 percent were completed within 60 days.	Target: Complete staff reviews within 60 days for all cases involving non-nuclear weapon states. Actual: Completed 16 staff reviews. 100 percent were completed within 60 days.[6]	Complete staff reviews within 60 days for all cases involving non-nuclear weapon states.	Complete staff reviews within 60 days for all cases involving non-nuclear weapon states.

ENDNOTES

1. Domestic safeguards are those nuclear material control and accounting measures and physical protection measures implemented by and within any country, including the U. S. , to prevent sabotage of nuclear materials or facilities or theft or diversion of nuclear materials by an individual or a group within that country. Secure use of nuclear materials is achieved through the successful implementation of domestic safeguards. International safeguards are the independent verifications performed by the International Atomic Energy Agency (IAEA) of a country's "peaceful use" declarations on nuclear materials and nuclear facilities.

2. NRC's proactive efforts help to assure that international outcomes are consistent with U.S. goals. The NRC works collaboratively with other U.S. Government agencies to identify and frame U.S. interests and in cooperation with regulatory and safety entities from other countries addressing the same interests. NRC provides international leadership to advance issues and provides support to countries that have taken leadership in advancing issues. NRC represents the U.S. in international meetings, provides policy guidance and technical assistance to other countries and international organizations, and holds positions of influence and/or chairs and participates on interagency and international committees to help us guide the direction and scope of important international safety, safeguards, and nonproliferation initiatives.

3. Significant is defined as such incidents which would include a loss by theft or diversion of one or more Kilograms of weapons grade uranium or plutonium, the detonation by a non-nuclear weapon state of a nuclear explosive device, or the abrogation of Nonproliferation Treaty safeguards commitments by a non-nuclear weapon state.

4. Agreements for Cooperation in the Civil/Peaceful Use of Nuclear Energy are required under section 123 of the Atomic Energy Act of 1954, as amended, to establish the legal framework for technical cooperation in the production and use of special nuclear material, as well as for the supply of such material or fuel cycle equipment, or related sensitive information, to another country or international organization. These Agreements for Cooperation (or Section 123 Agreements, as they are also known) include such nonproliferation conditions and controls as safeguards commitments; a guarantee of no explosive or military use; a guarantee of adequate physical protection; and U. S. rights to approve retransfers, enrichment, reprocessing, other alterations in form or content, and storage of U.S.-supplied or derived material. They must be in effect before an NRC export license can be issued.

5. Although the FY 2000-2005 Strategic Plan identified a target of at least 60 percent for FY 2000, clear objectives have not been established. Therefore, this measure has been deleted.

6. NRC reviews are driven by the Executive Branch based on their cases.

MANAGEMENT AND SUPPORT

BUDGET OVERVIEW

Summary	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	59,905	61,955	65,139	3,184
Contract Support and Travel	84,232	84,126	87,050	2,924
Total Budget Authority	144,137	146,081	152,189	6,108
FTE	630	614	617	3

The budget request of $152.2M and 617 FTE supports agency activities in five major program areas: management services, information technology and information management, financial management, policy support, and permanent change of station. Of the total budget increase of $6.1M, $3.2M is for increased salaries and benefits primarily associated with the governmentwide FY 2002 pay raise. The remaining increase of $2.9M for contract support and travel is primarily in the areas of management services and information technology and information management. The increase in management services results primarily from increases in (1) projected headquarters rent costs, (2) projected rent costs for Region IV after the current lease expires in October 2001, (3) headquarters facilities management costs caused by the building refurbishment program in Two White Flint North, and (4) transit subsidies. The increase in information technology and information management is primarily a result of funding for new initiatives, including: (1) the initial implementation of web and data warehouse architecture, (2) replacement of agency copiers and printers, (3) requirements analysis and design of a new Agencywide Documents Access and Management System (ADAMS) public interface, (4) additional support for processing documents into ADAMS, (5) increased network connection speeds for resident inspector sites, and (6) increased computer security activities.

MEASURING RESULTS - CORPORATE MANAGEMENT STRATEGIES

The NRC has developed four **corporate management strategies** to help accomplish our strategic and performance goals. These **strategies** also help the support offices better serve their customers within the agency to help them achieve the agency's goals. Our **strategic** and **performance goals** focus on the mission or business of the NRC. Our corporate management strategies describe the means by which the NRC will conduct its business to ensure success in implementing the FY 2000-2005 Strategic Plan and accomplishing the agency's mission.

Four Corporate Management Strategies and their Implementing Strategies

1. To **employ innovative and sound business practices**, the NRC will employ the following strategies:

    - We will strengthen collaborative processes for conducting business among support offices and between support and program offices.

    - We will improve customer service, balancing internal customer needs with overall agency priorities and available resources.

    - We will find new and better ways of doing business to increase effectiveness and efficiency of operations.

    - We will create and maintain a planning, budgeting, and performance management process that is focused on outcomes and provides an effective tool for setting goals, allocating resources, tracking progress, measuring results, and identifying areas for improvement.

    - We will strengthen our financial systems and processes to ensure that our financial assets are adequately protected consistent with risk and that our financial information is better integrated with decisionmaking.

    - We will acquire goods and services in an efficient manner that helps to accomplish our mission, ensures fair and equitable treatment for all parties wishing to do business with the NRC, and results in the best value to the NRC.

    - We will modify our management and organizational structure, as appropriate, to meet the changing demands of internal and external factors, such as the economic

deregulation of the electric utility industry and any resulting consolidation of the nuclear industry.

2. To **sustain a high-performing, diverse workforce**, the NRC will employ the following strategies:

   - We will recruit, hire, and retain a high-quality, diverse workforce with the skills needed to achieve our mission and goals.

   - We will assess our scientific, engineering, and technical core competency needs and design a strategic workforce plan to address critical skills gaps and guide the agency in the recruitment, development, and retention of a highly skilled diverse workforce.

   - We will foster a work environment that is free of discrimination and provides opportunities for all employees to optimally use their diverse talents in support of our mission and goals.

   - We will base our human resource decisions on sound workforce planning and analysis and develop succession strategies for key positions and critical skills.

   - We will improve the capability of our workforce through training, development, and continuous learning.

   - We will select and develop strong managers who can provide vision and strategic leadership.

   - We will focus on results by linking rewards and recognition to outcomes and organizational effectiveness.

3. To **provide proactive information management and information technology services**, the NRC will employ the following strategies:

   - We will work jointly with program and support offices to integrate information technology and business planning as a means of achieving agency goals and strategies.

   - We will make it easier for the staff to acquire, access, and use the information they need to perform their work.

- We will assume a leadership role in improving the agency staff's capability to use current and planned information technology to enhance performance.

- We will provide and maintain a robust, reliable, cost-effective, and "user-friendly" information technology infrastructure that is driven by the agency business needs.

- We will work jointly with stakeholders to optimize the delivery of information technology and management service.

- We will improve the ability of the NRC and external entities to conduct our mutual business electronically.

- We will provide external stakeholders the ability to easily access desired publicly available information to aid in their participation in the NRC's regulatory processes, and to enhance understanding of the agency's mission, goals, and performance.

4. To **communicate strategic change,** the NRC will use the following strategies:

- We will review and assess the effectiveness of communication channels and methods within the NRC to ensure that they support the needs of a changing environment.

- We will assess the effectiveness of communications by evaluating the effectiveness of communication channels or methods used to provide information to the public.

- On the basis of the assessments above, we will develop and implement communication plans that support strategic change and foster the desired work environment.

- We will improve communication with the public by using strategies that recognize the ongoing changes in the environment external to the agency.

- We will respond to requests and inquiries from stakeholders in a timely, courteous, and professional manner.

- We will identify regulatory decisions or issues that are most likely to generate substantial public interest at an early stage of development and initiate actions to inform and involve the public.

GOVERNMENTWIDE REFORMS

The NRC's performance plan supports governmentwide reforms outlined in the President's document, *A Blueprint for New Beginnings.* For example, the corporate management strategy to "Employ Innovative and Sound Business Practices" and supporting strategies encompass our continuing efforts to make greater use of performance-based contracts (PBSC) and to award contracts over $25,000 using PBSC techniques for not less than 20 percent of the total eligible service contracting dollars. The strategy also addresses NRC's continuing efforts to expand A-76 competition and assure more accurate Federal Activities Inventory Reform (FAIR) Act inventories. NRC will complete public-private or direct conversion competition on not less than five percent of the FTE's listed on our FAIR Act inventories.

In terms of delayering management levels, the agency has completed streamlining initiatives resulting in the consolidation of offices and functions, and decreased the ratio of supervisors and managers to employees by one half. The performance plan includes a supporting strategy to modify management and organizational structure, as appropriate, to meet changing internal and external factors.

The NRC's corporate management goal to "Provide Proactive Information Management and Information Technology Services" also encompasses the governmentwide reform to expand the applications of on-line procurement and other E-government services and information. Supporting strategies directly address improving our ability to conduct business electronically and providing access to external stakeholders to publicly available information. NRC will continue to post all synopses for acquisition valued at over $25,000 for which widespread notice is required and all associated solicitations unless covered by an exemption in the Federal Acquisition Regulation on the governmentwide point-of-entry website, (http://www.fedbizopps.gov).

ACCOMPLISHMENTS

- Launched a major procurement reform initiative entitled, "Focused Source Selection," under NRC's Procurement Reinvention Laboratory. The procedure involves early posting of the scope of work during a pre-solicitation phase and an early assessment of bidder capabilities. The solicitation itself would be sent to the top three ranked pre-solicitation bidders. Focused Source Selection is the first of its kind in the Federal government and provides a web-based, streamlined, interactive, and more focused approach to procurement of management support products and services.

- Converted contracts for facility management services, data entry and other support services to performance-based contracts. NRC also served on a Federal-wide

implementation task group which developed the "Best Practices Guide on Performance-Based Service Contracting," issued by the Office of Federal Procurement Policy which is currently in use by other Federal agencies. Consistent with performance-based service contracting objectives, NRC includes measurable performance requirements and quality standards in contracts to provide contractors with a better understanding of contract requirements.

- Expanded the application of on-line procurement by publicizing its business opportunities and posting its solicitations electronically on a single, easy to access and easy to use Governmentwide Internet location, http://www.fedbizopps.gov. The agency tested a new interactive, web-based procurement process that allows firms to do business with the NRC the same way they do business with commercial firms. Finally, the agency streamlined its paper-intensive ordering and payment functions through increased use of the BankCard.

- Conducted (1) staff training to provide the required knowledge and skills necessary to support implementation of new NRC regulatory and business processes, including the revised reactor oversight process, ADAMS, and the agency Financial and Human Resources Management System, and (2) change management training to help our managers and staff adapt to the dynamic environment resulting from the simultaneous implementation of these new regulatory and business processes.

- Reduced the number of managers and supervisors from slightly over 700 in 1993 to approximately 330 as of March 2001. Achieved the agency target ratio of 8 to 1 in FY 1999 and has maintained an 8.5 to 1 ratio since then.

- First Federal agency to achieve Year 2000 compliance for internal systems being on time and within budget.

- Began a major redesign of NRC's public Web site to enhance the public's ability to find the information needed to participate in the regulatory process, improve information quality and timeliness, and comply with requirements of the Americans with Disabilities Act.

- Initiated a pilot test using "media streaming" technology to broadcast selected public Commission meetings live over the Internet. Broadcasted 16 public Commission meetings over the Internet as a means of improving communications with the public. All "streamed" meetings will be archived and available to Internet users worldwide at www.nrc.gov/live.html.

MANAGEMENT AND SUPPORT

- Received, for the sixth successive year, an unqualified audit opinion on the Chief Financial Officer's financial statements.[1]

- Met the requirements of the Omnibus Budget Reconciliation Act of 1990, by collecting fees to offset approximately 100.7 percent of NRC's new budget authority that was required to be offset by fees.

- Supported the governmentwide electronic commerce initiative by making approximately 100 percent of NRC's payments electronically.

- Met the goal to maintain delinquent debt at year-end to less than 1 percent of NRC's billings for FY 2000.

- The NRC published a book entitled Permissible Dose: A History of Radiation Protection in the Twentieth Century. It is a study of radiation protection standards and of Federal efforts to ensure radiation safety for nuclear workers and the general public from the hazards of civilian nuclear programs. Permissible Dose provides an in-depth examination of the scientific and political controversies that have surrounded evaluations of the health effects of exposure to low levels of radiation.

BUDGET AUTHORITY AND FULL-TIME EQUIVALENT BY PROGRAM

Summary	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Program ($K)				
Management Services	54,629	54,060	57,723	3,663
Information Technology and Information Management	47,197	49,509	50,831	1,322
Financial Management	15,583	14,690	14,898	208
Policy Support	21,198	22,322	23,537	1,215
Permanent Change of Station	5,530	5,500	5,200	-300
Total Budget Authority	144,137	146,081	152,189	6,108
Full-Time Equivalent Employment by Program				
Management Services	178	172	172	0
Information Technology and Information Management	171	169	170	1
Financial Management	108	104	105	1
Policy Support	173	169	170	1
Permanent Change of Station	0	0	0	0
Total FTE	630	614	617	3

JUSTIFICATION OF PROGRAM REQUESTS

Management and Support is comprised of five programs. Program descriptions and output measures for each program follow.

Management Services

	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	15,698	15,854	16,565	711
Contract Support and Travel	38,931	38,206	41,158	2,952
Total Budget Authority	54,629	54,060	57,723	3,663
FTE	178	172	172	0

The resource increase for Management Services in FY 2002 includes:

- Salaries and benefits increase resulting from the governmentwide FY 2002 pay raise.
- Contract support and travel increase primarily associated with increases in (1) projected headquarters rent costs, (2) projected rent costs for Region IV after the current lease expires in October 2001, (3) headquarters facilities management costs caused by the building refurbishment program in Two White Flint North (TWFN), and (4) transit subsidies.

NRC administration includes responsibility for rent and facilities management, security, administrative services, and acquisition of goods and services. These functions are conducted using innovative and sound business practices and are in direct support of program staff in carrying out the mission and achieving the performance goals of the agency.

Rent and facilities management includes rent charges for the two-building White Flint North complex, the warehouse and other ancillary space, and the regional offices, as well as the day-to-day oversight of office and support space. This includes establishing policies, standards, and procedures for NRC-wide space and building acquisition and utilization, administering the terms of the GSA delegation program, operating and maintaining buildings and grounds, and managing the agency's conservation program. Rent charges are expected to rise in FY 2002, primarily in Region IV, where the current lease expires in October 2001 and a significant cost increase is anticipated. Facilities management costs will increase primarily because of additional refurbishment planned for TWFN, as NRC approaches its 8th year of occupancy in the building.

MANAGEMENT AND SUPPORT

An efficient and effective administrative support infrastructure is essential in supporting the programmatic efforts of the agency. Management oversight is provided for: (1) transportation services, including management of motor vehicles, and traffic mitigation, including employee subsidies for public transit (which will increase as a result of the new Executive Order on Federal Workforce Transportation); (2) office provisions, including warehouse operations, supplies, office equipment, and furniture; (3) administrative services, including conference facilities scheduling and management, audio-visual services, recycling, and various facility-related support services; (4) rule review, internal directives system management, rulemaking support services, and translations services; and (5) mail, messenger, and postage services.

Contract management is necessary to ensure that the agency obtains goods and services in an efficient manner consistent with mission needs. It includes the development and implementation of agencywide contracting policies and procedures, and implementation of the agency's Small Business Program, whose primary goal is to ensure that small 8(a), disadvantaged, and women-owned businesses receive a full and fair opportunity to participate in NRC's procurement activities. It also includes the development and application of streamlined procurement processes and adherence to sound business practices in the negotiation, award, administration, and closeout of agency contracts.

In managing the agency's human resources, a variety of activities are conducted in the areas of recruitment, organization, employee and labor relations, program and policy analysis, placement, utilization, and training and development of agency employees. Administration of NRC-wide occupational health and safety, employee assistance, health and fitness, and child development programs are also part of the Human Resources program. In FY 2002, additional focus will be directed toward managing several human capital investment programs, including a student loan repayment program and an agencywide intern program.

Management and Support training and development comprises three major task areas: external training, in-house training and development, and management development. In concert, these task areas support the mission-related need to facilitate workplace learning by ensuring that continuous learning opportunities are supported, promoted, and fully integrated into the organizational culture as changes take place in organizational goals, technologies, programs, and environment, and reforms to NRC's regulatory programs are implemented. In support of this program, human resource professionals facilitate the transfer of new knowledge, skills, and competencies to meet the NRC's organizational, occupational, and individual performance expectations as well as meet recruitment goals. Management and Support training and development will continue to be provided using the "systems approach to training" principles. The "systems approach to training" is a standard multiphase program that includes training needs analysis, training program design and development, implementation of training, and program evaluation.

NRC's recruitment and staffing efforts support the maintenance of a competent, motivated, and culturally diverse workforce. This includes activities necessary to recruit and hire new employees and to assign both new and current employees to positions established to carry out the mission of the agency. Principal activities include position management and evaluation, recruitment contacts, advertising and recruitment visits, competitive and non-competitive staff placement activities including merit promotion, pay-setting, personnel transaction processing, and personnel records maintenance.

Beginning in FY 2001, the NRC will develop and implement an intern program to attract individuals with high potential to the workforce and develop a solid base of capability. The agency projects that one-third of our engineers and scientists will be eligible for optional retirement by the end of FY 2005. Consequently, NRC will launch a plan of action to assess NRC's scientific, engineering, and technical core competency needs. The NRC will design a workforce plan to address critical skills gaps and guide the agency in the recruitment, development, and retention of a highly skilled diverse workforce. This new initiative will support the achievement of all the agency's performance goals and will ensure that adequate attention is devoted to addressing and resolving core competency issues.

Workforce effectiveness and utilization efforts provide the infrastructure, policy, support, information, and analysis necessary for NRC managers and employees to carry out their responsibilities. The task areas include services and products to enhance organizational effectiveness (such as functional realignments, reductions in supervisory/managerial personnel, and increased span of management control) in accordance with agencywide streamlining efforts, and programs to support management and employee effectiveness, including human resource program and policy development, workforce analysis, administration of employee appraisal and recognition programs, employee relations/labor-management partnership activities, management of human resources information and data, human resources computer application development work, executive succession planning, development of core competencies methodologies, administration of benefits and retirement, employee assistance and health services, and safety programs.

The Office of Small Business and Civil Rights (SBCR) develops, implements, and manages four major programs: (1) Affirmative Action, including the Federal Women's Program and managing diversity process; (2) Civil Rights; (3) Historically Black Colleges and Universities (HBCU); and (4) Small Business Procurement Preference. The programs' missions and major activities support the maintenance of a high-performing and diverse workforce and include: (1) facilitating equal employment opportunity for all NRC employees and applicants for employment through an ongoing affirmative employment process; (2) providing for prompt, fair, and impartial processing of discrimination complaints filed under applicable civil rights statutes; (3) administering grants to HBCU faculty and students, which affords these

individuals the opportunity to participate in NRC's scientific, engineering, and research activities; and (4) ensuring that small 8(a), disadvantaged, and women-owned businesses have full and fair opportunity to participate in NRC procurement activities. Other activities include developing the agency's Affirmative Employment Plan, and briefing the Commission at semi-annual public meetings on the problems, progress, and status of the agency's EEO program.

Program Outputs

The following program outputs have been identified for the Management Services program.

OUTPUT MEASURES				
Output	**FY 1999 Actual**	**FY 2000 Actual**	**FY 2001 Target**	**FY 2002 Target**
Program assessments to evaluate the effectiveness in various areas of operation and maintenance of the White Flint Complex based upon criteria used by GSA.	Target: A score of 90 or higher (on a scale of 100) on the GSA-supplied criteria. Actual: Program assessment resulted in an average score of 91.	Target: A score of 90 or higher (on a scale of 100) on the GSA-supplied criteria. Actual: Program assessment resulted in an average score of 93.	A score of 90 or higher (on a scale of 100) on the GSA-supplied criteria.	A score of 90 or higher (on a scale of 100) on the GSA-supplied criteria.
One White Flint North (OWFN) Restack Project milestones.	Target: Complete floors 15, 14, 13, and 8 on following schedule: Floor 8: January 1999 Floor 14: April 1999 Floor 15: July 1999 Floor 13: September 1999 Actual: Completed floors 15, 14, 13, and 8 on schedule.	Target: Complete the restack project in June 2000. Actual: Completed the restack project in June 2000.	This measure completed in FY 2000.	This measure completed in FY 2000.

OUTPUT MEASURES				
Output	**FY 1999 Actual**	**FY 2000 Actual**	**FY 2001 Target**	**FY 2002 Target**
Review of draft rules without need for substantive changes and within the Office of the Federal Register and NRC schedules.	Target: Complete reviews within schedule 98 percent of the time. Actual: Completed reviews within schedule 100 percent of the time.	Target: Complete reviews within schedule 99 percent of the time. Actual: Completed reviews within schedule 100 percent of the time.	Complete reviews within schedule 99 percent of the time.	Complete reviews within schedule 99 percent of the time.
Staffing strategies achieve targeted workforce levels.	Target: FTE utilization is within 2 percent authorized ceiling. Supervisory ratio is maintained at 8:1. Actual: Full-time equivalent staff-year and supervisory ratio reduction targets were met.	Target: FTE utilization is within 2 percent of authorized ceiling. Supervisory ratio is maintained at 8:1. Actual: Full-time equivalent staff-year and supervisory ratio reduction targets were met. Utilized approximately 99 percent of NRC authorized FTE.	FTE utilization is within 2 percent of authorized ceiling. Supervisory ratio is maintained at 8:1.	FTE utilization is within 2 percent of authorized ceiling. Supervisory ratio is maintained at 8:1.

OUTPUT MEASURES				
Output	**FY 1999 Actual**	**FY 2000 Actual**	**FY 2001 Target**	**FY 2002 Target**
OMB Directed Acquisition Reform Initiative Measures				
Percent of eligible service contracting dollars (contracts over $25,000) that use Performance-Based Contracting techniques during the Fiscal Year.	New measure in FY 2002.	New measure in FY 2002.	New measure in FY 2002.	Not less than 20 percent.
Percent of required synopses for acquisitions that are posted on the government-wide point-of-entry website (www.fedbizopps.gov) during the Fiscal Year. Synopses for acquisitions are those valued at over $25,000 for which widespread notice is required including all associated solicitations; excludes those covered by an exemption in the FAR.	New measure in FY 2002.	New measure in FY 2002.	New measure in FY 2002.	100 percent of all required synopses.
Percent of FTEs listed on Federal Activities Inventory Reform Act inventories that are completed public-private or direct conversion competitions during the fiscal year.	New measure in FY 2002.	New measure in FY 2002.	New measure in FY 2002.	Not less than 5 percent of FTEs listed.
Diversity of agency workforce groups is equivalent to the relevant American labor market (based on Oak Ridge Institutes of Science and Education availability data).	Target: Workforce groups are no more than 25 percent under-represented Actual: No group was more than 25 percent under-represented in occupations relevant to NRC.	Target: Workforce groups are no more than 25 percent under-represented. Actual: No group more than 25 percent under-represented in occupations relevant to NRC.	Target: Workforce groups are no more than 25 percent under-represented.	Target: Workforce groups are no more than 25 percent under-represented.

OUTPUT MEASURES				
Output	**FY 1999 Actual**	**FY 2000 Actual**	**FY 2001 Target**	**FY 2002 Target**
Strategic workforce planning efforts adequately address core competency requirements.	New measure in FY 2001.	New measure in FY 2001.	Target: Address aging workforce concerns by hiring 25 percent of new professional staff at the entry level. Retain 75 percent of new professional hires over their first four years of employment.	Target: Address aging workforce concerns by hiring 25 percent of new professional staff at the entry level. Retain 75 percent of new professional hires over their first four years of employment.

Information Technology and Information Management

	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	15,125	15,806	16,664	858
Contract Support and Travel	32,072	33,703	34,167	464
Total Budget Authority	47,197	49,509	50,831	1,322
FTE	171	169	170	1

The resource increase for Information Technology and Information Management in FY 2002 includes:

- Salaries and benefits increase resulting from the increase in FTE and the governmentwide FY 2002 pay raise.

- Contract support and travel increase primarily associated with the initial implementation of web and data warehouse architecture, replacement of agency copiers and printers, requirements analysis and design of a new ADAMS public interface, additional support for processing documents into ADAMS, increase of the network connection speeds for resident inspector sites, and increased computer security activities to support the agency's critical infrastructure. These increases are offset by decreases primarily due to decreasing costs for telecommunications services for FTS 2001 in accordance with the new MCI WorldComm contract, completion of the transition to the follow-on Next Generation Network contract for network services, the completion of funding for the ADAMS historical document retrofit program in FY 2001, and the completion of the transition to a new ADAMS release.

The Office of the Chief Information Officer (OCIO) plans, directs, and oversees the NRC's information resources, including information technology infrastructure, applications systems, and delivery of information management services, to meet the mission and performance goals of the agency. The OCIO ensures that information technology resources are acquired and information resources are managed consistent with Federal Information Resources Management laws and regulations, including implementation of the Clinger-Cohen Act of 1996.

MANAGEMENT AND SUPPORT

The NRC will continue the direction and coordination of information resources planning, including development of information technology (IT) and information management (IM) measures, development of agency IT architectures and standards, assessment of technology trends and their applicability to NRC business needs, direction of planning for new information technology, and management of the agency's IT Capital Planning and Investment Control process.

NRC's computer security program will continue to be conducted in accordance with Federal laws and regulations. These program activities implement administrative, technical, and physical security measures for the protection of the agency's information, automated information systems, and information technology, which includes special safeguards to protect classified information, unclassified safeguards information, and sensitive unclassified information that is processed, stored, or produced in all automated information systems.

The NRC will continue to support the agency's mission and programs by ongoing development, integration, implementation, management, and support of the agency's IT infrastructure and IM services. Activities include the management and operation of the Customer Support Center and desktop support. Telecommunications services and support provides agency long-distance and headquarters local telecommunications services to meet current business needs, operations and administrative support for agency communications systems, personal communications equipment (pagers, faxes, modems, cellular phones), and support for the NRC Operations Center. NRC IT infrastructure provides for development, integration, implementation, maintenance, and support of all agency network, telecommunications, and desktop resources; the operation and systems programming support of agencywide application systems and timesharing services; and technical support for design of the agency's information technology architecture pertaining to IT infrastructure development, standards, and practices.

Information management activities will continue to provide for organizational and electronic integration of agency IM functions and for agencywide IM services. This includes planning, developing policy for, managing, and delivering services related to the Public Document Room; the NRC Technical Library; the File Center; the Freedom of Information Act and Privacy Act programs; the agency's Information Collection Budget; and NRC's records, forms, and correspondence management programs. Activities include duplicating, copying, printing, editing, writing, and graphic services; centralized receipt, processing, distribution and electronic and paper inventory maintenance of agency documents; and electronic publishing, including NRC's World Wide Web internal and external sites. Also includes efforts for the development, implementation and maintenance of ADAMS, the agency's electronic system that supports document creation and capture, workflow maintenance, records management, and search and retrieval by both NRC staff and the public.

Program Outputs

The following program outputs have been identified for the Information Technology and Information Management program.

OUTPUT MEASURES				
Output	**FY 1999 Actual**	**FY 2000 Actual**	**FY 2001 Target**	**FY 2002 Target**
Availability of key infrastructure services which are provided as part of the agency information technology infrastructure. (FY 1998: Baseline established as 1 percent unavailability.)	Target: Key infrastructure services will be available 99.5 percent. Actual: Key infrastructure services available 99.5 percent.	Target: Key infrastructure services will be available 99.6 percent. Actual: Key infrastructure services available 99.6 percent.	Key infrastructure services will be available 99.6 percent.	Key infrastructure services will be available 99.6 percent.
Availability of agency network servers within the agency information technology infrastructure (determined by the percentage of work hours agency network servers are available for staff use exceeding scheduled downtime and scheduled outages). (FY 1998: Baseline established as 1 percent unavailability.)	Target: Agency network servers will be available 99.5 percent. Actual: Agency network servers available 99.8 percent.	Target: Agency network servers will be available 99.8 percent. Actual: Agency network servers available 99.8 percent.	Agency network servers will be available 99.8 percent.	Agency network servers will be available 99.8 percent.
Level of staff satisfaction with information in NRC's primary applications systems. (FY 1998: Baseline established as 3.5 on a scale of 1 to 5.[2])	No survey performed in FY 1999 due to higher workload priorities.	This measure does not have a FY 2000 target. This measure changed from annual to biennial to minimize burden on staff.	Improve staff satisfaction level to 3.8.	This is a biennial measure and does not have a FY 2002 target.

OUTPUT MEASURES				
Output	**FY 1999 Actual**	**FY 2000 Actual**	**FY 2001 Target**	**FY 2002 Target**
Complete the milestones specific to the ADAMS Assessment Action Plan for Challenge Area 5 for improving access to ADAMS. (FY 1998 Baseline: Not required this year.)	New measure in FY 2001.	New measure in FY 2001.	Install ADAMS Release 3.3 version; conduct public outreach programs; complete plan for future releases.	TBD based on results of plan to be developed in FY 2001.

Financial Management

	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	9,485	9,555	10,102	547
Contract Support and Travel	6,098	5,135	4,796	-339
Total Budget Authority	15,583	14,690	14,898	208
FTE	108	104	105	1

The resource increase for Financial Management in FY 2002 includes:

- Salaries and benefits increase resulting from the increase in FTE and the governmentwide FY 2002 pay raise.
- Contract support and travel decrease primarily associated with the completion of activities for cost accounting and efficiencies resulting from the implementation of Travel Manager software and reduction of the data entry contract.
- FTE increase associated with a cost-effective substitution of FTEs in lieu of contractor support for data entry.

The Office of the Chief Financial Officer (OCFO) provides for the required functions of budget planning, development, and oversight of budget execution. The OCFO manages the agency planning process, which includes updating the agency's strategic plan on a triennial basis, developing the annual performance plan, and issuing the annual performance report, as required by the Government Performance and Results Act of 1993. The NRC published the FY 2000–FY 2005 Strategic Plan in September 2000.

Accounting activities include the maintenance of a core accounting system, financial reporting to OMB and Treasury, payments to vendors for goods and services received, issuing bills, and an annual, audited financial statement. The FY 2001 financial statement will be published by March 2002. During FY 2001, the NRC will implement the Human Resources, Time and Labor, Payroll, and Cost Accounting components of the new agencywide integrated financial

and resource management system (STARFIRE). Efficiencies gained from the implementation of STARFIRE have been reflected in this budget submission. Additional savings will be factored into future budget requests.

The NRC is required to recover approximately 100 percent of the agency's budget authority through license and annual fees in FY 2000, 98 percent in FY 2001, and 96 percent in FY 2002. Activities necessary to meet the requirement to recover fees include developing and issuing rules that reflect fees to offset the budget authority each year; providing policy, processing applications, and analyzing fee-related data; issuing approximately 5,200 annual fee bills and 1,700 full cost licensing and inspection invoices per year; pursuing collection action; and responding to Congressional constituent and licensee correspondence regarding fee billings. The office also provides services directly to employees, such as temporary duty travel services and change of station travel, as well as the traditional functions of payroll services that ensure that disbursements are accurate and timely.

These Financial Management activities require the employment of innovative and sound business practices and the effective communication of strategic change, which support program staff in carrying out the mission of the agency and achieving their performance goals.

Program Outputs

The following program outputs have been identified for the Financial Management program.

OUTPUT MEASURES				
Output	**FY 1999 Actual**	**FY 2000 Actual**	**FY 2001 Target**	**FY 2002 Target**
Timeliness and quality of NRC's Annual Financial Statement. (FY 1998: Published the FY 1997 Statement in March 1998; received an unqualified opinion.)[1]	Target: Publish the FY 1998 Statement by March 1999 and receive an unqualified opinion. Actual: Published the FY 1998 Statement in March 1999 and received an unqualified opinion.	Target: Publish the FY 1999 Statement by March 2000 and receive an unqualified opinion. Actual: Published the FY 1999 Statement in March 2000 and received an unqualified opinion.	Publish the FY 2000 Statement by March 2001 and receive an unqualified opinion.	Publish the FY 2001 Statement by March 2002 and receive an unqualified opinion and no material weaknesses.

OUTPUT MEASURES				
Output	**FY 1999 Actual**	**FY 2000 Actual**	**FY 2001 Target**	**FY 2002 Target**
Collect amounts due NRC. (FY 1998: Actual collections were within 0.9 percent of projected collections; receivables at $2.3 million.)	Target: Achieve 98 percent actual collections when compared with projected collections and maintain past due accounts receivable at $5 million or less by the end of the fiscal year. Actual: Achieved 98.6 percent. Maintained past due accounts at $2.7 million.	Target: Achieve approximately 100 percent actual collections when compared with projected collections and maintain past due accounts receivable at $5 million or less by the end of the fiscal year. Actual: Achieved 100.7 percent. Maintained past due accounts at $2 million.	Achieve approximately 100 percent actual collections when compared with projected collections. Maintain past due accounts receivable at 1 percent or less of annual billings for the fiscal year.	Achieve approximately 100 percent actual collections when compared with projected collections. Maintain past due accounts receivable at 1 percent or less of annual billings for the fiscal year.
Pay Bills (FY 1998: 98 percent of bills by EFT; 94 percent of payments on time.)	Target: Pay 98 percent of bills by electronic funds transfer (EFT); achieve 94 percent of payments on time. Actual: Paid an average of 98 percent of vendor bills by EFT; achieved 96 percent of payments on time.	Target: Pay approximately 98 percent of bills by electronic funds transfer (EFT); achieve 94 percent of payments on time. Actual: Paid 99 percent of bills by EFT; achieved 96 percent of payments on time.	Pay approximately 98 percent of bills by electronic funds transfer and achieve 94 percent of payments on time.	Pay approximately 98 percent of bills by electronic funds transfer and achieve 94 percent of payments on time.

OUTPUT MEASURES				
Output	**FY 1999 Actual**	**FY 2000 Actual**	**FY 2001 Target**	**FY 2002 Target**
Fee Rule (FY 1998: Issued proposed rule in March 1998 and final rule in June 1998.	Target: Issue proposed rule by March 1999 and publish final rule by June 1999. Actual: Issued proposed rule in March 1999. Published final rule in June 1999.	Target: Issue proposed rule by March 2000 and publish final rule by June. Actual: Issued proposed rule in March 2000. Published final rule in June 2000.	Issue proposed rule by March. Issue final rule by June.	Issue proposed rule by March. Issue final rule by June.
Submit and publish annually to OMB, Congress, and the President, the Performance Plan and Program Performance Report. (FY 1998: Not required this fiscal year.)	Target: Submit FY 2000 Performance Plan to OMB and Congress Actual: Met target Program Performance Report not required to be submitted.	Target: Submit FY 2001 Performance Plan to OMB and to Congress on time. Actual: Met target. Target: Submit FY 1999 Program Performance Report to Congress and the President on time. Actual: Met target.	Submit FY 2002 Performance Plan to OMB and to Congress on time. Submit FY 2000 Program Performance Report to Congress and President on time.	Submit FY 2003 Performance Plan to OMB and to Congress on time. Submit FY 2001 Program Performance Report to Congress and President on time.
Submit and publish the tri-annual Strategic Plan to Congress. (FY 1998: Not required this fiscal year. Present Strategic Plan is FY 1997-FY 2002.)	Not required to be updated until FY 2000.	Target: Submit and publish FY 2000-FY 2005 Strategic Plan to Congress on September 29, 2000. Actual: FY 2000-FY 2005 Strategic Plan submitted to Congress on September 29, 2000.	Not required until FY 2003.	Not required until FY 2003.

Policy Support

	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	19,597	20,740	21,808	1,068
Contract Support and Travel	1,601	1,582	1,729	147
Total Budget Authority	21,198	22,322	23,537	1,215
FTE	173	169	170	1

The resource increase for Policy Support in FY 2002 includes:

- Salaries and benefits increase resulting from the increase in FTE and the governmentwide FY 2002 pay raise.

- Contract support and travel increase primarily associated with increases for (1) the Secretariat, due to increased costs for maintenance of the NRC Web-site version of the Commission's activities page, and a new verbatim stenographic contract for Commission meetings, and (2) the Advisory Committee for Reactor Safeguards, due to increased activity in reactor license renewal.

- FTE increase to support increased activity in reactor license renewal by the Advisory Committee for Reactor Safeguards.

Several NRC organizations provide policy support services to the program area staffs in performing their regulatory mission activities and achieving their performance goals. This section describes major support activities that will be conducted during FY 2001–FY 2002.

The Commission is the governing body of the Nuclear Regulatory Commission. It is responsible for determining fundamental policy and for guiding staff offices to ensure that the civilian use of nuclear energy is regulated in a manner consistent with public health and safety, environmental quality, national security, and antitrust laws. The following Commission-level offices provide support to the Commission.

Commission Appellate Adjudication (OCAA) assists the Commission in its disposition of appeals of licensing board decisions and other adjudicatory matters coming before the Commission and monitors pending board cases. OCAA also has lead responsibility for adjudication of certain aspects of license transfers, which has become an area of agency success.

Congressional Affairs (OCA) is responsible for ensuring that the NRC meets its statutory responsibility to keep the appropriate Congressional committees and members fully and currently informed with respect to the agency's activities. OCA provides advice and assistance to the Chairman, Commissioners, and the NRC staff on all relations with Congress. The Office maintains liaison with Congressional committees and members of Congress on matters of interest to them and to the NRC; coordinates appearances and testimony of NRC officials at hearings and briefings, and schedules and coordinates courtesy visits as needed. The Office also serves as the primary point of contact for all NRC written communications with Congress—reviewing, coordinating, and concurring in all outgoing correspondence to Congress. Also, OCA monitors legislative proposals, bills, markups, and hearings of interest to the agency.

The General Counsel is the Commission's chief legal advisor and advises the Commission on the legal aspects of agency policy initiatives, programs, rules, and adjudicatory matters. The Office of the General Counsel (OGC) gives advice and assistance to the Commission and NRC offices on matters involving interagency agreements, legislation, procurement, intellectual property, budget, fees, security, alternate dispute resolution matters and administrative functions, represents the NRC in public rulemaking and administrative hearings involving procurement, personnel, personnel security, labor relations, equal employment opportunity matters, and represents the NRC in coordination with the Department of Justice in proceedings on judicial review. The General Counsel is the designated agency official and gives advice to the Commission and staff on all matters related to ethics and conflict of interest, and is responsible for administering the ethics program prescribed by the Office of Government Ethics. These efforts contribute to improvements in the efficiency and effectiveness of the agency's operations, and to public confidence in the overall integrity of the agency's decisionmaking processes, with a corresponding avoidance of unnecessary regulatory burden on those doing business with the NRC.

Public Affairs (OPA) provides the public and media with prompt, accurate, clear, and complete information about NRC policies, programs, and activities to help maintain public confidence in the agency's regulatory program. OPA assists the Chairman in carrying out responsibilities as principal spokesman for the NRC, and assists the Commission and senior NRC staff by managing and directing the agency's public affairs program. This includes keeping top management informed of public interest in and media coverage of NRC's regulatory activities,

advising the Commission on public affairs strategies that can be implemented effectively, and advising management on conducting public meetings. To keep the public and media informed, Public Affairs distributes and posts to the NRC Website press releases, speeches, fact sheets, brochures, and other key documents. OPA responds to inquiries from reporters and the public by electronic mail, telephone, facsimile, and letter, providing information as requested. Public Affairs arranges technical interviews with the media, as needed, and maintains regular dialogue with reporters who follow NRC to notify them about major agency actions and release of key documents when they are about to be issued and to gain advance knowledge of what will be reported.

The Secretariat provides executive management services to support the Commission and to implement Commission decisions. This includes the planning and scheduling of Commission business by preparing the Commission's meeting agenda, and managing the Commission's decisionmaking process; codifying Commission decisions in memoranda directing staff actions; monitoring staff compliance of pending issues and commitments; processing and control of Commission correspondence; maintaining the Commission's historical paper records collection; and administration of the NRC historical program. The Secretariat maintains the Commission's adjudicatory and rulemaking dockets, including the management of the Commission's electronic hearing docket, which enhances the processes for handling the Commission's adjudicatory activities. The Secretariat also integrates automation initiatives into the Commission's administrative systems.

The Executive Director for Operations (EDO) leads the operational and administrative activities of the agency. This includes operational planning, an aspect of the Planning, Budgeting, and Performance Management Process, in which the EDO plans and directs the programs and support activities to regulate civilian use of nuclear reactors and nuclear materials which ensure the regulatory mission of the NRC is met. The EDO also provides leadership of the NRC's communications activities to improve communications and increase public confidence in NRC's regulatory activities.

The Advisory Committee on Reactor Safeguards (ACRS) is independent of the NRC staff and is statutorily mandated by the Atomic Energy Act of 1954, as amended. The ACRS reviews safety studies and facility license and license renewal applications and makes reports thereon to the NRC, advises the NRC on the hazards of proposed and existing reactor facilities and the adequacy of proposed reactor safety standards, and performs such other duties as the NRC may require. At present, the ACRS is reviewing several matters related to applications for renewal of nuclear power plant licenses, reactor oversight programs, generic safety issues, rulemaking, risk-informed and performance-based regulatory approaches, code review, and other regulatory activities. The ACRS, on its own initiative, may conduct reviews of specific generic matters or nuclear facility safety-related items. As requested by the Commission, the ACRS also

performs a comprehensive review of the NRC Safety Research Program and provides a report to the Commission annually. In addition, upon request from the program offices, the ACRS provides technical advice to other outside organizations. Advisory committees by design are structured to offer the public a forum to participate in matters of strong public interest. The independent expert nature of both the ACRS and the Advisory Committee on Nuclear Waste (ACNW) lends itself in the facilitation of increased public confidence and safety related to matters involving the regulation of nuclear reactors, safeguards, and the safe use of nuclear waste materials.

The ACNW was established by the Commission in June 1988 to provide independent technical advice on agency activities, programs, and key technical issues associated with the regulation, management, and safe disposal of radioactive waste. In performing its work, the Committee examines and reports on areas of concern as requested by the Commission and may undertake studies and activities on its own initiative, as appropriate. The bases of this advice include regulations governing low-level waste disposal, and other applicable regulations and legislative mandates. The scope of this advice includes reviewing and commenting on issues that affect transportation, storage, decommissioning, and application of risk-informed and performance based regulation. The Committee interacts with representatives of NRC, ACRS, other Federal, State, and local agencies, Indian tribes, the public, and other stakeholders, as appropriate, to fulfill its responsibilities.

Permanent Change of Station

	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	0	0	0	0
Contract Support and Travel	5,530	5,500	5,200	-300
Total Budget Authority	5,530	5,500	5,200	-300
FTE	0	0	0	0

The resource decrease for Permanent Change of Station contract support and travel in FY 2002 reflects a projected decline in the number of employee moves and in the number of "outside" hires.

This program is carried out to ensure that NRC personnel who are required to change duty stations are afforded the required (1) relocation services and expenses in connection with the sale and purchase of a residence, (2) transportation and storage of household goods, (3) subsistence while occupying temporary quarters, and (4) other miscellaneous moving expenses.

ENDNOTES

1. An unqualified audit opinion means that the financial statements present fairly, in all material respects, the agency's financial position, results of operations, and cash flows in conformity with generally accepted accounting principles.

2. The basic question asks for overall satisfaction with reliability, accuracy, and accessibility of information in selected systems.

INSPECTOR GENERAL

OFFICE OF THE INSPECTOR GENERAL

MISSION

Congress passed the Inspector General (IG) Act in 1978 to ensure integrity and efficiency within the Federal government and its programs. In accordance with the 1988 amendment to the Act, the NRC's Office of the Inspector General (OIG) was established as a statutory entity on April 15, 1989.

The OIG's mission is to (1) independently and objectively conduct and supervise audits and investigations relating to the NRC's programs and operations; (2) prevent and detect fraud, waste, and abuse; and (3) promote economy, efficiency, and effectiveness in NRC's programs and operations. In addition, OIG reviews existing and proposed regulations, legislation and directives and provides comments, as appropriate, regarding any identified significant concern. The Inspector General also keeps the NRC Chairman and members of Congress fully and currently informed about problems, makes recommendations to the agency for corrective action, and monitors NRC's progress in implementing such actions.

GENERAL GOALS

The OIG's general goals comprise the essential elements necessary to effectively realize OIG's principal mission. They also reflect the vision statement adopted by the OIG. "We are the agents of positive change striving for continuous improvement in our agency's management and program operations and in our office."

The OIG will fulfill its legislative mandate by working to achieve the following general goals as stated in its FY 2000–FY 2005 Strategic Plan: (1) To add value to NRC's technical and administrative programs, OIG will identify opportunities for improvement in agency operations and conduct activities for the purpose of preventing and detecting fraud, waste, and abuse; (2) In order to keep our stakeholders well-informed, OIG will enhance its communication and liaison activities with OIG's customers, including NRC management, the U.S. Congress, Government agencies, the nuclear industry, and public entities; (3) OIG will make value-added policy, legislative, and regulatory recommendations relating to the NRC's programs and operations; and (4) OIG will improve the effectiveness of its efforts in conducting activities for the purpose of preventing and detecting fraud, waste, and abuse in NRC's programs and operations by ensuring the economical, efficient, and effective operation of our office.

BUDGET OVERVIEW

Summary	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	4,799	4,970	5,300	330
Contract Support and Travel	201	530	880	350
Total Budget Authority	5,000	5,500	6,180	680
FTE	44	44	44	0

The budget request of $6.2M and 44 FTE provides the necessary resources for OIG to achieve its general goals in its strategic plan. These resources support the OIG mission and enable it to assist the NRC by ensuring integrity, efficiency, and accountability in the agency's programs to regulate the civilian use of byproduct, source, and special nuclear materials in a manner that adequately protects the health and safety of the public, as well as the Nation's common defense and security.

To accomplish our goals and fulfill our legislative mandate in FY 2001, OIG will supplement its budget with approximately $700,000 in carryover funds. These additional resources will be used for OIG's financial statement and contract audit work, the continued development of a management information system, and other mission-related requirements. In FY 2002, OIG will use carryover funds to support its work under the Chief Financial Officers (CFO) Act.

Audits

The OIG audit staff conducts performance and financial audits in accordance with Government Auditing Standards. Performance audits are conducted on NRC administrative and program operations to evaluate the effectiveness and efficiency with which managerial responsibilities are carried out. They focus on whether management controls, practices, processes, and procedures are adequate and effective, and whether programs achieve intended results.

Financial audits include the financial statements audit required by the CFO Act and other financial-related audits. These audits include such items as internal control systems, transaction processing, financial systems, and contracts. In preparing reports summarizing audit findings, the OIG strives

to maintain an open channel of communication between the agency and management officials to ensure that audit findings are accurate and fairly presented in the audit report.

Investigations

Investigations are performed in accordance with the Quality Standards for Investigations of the President's Council on Integrity and Efficiency, Department of Justice (DOJ) guidelines, the NRC/OIG Special Agent Handbook, and other applicable laws, policies, and regulations. OIG investigators conduct investigations of individuals and entities suspected of offenses against the criminal and civil laws of the United States or NRC regulations, in accordance with the IG Act. The OIG coordinates investigations with DOJ, U.S. Attorney's offices and other law-enforcement agencies. Investigations generally fall into the following categories: fraud, waste, abuse, and mismanagement involving NRC programs, activities and functions; contract and procurement fraud and improprieties; conflict of interest and ethics violations; and NRC employee misconduct and improprieties.

Many sources refer allegations of criminal misconduct and wrongdoing to the investigative staff. These sources include: NRC management and staff, the Congress, public interest groups, the nuclear industry, other Government agencies, and the general public. The OIG maintains a toll-free telephone hotline to facilitate the receipt of allegations.

In addition to criminal and administrative investigations, OIG investigators conduct event inquiries which do not specifically involve individual misconduct but rather identify institutional weaknesses that led to or allowed the occurrence of a problem. These institutional weaknesses may serve as precursors for more extensive activity by the OIG's audit and/or investigative staff.

Regulatory Review

As part of OIG's mission to prevent and detect fraud, waste, and abuse and to promote economy and efficiency, OIG reviews proposed legislation, regulations, directives, and policy initiatives that affect NRC's programs and operations. Significant concerns which are documented by the OIG in regulatory commentaries are given to the agency for consideration, and provide OIG's objective analysis of vulnerabilities created by proposed or existing statutes, regulations, or policies.

Management Support

The Resource Management and Operational Support staff performs myriad support functions. These include formulating and executing the OIG budget, administering independent personnel services, preparing the OIG Semiannual Report to Congress, supporting information technology within OIG, and coordinating strategic planning activities.

LINKAGE BETWEEN THE GENERAL GOALS OF THE OIG FY 2000–FY 2005 STRATEGIC PLAN AND THE FY 2001–2002 PERFORMANCE PLAN

The OIG's strategic plan includes four general goals and a number of supporting objectives that describe planned accomplishments.

The following is a linkage between the general goals of the OIG FY 2000–FY 2005 Strategic Plan and the FY 2001–FY 2002 Performance Plan. This includes a tie-in between the level of activity by the OIG in its audit, investigation and support functions with the objectives related to the general goals. It also includes the performance indicators, FY 2001/FY 2002 target levels for accomplishing our performance indicators, and our FY 1999 through FY 2000 performance results.

General Goal 1

To add value to the NRC's technical and administrative programs, OIG will identify opportunities for improvement in the agency and conduct activities for the purpose of preventing and detecting fraud, waste, and abuse in NRC's programs and operations.

Objectives
1. Conduct timely, effective, and independent audits and investigations.
2. Proactively identify and act on current and emerging issues.
3. Advise the NRC in areas of OIG expertise.
4. Enhance programs for prevention and awareness of fraud, waste and abuse.

FY 2002 Activities	Objectives			
	1	2	3	4
OIG will conduct 16 to 18 audits during FY 2002. The audits planned for this period will be based on input from various elements of the NRC, Congress, the General Accounting Office, the Office of Management and Budget, the Department of Energy, and the nuclear industry, as well as OIG staff. The plan will identify key, high-risk, high-cost programs for audit, including the NRC's inspection, research, waste management, international activities, information technology programs, and NRC's management challenges. The OIG will also provide the necessary oversight for the annual audit of the NRC's financial statements as well as performing the necessary contract audit activities in support of fulfilling NRC's Federal Acquisition Regulation requirements.	x	x	x	x
OIG will conduct 50-70 investigations and event inquiries during FY 2002. The majority will focus on violations of law or misconduct by NRC employees and contractors as well as allegations of irregularities or abuse in NRC programs and operations. Where indications of potentially systematic violations such as theft of government property or contract fraud have been raised, proactive investigations will also be conducted.	x	x	x	x

INSPECTOR GENERAL

OIG has established the following performance goals and indicators for measuring its results in achieving General Goal 1.

1.1. Conduct timely, effective, and independent audits and investigations.

Performance Indicators for Audits	FY 2001/FY 2002 Targets
Keep average cost per audit to 1 FTE or less.	1 FTE applied per audit. (I)
Complete audits in 6 months or less, on average.	Complete audits in 6 months on average. (O)
Obtain satisfactory peer review to be completed every three years.	Achieve 100% compliance with audit standards per triennial peer review (FY 2000, FY 2003). (O)
Obtain customer feedback on timeliness and quality of audits.	Obtain customer feedback on all audit reports issued. (O)
Obtain agency agreement on at least 90% of audit recommendations. [1]	Obtain agency agreement on 90% of audit recommendations. (O)
Obtain final agency action on 75% of audit recommendations within one year. [2]	Final action completed within one year on 75% of audit recommendations. (O)

Key to Performance Indicators

Input = I Output = O Outcome = O

FY 2000 Performance: .53 FTE applied per audit.
6.9 months per audit on average.
100% compliance with audit standards per peer review.
100% feedback obtained on issued audit reports, and the new audit report process.

FY 1999 Performance: .48 FTE applied per audit.
5.1 months per audit on average.
100% feedback obtained on issued audit reports.
100% agreement by the agency on audit recommendations.

Performance Indicators for Investigations	FY 2001/FY 2002 Targets
Complete non-fraud investigations in an average time frame of 6 months. [3]	Complete non-fraud investigations in 6 months on average. (O)
For 80% of fraud investigations, the number of hours worked (applied time) will not be less than 25% of the total numbers of hours in an open status (elapsed time). [4]	Achieve 80% rate for hours worked that will not be less than 25% of the total number of hours open for fraud investigations. (O)
For 80% of non-fraud investigations, the number of hours worked (applied time) will not be less than 50% of the total number of hours in an open status (elapsed time).	Achieve 80% rate for hours worked that will not be less than 50% of the total number of hours open for non-fraud investigations. (O)
Achieve a minimum rate of 30% of investigations being referred for criminal prosecution. [5]	Achieve 30% rate for cases referred for criminal prosecution. (O)
Achieve a minimum success rate of 90% for actions taken by NRC management in response to investigative reports issued by OIG (e.g. additional training, program reviews and modifications). [6]	Achieve 90% success rate for management actions in response to OIG investigative reports. (O)
Achieve a minimum success rate of 70% for Program Fraud and Civil Remedies Act (PFCRA) cases accepted by NRC's Office of General Counsel (OGC).	Achieve 80% success rate for PFCRA referrals. (O)
Address the majority of investigative issues raised in customer surveys.	Address 90% of survey investigative issues. (O)
Address investigative issues identified in quality control reviews.	Address 100% of quality control investigative issues. (O)

FY 2000 Performance:

5.0 months per investigation on average.
259.5 hours per completed investigation on average.
40% of cases initiated were referred.
100% success rate for management referrals.
PFCRA referrals - none.
100% of survey issues addressed.
100% of quality control issues addressed.

FY 1999 Performance: 7.96 months per investigation on average.
230 hours per completed investigation on average.
Convictions/pleas - Not applicable.
96.8% success rate for management referrals.
100% success rate for PFCRA referrals.
100% of survey issues addressed.
100% of quality control issues addressed.

1.2. Proactively identify and act on current and emerging issues.

Performance Indicators for Audits	FY 2001/FY 2002 Targets
Develop a detailed annual audit plan, listing audits to be performed and estimated required resources, with input from agency management, Congress, industry, other Government agencies, GAO and the public.	Complete Audit Plan by October 1, 2000 for FY 2001 and October 1, 2001 for FY 2002. **(I)**

FY 2001 Performance: Plan completed by milestone date.

FY 2000 Performance: Plan completed by milestone date.

FY 1999 Performance: Plan completed in December 1998.

Performance Indicators for Investigations	FY 2001/FY 2002 Targets
Develop a detailed annual investigative plan, based in part on sources of information developed by investigative staff. Sources include members of public interest groups, NRC employees, representatives of other agencies and licensees.	Complete Investigative Plan by October 1, 2000 for FY 2001 and October 1, 2001 for FY 2002. **(I)**

FY 2001 Performance: Plan completed by milestone date.

FY 2000 Performance: Plan completed by milestone date.

FY 1999 Performance: Plan completed in May 1999.

1.3. Advise the NRC in areas of OIG expertise.

Performance Indicators for Audits and Investigations	FY 2001/FY 2002 Targets
Participate on one or more targeted management projects or task forces by OIG auditors and/or investigators.	Participate on at least one project or task force by OIG auditors and/or investigators. **(O)**
Identify reports that either define agency institutional weaknesses or provide assessments as to how well NRC programs are meeting intended objectives and/or purposes.	Complete 12 reports in FY 2001 and FY 2002. **(O)**

FY 2000 Performance: Participation on seven tasks forces and management projects by OIG auditors and investigators.

Completed 21 reports.

FY 1999 Performance: Participation on two intergovernmental task forces by OIG investigators.

Completed 18 reports.

1.4. Enhance programs for prevention and awareness of fraud, waste and abuse.

Performance Indicators for Audits and Investigations	FY 2001/FY 2002 Targets
Complete annual training for NRC employees and others, in areas most at risk for fraud, waste, and abuse.	Conduct training at major Headquarter's components and/or NRC regional offices. Training will be provided by senior members of the OIG staff. **(O)**
	Develop a course to train NRC Project Officers/ Managers and other identified employees on detecting indicators of contract fraud during the course of their duties. Training will be provided by OIG investigative staff to NRC Contract Project Officers/Managers (FY 2001/FY 2002) and other identified employees (FY 2001/FY 2002). **(O)**

FY 2000 Performance:	Computer security awareness presentation conducted by OIG investigators.
	Fraud awareness briefings were presented to NRC's Division of Contracts and Property Management and Region 2 personnel. In addition, two OIG fraud bulletins were issued.
FY 1999 Performance:	OIG participated in training for OGC Regional Counsels.
	As part of OIG's ongoing educational effort within the agency and the community at large, OIG published a brochure on "Fraud Awareness."

General Goal 2 (Strategic Goal)
To keep our stakeholders well-informed, OIG will enhance its communication and liaison activities with OIG's customers, including NRC management, the U.S. Congress, Government agencies, the nuclear industry, and public entities.
Objectives (Strategies) 1. Develop and maintain liaison activities with OIG customers.
FY 2002 Activities
Periodically meet with the NRC Chairman, the Commission, other key NRC executives and members of Congress. Hold planning conferences and invite customers for input, provide reports to Congress summarizing results of OIG activities and accomplishments.

OIG has established the following performance goals and indicators for measuring its results in achieving General Goal 2.

2.1. Develop and maintain liaison activities with OIG customers.

Performance Indicators for the Office	FY 2001/FY 2002 Targets
The IG/Deputy IG will meet periodically with the NRC's EDO, CFO, CIO and the General Counsel.	The IG/Deputy IG will meet four times each year with the EDO, CFO, CIO and the General Counsel. **(O)**
The IG/Deputy IG/senior members of OIG staff will brief the NRC Chairman and the NRC Commissioners periodically on OIG matters.	The IG/Deputy IG/senior members of OIG staff will brief the Chairman monthly and the Commissioners quarterly on OIG matters. **(O)**
The IG/Deputy IG/senior members of the OIG staff will meet periodically with appropriate Congressional Committees and issue summaries of audits and investigations to the U.S. Senate Committee on Governmental Affairs.	The IG/Deputy IG/senior members of the OIG staff will meet twice each year with appropriate oversight committees and provide quarterly summaries of reports to the Committee on Governmental Affairs. **(O)**
OIG will timely produce, and appropriately distribute, a Semiannual Report to Congress and other interested parties.	Semiannual reports will be distributed no later than one month following the end of the reporting period. **(O)**
OIG will make publicly releasable reports available on the Internet.	Audit reports, investigative event inquiries, and the Semiannual Report to Congress will be on the Internet within four weeks of issuance. **(O)**

INSPECTOR GENERAL

Performance Indicators for the Office	FY 2001/FY 2002 Targets
OIG investigators will be assigned liaison responsibilities for designated Government agencies and meet with representatives of these agencies on a periodic basis.	Investigators will meet quarterly with designated Government agency representatives and report results to the Assistant Inspector General for Investigations. **(O)**
OIG representatives will interact with public interest groups involved with nuclear safety issues.	Perform liaison activities monthly. **(O)**

FY 2000 Performance:

Met 4 times with the EDO, CFO, CIO, and General Counsel.

Chairman received monthly briefings and each Commissioner received a quarterly briefing.

Quarterly summaries were timely provided to oversight committees.

Semiannual reports were issued within one month after close of reporting period.

Audit reports were available on the Internet within four weeks of issuance.

Event Inquiries were made publicly available upon issuance. Internet target not met.

Investigators met with designated agencies on a routine basis.

OIG performed liaison activities with public interest groups.

FY 1999 Performance:

Met 4 times with the EDO, CFO, CIO, and General Counsel.

Chairman received monthly briefings and each Commissioner received a quarterly briefing.

Quarterly summaries were timely provided to oversight committees.

Semiannual reports were issued within one month after close of reporting period.

Audit reports were available on the Internet within four weeks of issuance.

All investigative Event Inquiries were made publicly available upon issuance. Internet target not met.

Investigators met with approximately 14 designated agencies on a quarterly basis.

OIG performed monthly liaison activities.

General Goal 3 (Strategic Goal)
OIG will make value-added policy, legislative, and regulatory recommendations relating to NRC's programs and operations.
Objectives 1. Review existing and proposed legislation and regulations.
FY 2002 Activities
OIG will review existing and proposed policy legislation, and regulations relating to NRC's programs and operations. OIG will provide timely reports that make recommendations concerning the impact of such legislation or regulations as they pertain to economy and efficiency of programs and operations and vulnerability to fraud, waste and abuse.

OIG has established the following performance goals and indicators for measuring its results in achieving General Goal 3.

3.1. Review existing and proposed legislation and regulations.

Performance Indicators for OIG General Counsel	FY 2001/FY 2002 Targets
90 percent of responses to requests from the agency for comment/input on existing and proposed legislation and regulations will be made within the due date(s).	90 percent of requests will be reviewed within the due date. **(O)**
NRC will take responsive action on the majority of OIG comments relating to the review of proposed policy, legislation, and regulations.	OIG will obtain agency agreement to take responsive actions to comments in 60% of the matters reviewed. **(O)**

FY 2000 Performance: Targets were met.

FY 1999 Performance: Targets were met.

General Goal 4 (Strategic Goal)

OIG will improve the effectiveness of its efforts in conducting activities for the purpose of preventing and detecting fraud, waste and abuse in NRC's programs and operations by ensuring the economical, efficient and effective operation of our office.

Objectives
1. Maximize organizational efficiency and effectiveness.
2. Evaluate the sufficiency of the current Issue Area Monitor Program (IAM).
3. Develop a specialized training program and increase the organizational knowledge of the OIG staff.

FY 2002 Activities	Objectives		
	1	2	3
OIG will evaluate the OIG report production process and determine where and how they can be streamlined. OIG will also assess the efficiency of current methods for information distribution within OIG and establish a means to allow OIG staff to provide direct input to the IG/Deputy IG regarding audit and investigative issues.	x		
OIG will evaluate how current agency issue areas are monitored and consider whether it is appropriate to expand the current OIG program, which is currently an audit staff function, to include investigations.		x	
OIG will establish a specialized training program for the OIG staff to enhance awareness of investigative, audit, legal and pertinent legislative processes.			x

OIG has established the following performance goals and indicators for measuring its results in achieving General Goal 4.

4.1. Maximize organizational efficiency and effectiveness.

Performance Indicators for the Office	FY 2001/FY 2002 Targets
OIG will evaluate its process for producing reports.	OIG will review the OIG report production process on an annual basis. **(O)**
OIG will evaluate the way it processes information to determine potential inefficiencies and barriers to effective communication.	OIG will complete a business requirements analysis and begin development of a Management Information System (MIS) in FY 2001. OIG will complete its MIS in FY 2002. **(O)**
The IG and Deputy IG will schedule periodic meetings with OIG staff in order to obtain direct input regarding audit and investigative issues.	The IG and Deputy IG will meet directly with OIG audit and investigative staff on a quarterly basis each year to obtain input on audit and investigative issues. **(O)**

FY 2000 Performance: The report production process was evaluated. As a result, a new discussion draft report process was initiated and the exit conference process was revised.

A followup review addressing the information retrieval issue was conducted and a new database system was designed and developed.

IG and Deputy IG met three times with audit and investigative staff.

FY 1999 Performance: An initial assessment addressing the information retrieval issue was completed and the report preparation process was reviewed.

IG and Deputy IG met quarterly with audit and investigative staff.

4.2. Evaluate the sufficiency of the current Issue Area Monitor (IAM) program.

Performance Indicator for the Office	FY 2001/FY 2002 Targets
OIG will use a team approach to review the IAM process.	A review will be conducted in FY 2001/FY 2002. **(O)**

FY 2000 Performance: A review was completed in the first quarter and a summary report issued in the second quarter of FY 2000.

FY 1999 Performance: The Issue Area Monitor program was reviewed in November 1999.

4.3. Develop a specialized training program and increase the organizational knowledge of the OIG staff.

Performance Indicators for Audits	FY 2001/FY 2002 Targets
Auditors will obtain Continuing Professional Education (CPE) in accordance with Government Auditing Standards.	Each OIG auditor will complete a minimum of 20 hours of CPEs in each year and a total of 80 hours for both years combined. Of the 80 hours, 24 hours must be directly related to Government environment and to Government auditing. For entry-level employees with less than 2 years with the audit organization, a pro rata number of hours will be acceptable. **(O)**

Performance Indicators for Audits	FY 2001/FY 2002 Targets
Newly hired OIG auditors will attend an NRC developed technical training course for non-engineers at the Technical Training Center (TTC).	At least 50% of newly hired auditors will complete the TTC course. **(O)**
Auditors will develop an Individual Development Plan (IDP) for long-term career development.	At least 50% of the audit staff will develop IDPs. [7] **(O)**

FY 2000 Performance: Auditors met training requirements. IDP target not met.

FY 1999 Performance: Auditors met training requirements. IDP target not met.

Performance Indicators for Investigations	FY 2001/FY 2002 Targets
Investigators will attend periodic technical training relevant to NRC operations and refresher training relating to their law-enforcement function.	Each investigator will receive at least 40 hours of training. **(O)**
Newly hired investigators will attend an NRC-developed training course for non-engineers at the TTC.	At least 50% of newly hired investigators will complete the TTC course. **(O)**
Investigators will develop an IDP for long-term career development.	At least 50% of the investigative staff will develop IDPs. **(O)** [7]

FY 2000 Performance: Investigators met training requirements. IDP target met.

FY 1999 Performance: Investigators met training requirements. IDP target not met.

VERIFICATION AND VALIDATION OF MEASURED VALUES AND PERFORMANCE

The OIG uses numerous small database systems to measure OIG performance. Primarily, the OIG uses Microsoft Access and Clipper applications. In some instances, customer and stakeholder surveys, as well as peer reviews, are used to determine whether OIG has achieved its stated goals.

CROSS-CUTTING FUNCTIONS WITH OTHER GOVERNMENT AGENCIES

The NRC's OIG has a cross-cutting function relating to its investigatory case referrals to DOJ and other state and local law enforcement entities.

PROGRAM LINK TO PERFORMANCE GOALS

The following table depicts the relationship of the Inspector General program and its associated resource requirements to performance goals.

Links to Arena Performance Goals	Performance Goals			
	Add Value to NRC Programs	Enhance Communication	Value-Added Policy and Regulatory Recommendations	Improve Effectiveness
FY 2002 Programs ($6,180K, 44 FTE)				
Audits ($2,592K, 18 FTE)	X	X	X	X
Investigations ($2,371K, 18 FTE)	X	X	X	X
Management and Operational Support ($1,217K, 8 FTE)		X	X	X

BUDGET AUTHORITY AND FULL-TIME EQUIVALENT BY PROGRAM

Summary	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Program ($K)				
Audits	1,999	2,368	2,592	224
Investigations	2,104	2,193	2,371	178
Management and Operational Support	897	939	1,217	278
Total Budget Authority	5,000	5,500	6,180	680
Full-Time Equivalent Employment by Program				
Audits	18	18	18	0
Investigations	18	18	18	0
Management and Operational Support	8	8	8	0
Total FTE	44	44	44	0

The Inspector General strategic arena is comprised of three (3) program areas: Audits, Investigations, and Management and Operational Support.

ACCOMPLISHMENTS

In FY 2000, our office completed 18 performance and financial audits of NRC's programs and operations. This work lead the OIG to make 52 recommendations to the NRC for program improvement. The OIG also analyzed 37 contract audit reports issued by the Defense Contract Audit Agency (DCAA) and another Government agency. Overall, these analyses caused the OIG to question $113,797 in costs. In addition, the OIG completed 45 investigations and 3 event inquiries, made 93 referrals to NRC Management, and 20 referrals to other Government agencies. Finally, the OIG reviewed approximately 270 documents issued by NRC's Office of the Secretary and 100 *Federal Register* notices, regulatory actions, and statutes.

During the fiscal year, OIG has undertaken several proactive initiatives to improve communication and to detect potential contractor fraud. The OIG has presented a fraud awareness information session to NRC procurement employees, and developed and issued several fraud awareness bulletins that provided NRC employees with case examples from across the OIG community on various fraudulent activities.

JUSTIFICATION OF PROGRAM REQUESTS

The Inspector General strategic arena is comprised of three (3) program areas: Audits, Investigations, and Management and Operational Support. Following are resources tables and program descriptions that detail the resources and associated efforts within each program.

Audits

Summary	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	1,964	2,033	2,168	135
Contract Support and Travel	35	335	424[8]	89
Total Budget Authority	1,999	2,368	2,592	224
FTE	18	18	18	0

The resource increase in FY 2002 for Audits includes:

- Salaries and benefits increase resulting from the governmentwide FY 2002 pay raise.
- Contract support and travel increase to provide resources for technical audit support and program-specific training. In FY 2002, OIG will augment its contract support resources with $412,000 in carryover funds to fulfill its requirements under the CFO Act of 1990.

The audit program is designed to provide assurance to the Chairman and to Congress that NRC programs and operations are working efficiently and effectively. To do this, the OIG audit staff conducts performance audits with a focus on administrative and program operations, and financial audits with a focus on internal control systems, transaction processing, and financial systems.

FY 2002 resources will allow the OIG to conduct 16 to 18 audits. The audits planned for this period will be based on a comprehensive annual audit plan that includes input from various elements of the NRC, Congress, the General Accounting Office, the Office of Management and Budget (OMB), the Department of Energy, and the nuclear industry, as well as from the OIG staff. The plan identifies key, high-risk, high-cost programs for audit, that may include the NRC's inspection, research, waste management, international activities, information technology programs, and NRC's management challenges.

In the financial management area, the audit plan includes several audits to meet legislative and OMB requirements. The FY 2002 contract support and travel resources request of $424,000, augmented by $412,000 in OIG carryover funds, will allow the OIG to procure private-sector contractors for the conduct of the annual audit of the NRC's financial statements and to provide contract technical

support for audits requiring specialized services. Further, OIG will procure the services of the Defense Contract Audit Agency, the Department of Health and Human Services, and private-sector entities as needed to fulfill NRC's requirements under the Federal Acquisition Regulations. The OIG will analyze between 25 to 35 contract audit reports issued by these entities for questioned costs and funds that could be put to better use.

The OIG will also review NRC performance information developed to fulfill the requirements of the Government Performance and Results Act. First, OIG will review and evaluate the support for NRC's broad outcome goals for financial statement reporting purposes. Second, OIG will examine NRC's output measures as part of regularly scheduled audit activity. As part of the audit planning process, OIG will select specific output measures for examination. Reviews conducted under each review will examine the data systems used, and determine the accuracy and reliability of the data supporting outcome goals and output measures. OIG will also verify and validate selected outcome measures. Additionally, OIG will assess and report on NRC's response to recommendations made by OIG and other audit entities, such as GAO, concerning NRC programs, and monitor the agency's progress in addressing its management challenges.

Investigations

Summary	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	1,964	2,033	2,168	135
Contract Support and Travel	140	160	203	43
Total Budget Authority	2,104	2,193	2,371	178
FTE	18	18	18	0

The resource increase in FY 2002 for Investigations includes:

- Salaries and benefits increase resulting from the governmentwide FY 2002 pay raise.
- Contract support and travel increase to provide for investigative technical support and for program-specific training.

Consistent with the Inspector General Act of 1978, as amended, OIG receives and investigates allegations concerning violations of Federal laws and regulations, as well as allegations of mismanagement, waste, and danger to public health and safety. The mission of the investigative program is to perform investigative activities related to the integrity of NRC's programs and operations.

The majority of investigative activities focus on violations of law and misconduct by NRC employees and contractors as well as allegations of irregularities or abuse in NRC programs and operations. However, proactive investigations may also be conducted where indications of potentially systematic violations such as theft of government property or contract fraud have been raised. In addition, OIG periodically undertakes event inquiries that focus on root cause analysis of institutional weaknesses associated with a particular problem and implements other preventive initiatives such as integrity awareness training.

FY 2002 contract support and travel resources of $203,000 will allow the OIG to conduct between 50-70 investigations and event inquiries covering a broad range of criminal misconduct and wrongdoing affecting various NRC programs. Investigations and event inquiries may be initiated as a result of allegations or referrals from private citizens, licensee employees, NRC employees,

Congress, other Federal, State and local law enforcement agencies, OIG Audits, OIG Hotline, and proactive efforts directed at areas bearing high potential for fraud, waste, and abuse.

Cases involving allegations of criminal and other wrongdoing will continue to be a high priority. OIG has concentrated its efforts and resources on investigations to detect contract fraud, computer intrusion involving unauthorized access into NRC operating systems, matters related to allegations that NRC failed to adequately perform its public health and safety mission, and significant misconduct involving NRC employees. The OIG staff also provides the regions with generic case examples, as well as lessons learned from the wrongdoing in those cases. In addition, the investigative unit will undertake a number of proactive project initiatives where resources allow.

Further, OIG will continue its regional liaison activities to facilitate closer coordination between the OIG and regional employees. OIG will conduct fraud awareness briefings, and participate in projects or task forces that strengthen agency operations.

Management and Operational Support

Summary	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Budget Authority by Function ($K)				
Salaries and Benefits	872	904	964	60
Contract Support and Travel	25	35	253	218
Total Budget Authority	897	939	1,217	278
FTE	8	8	8	0

The resource increase in FY 2002 for Management and Operational Support includes:

- Salaries and benefits increase resulting from the governmentwide FY 2002 pay raise.
- Contract support and travel increase primarily to support OIG-specific information technology requirements, publishing OIG's semiannual report to Congress, and fulfilling training requirements. These expenses were previously funded from OIG carryover funds.

The Inspector's General management and operational support staff consists of senior managers, administrative support and legal counsel.

Management

FY 2002 resources will allow the OIG senior managers to lead a diverse program and provide policy direction and guidance in the conduct and supervision of audits and investigations, as well as provide leadership and coordination in recommending policies to prevent and detect fraud and abuse in agency programs and operations. Further, OIG managers will promote economy and efficiency and combat fraud and abuse in NRC programs and operations. OIG senior managers will periodically meet with the NRC Chairman, the Commission, other key NRC executives and appropriate oversight committees.

Operational Support

FY 2002 resources will allow the OIG administrative staff to formulate and execute the OIG budget; prepare OIG's semiannual report to Congress; operate an independent personnel program; administer the control of OIG funds; authorize OIG travel; administer the information technology program;

provide space planning, security management, quality assurance, training, and procurement support to the OIG; and serve as the liaison and point of contact for activities of the President's Council for Integrity and Efficiency. Moreover, FY 2002 contract support and travel resources of $253,000 will allow the OIG to satisfy OIG office-specific IT requirements, provide reports to Congress summarizing results of OIG activities and accomplishments, and provide general training resources for OIG staff.

Legal Counsel

FY 2002 resources will allow the OIG General Counsel to provide independent advice on issues concerning criminal law and procedures, evidence, and constitutional law as these relate to the OIG's investigative program. In addition, OIG General Counsel develops legal interpretations of appropriation law, financial management statutes and regulations, and procurement and funding rules in support of OIG's audit program. The OIG General Counsel furnishes litigation support to DOJ and others as necessary, and advises on matters concerning personnel, procurement, labor law, and Privacy Act and Freedom of Information Act issues. The OIG General Counsel also will review and comment on existing and proposed legislation, regulations, directives, and policy issues that affect NRC programs and operations. The OIG will provide timely reports that make recommendations concerning the impact of such legislation or regulations as they pertain to the economy and efficiency of NRC programs and operations and their vulnerability to fraud, waste, and abuse.

ENDNOTES

1. Revised performance indicator. Previous criteria captured agency agreement on at least 80 percent of audit recommendations with an 80-90 percent target level.

2. New performance indicator for FY 2001.

3. Revised performance indicator. Previous criteria captured completion of both fraud and non-fraud investigations in eight months or less during period Fiscal Years 1997-2000.

4. Revised performance indicator. Previous criteria captured and applied an average of 185 hours or less on completed fraud and non-fraud investigations.

5. Revised performance indicator for FY 2001. Previous indicator for FY 2000 was 25 percent of investigations referred to DOJ. Prior to FY 2000, performance indicator measured DOJ convictions and pleas on cases referred. The revised indicator increased the number of referrals from 25 percent to 30 percent and changed DOJ to criminal prosecution.

6. Revised performance indicator in FY 2000. The revised indicator increased the minimum success rate from 70 percent to 90 percent.

7. Revised target for performance indicator. Previous criteria captured OIG staff IDPs development at 75 percent.

8. Resources for the CFO audit of $420,000 will be funded in FY 2002 with $412,000 in OIG carryover funds.

APPENDICES

APPENDIX I
SUPPORTING TABLES

BUDGET AUTHORITY BY FUNCTION

NRC Appropriation	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Salaries and Expenses (S&E) ($K)				
Salaries and Benefits	279,084	291,384	306,153	14,769
Contract Support	173,379	177,875	188,082	10,207
Travel	12,450	12,566	12,665	99
Total (S&E)	464,913	481,825	506,900	25,075
Office of the Inspector General (OIG) ($K)				
Salaries and Benefits	4,800	4,970	5,300	330
Contract Support	0	290	640	350
Travel	200	240	240	0
Total (OIG)	5,000	5,500	6,180	680
Total NRC Appropriation ($K)				
Salaries and Benefits	283,884	296,354	311,453	15,099
Contract Support	173,379	178,165	188,722	10,557
Travel	12,650	12,806	12,905	99
Total (NRC)	469,913	487,325	513,080	25,755

PROGRAM FINANCING

	FY 2000 Enacted	FY 2001 Enacted	FY 2002 Estimate	
			Request	Change from FY 2001
Nuclear Waste Fund	19,150	21,552	23,650	2,098
General Fund	3,763	12,446	20,249	7,803
All Other Work	447,000	453,327	469,181	15,854
Total	469,913	487,325	513,080	25,755

APPENDIX II
APPROPRIATIONS LEGISLATION

PROPOSED FY 2002 APPROPRIATIONS LEGISLATION

The proposed appropriations legislation is as follows:

Salaries and Expenses

For necessary expenses of the Commission in carrying out the purposes of the Energy Reorganization Act of 1974, as amended, and the Atomic Energy Act of 1954, as amended, including official representation expenses (not to exceed $15,000) and purchase of promotional items for use in the recruitment of individuals for employment, $506,900,000, to remain available until expended: Provided, That of the amount appropriated herein, $23,650,000 shall be derived from the Nuclear Waste Fund: Provided further, That revenues from licensing fees, inspection services, and other services and collections estimated at $463,248,000 in fiscal year 2002 shall be retained and used for necessary salaries and expenses in this account, notwithstanding 31 U.S.C. 3302, and shall remain available until expended: Provided further, That $700,000 of the funds herein appropriated to provide for regulatory reviews and other assistance to Federal agencies and States shall be excluded from license fee revenues, notwithstanding 42 U.S.C. 2214: Provided further, that the sum herein appropriated shall be reduced by the amount of revenues received during fiscal year 2002 so as to result in a final fiscal year 2002 appropriation estimated at not more than $43,652,000.

Office of the Inspector General

For necessary expenses of the Office of the Inspector General in carrying out the provisions of the Inspector General Act of 1978, as amended, $6,180,000 to remain available until expended: Provided, That revenues from licensing fees, inspection services, and other services and collections estimated at $5,932,800 in fiscal year 2002 shall be retained and be used for necessary salaries and expenses in this account, notwithstanding 31 U.S.C. 3302, and shall remain available until expended; Provided further, That the sum herein appropriated shall be reduced by the amount of revenues received during fiscal year 2002 so as to result in a final fiscal year 2002 appropriation estimated at not more than $247,200.

Analysis of Proposed FY 2002 Appropriations Legislation

The analysis of the proposed appropriations legislation is as follows:

Salaries and Expenses

1. FOR NECESSARY EXPENSES OF THE COMMISSION IN CARRYING OUT THE PURPOSES OF THE ENERGY REORGANIZATION ACT OF 1974, AS AMENDED, AND THE ATOMIC ENERGY ACT OF 1954, AS AMENDED: 42 U.S.C. 5841 et seq.

   The NRC was established by the Energy Reorganization Act of 1974, as amended (42 U.S.C. 5801 et seq.). This act abolished the Atomic Energy Commission and transferred to the NRC all the licensing and related regulatory functions of the Atomic Energy Commission. These functions included those of the Atomic Safety and Licensing Board Panel and the Advisory Committee on Reactor Safeguards; responsibilities for licensing and regulating nuclear facilities and materials; and conducting research for the purpose of confirmatory assessment related to licensing, regulation, and other activities, including research related to nuclear material safety and regulation under the provisions of the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq.).

2. INCLUDING PURCHASE OF PROMOTIONAL ITEMS FOR USE IN THE RECRUITMENT OF INDIVIDUALS FOR EMPLOYMENT: b-247563.3, APRIL 5, 1996

   This language is required because 31 U.S.C. 1301(a) provides that appropriated funds are available only for authorized purposes. Specific statutory authority is required for purchasing items of nominal value that can be given to attract potential employees as part of NRC's recruitment effort.

3. INCLUDING OFFICIAL REPRESENTATION EXPENSES: 47 Comp. Gen. 657, 43 Comp. Gen. 305

   This language is required because of the established rule restricting an agency from charging appropriations with the cost of official representation unless the appropriations involved are specifically available therefor. Congress has appropriated funds for official representation expenses to the NRC and NRC's predecessor, the Atomic Energy Commission, each year since FY 1950.

4. TO REMAIN AVAILABLE UNTIL EXPENDED:

31 U.S.C. 1301 provides that no regular, annual appropriation shall be construed to be permanent or available continuously unless the appropriation expressly provides that it is available after the fiscal year covered by the law in which it appears.

5. SHALL BE DERIVED FROM THE NUCLEAR WASTE FUND:

42 U.S.C. 10131(b)(4) provides for the establishment of a Nuclear Waste Fund to ensure that the costs of carrying out activities relating to the disposal of high-level radioactive waste and spent nuclear fuel will be borne by the persons responsible for generating such waste and spent fuel.

42 U.S.C. 10222(a)(4) provides that the amounts paid by generators or owners of these materials into the fund shall be reviewed annually to determine if any fee adjustment is needed to ensure full cost recovery.

42 U.S.C. 10134 specifically requires the NRC to license a repository for the disposal of high-level radioactive waste and spent nuclear fuel and sets forth certain licensing procedures. 42 U.S.C. 10133 also assigns review responsibilities to the NRC in the steps leading to submission of the license application. Thus, the Nuclear Waste Policy Act of 1982, as amended, establishes NRC's responsibility throughout the repository siting process, culminating in the requirement for NRC licensing as a prerequisite to construction and operation of the repository.

42 U.S.C. 10222(d) specifies that expenditures from the Nuclear Waste Fund can be used for purposes of radioactive waste disposal activities, including identification, development, licensing, construction, operation, decommissioning, and post-decommissioning maintenance and monitoring of any repository constructed under the Nuclear Waste Policy Act of 1982, and administrative costs of the high-level radioactive waste disposal program.

6. REVENUES FROM LICENSING FEES, INSPECTION SERVICES, AND OTHER SERVICES AND COLLECTIONS SHALL BE RETAINED AND USED FOR NECESSARY SALARIES AND EXPENSES IN THIS ACCOUNT, NOTWITHSTANDING 31 U.S.C. 3302, AND SHALL REMAIN AVAILABLE UNTIL EXPENDED:

The NRC is authorized under Title V of the Independent Offices Appropriation Act of 1952 to collect license fees. Pursuant to 31 U.S.C. 9701, any person who receives a

service or thing of value from the Commission shall pay fees to cover the NRC's cost in providing such service or thing of value.

Pursuant to 42 U.S.C. 2213, the NRC is required to assess and collect annual charges from NRC licensees and certificate holders, except for the holders of any license for a federally owned research reactor used primarily for educational training and academic research purposes. During the years FY 1991 to FY 2000, the aggregate amount of such charges approximated 100 percent of the Commission's budget authority, less any amount appropriated to the Commission from the Nuclear Waste Fund; the amount of fees collected under the Independent Offices Appropriation Act of 1952 (31 U.S.C. 9701); and in some years, any amounts appropriated for regulatory reviews and other assistance to Federal agencies and States. Subsequently, Public Law 106-377, which enacted the Energy and Water Development Appropriations Act for FY 2001, amended 42 U.S.C. 2213 to decrease the fee recovery requirement to a rate of 98 percent in FY 2001 and to further decrease the fee recovery requirement by an additional two percent per year until it is reduced to 90 percent by FY 2005. The fee recovery requirement for FY 2002 is 96 percent.

31 U.S.C. 3302 requires the NRC to deposit all revenues collected to miscellaneous receipts of the Treasury unless specifically authorized by law to retain and use such revenue.

7. FUNDS HEREIN APPROPRIATED FOR REGULATORY REVIEWS AND OTHER ASSISTANCE TO FEDERAL AGENCIES AND STATES SHALL BE EXCLUDED FROM LICENSE FEE REVENUES, NOTWITHSTANDING 42 U.S.C. 2214:

Pursuant to 42 U.S.C. 2213, the NRC is required to assess and collect annual charges from NRC licensees and certificate holders, except for the holders of any license for a federally owned research reactor used primarily for educational training and academic research purposes. During the years FY 1991 to FY 2000, the aggregate amount of such charges approximated 100 percent of the Commission's budget authority, less any amount appropriated to the Commission from the Nuclear Waste Fund; the amount of fees collected under the Independent Offices Appropriation Act of 1952 (31 U.S.C. 9701); and in some years, any amounts appropriated for regulatory reviews and other assistance to Federal agencies and States. Subsequently, Public Law 106-377, which enacted the Energy and Water Development Appropriations Act for FY 2001, amended 42 U.S.C. 2213 to decrease the fee recovery requirement to a rate of 98 percent in FY 2001 and to further decrease the fee recovery requirement by an additional two percent per year until it is reduced to 90 percent by FY 2005.

Under the Independent Offices Appropriation Act of 1952, 31 U.S.C. 9701, the NRC is not authorized to charge fees to DOE or other Federal agencies for these activities. Rather than having the NRC recover these costs by assessing fees to its licensees under its 96 percent cost recovery requirement for FY 2002, the costs of these consultation and review activities would be derived from appropriated funds.

The Economy Act, 31 U.S.C. 1535 et seq., permits a Federal agency to perform work or services for another Federal agency on a reimbursable basis. A Federal agency may not be reimbursed for rendering services to another Federal agency if the services are required by law in carrying out the normal functions of the performing agency for which appropriations are specifically provided.

The NRC performs the following types of activities for Federal agencies for which it cannot directly charge the benefitting Federal agency license fees under 42 U.S.C. 2214:

a. Review of applications for the issuance of new licenses or approvals. Under the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, as amended, the NRC performs these functions to provide licenses, certificates of compliance, and other approvals to Federal agencies.

b. Consultation and safety review activities for Federal agencies that the NRC is not statutorily required to perform. An examples of such activity follows:

- NRC is currently providing nuclear safety related assistance to the countries of the former Soviet Union and Central and Eastern Europe. NRC's staff costs associated with this assistance are funded from NRC's General Fund appropriation. Contract support and travel funding for NRC's assistance are provided by the U.S. Agency for International Development (USAID).

8. THE SUM HEREIN APPROPRIATED SHALL BE REDUCED BY THE AMOUNT OF REVENUES RECEIVED:

Pursuant to 42 U.S.C. 2213, the NRC is required to assess and collect annual charges from NRC licensees and certificate holders, except for the holders of any license for a federally owned research reactor used primarily for educational training and academic research purposes. During the years FY 1991 to FY 2000, the aggregate amount of such charges approximated 100 percent of the Commission's budget authority, less any amount appropriated to the Commission from the Nuclear Waste Fund; the amount of fees collected under the Independent Offices Appropriation Act of 1952 (31 U.S.C. 9701); and in some years, any amounts appropriated for regulatory reviews and other assistance

to Federal agencies and States. Subsequently, Public Law 106-377, which enacted the Energy and Water Development Appropriations Act for FY 2001, amended 42 U.S.C. 2213 to decrease the fee recovery requirement to a rate of 98 percent in FY 2001 and to further decrease the fee recovery requirement by an additional two percent per year until it is reduced to 90 percent by FY 2005. The fee recovery requirement for FY 2002 is 96 percent.

Office of the Inspector General

9. FOR NECESSARY EXPENSES OF THE OFFICE OF THE INSPECTOR GENERAL IN CARRYING OUT THE PROVISIONS OF THE INSPECTOR GENERAL ACT OF 1978, AS AMENDED:

Public Law 95-452, 5 U.S.C. app., as amended by Public Law 100-504

Public Law 100-504 amended Public Law 95-452 to establish the Office of the Inspector General within the NRC effective April 17, 1989, and to require the establishment of a separate appropriation account to fund the Office of the Inspector General.

10. TO REMAIN AVAILABLE UNTIL EXPENDED:

31 U.S.C. 1301 provides that no regular, annual appropriation shall be construed to be permanent or available continuously unless the appropriation expressly provides that it is available after the fiscal year covered by the law in which it appears.

11. REVENUES FROM LICENSING FEES, INSPECTION SERVICES, AND OTHER SERVICES AND COLLECTIONS SHALL BE RETAINED AND USED FOR NECESSARY SALARIES AND EXPENSES IN THIS ACCOUNT, NOTWITHSTANDING 31 U.S.C. 3302, AND SHALL REMAIN AVAILABLE UNTIL EXPENDED:

The NRC is authorized under Title V of the Independent Offices Appropriation Act of 1952 to collect license fees. Pursuant to 31 U.S.C. 9701, any person who receives a service or thing of value from the Commission shall pay fees to cover the NRC's cost in providing such service or thing of value.

Pursuant to 42 U.S.C. 2213, the NRC is required to assess and collect annual charges from NRC licensees and certificate holders, except for the holders of any license for a federally owned research reactor used primarily for educational training and academic research purposes. During the years FY 1991 to FY 2000, the aggregate amount of such

charges approximated 100 percent of the Commission's budget authority, less any amount appropriated to the Commission from the Nuclear Waste Fund; the amount of fees collected under the Independent Offices Appropriation Act of 1952 (31 U.S.C. 9701); and in some years, any amounts appropriated for regulatory reviews and other assistance to Federal agencies and States. Subsequently, Public Law 106-377, which enacted the Energy and Water Development Appropriations Act for FY 2001, amended 42 U.S.C. 2213 to decrease the fee recovery requirement to a rate of 98 percent in FY 2001 and to further decrease the fee recovery requirement by an additional two percent per year until it is reduced to 90 percent by FY 2005. The fee recovery requirement for FY 2002 is 96 percent.

31 U.S.C. 3302 requires the NRC to deposit all revenues collected to miscellaneous receipts of the Treasury unless specifically authorized by law to retain and use such revenue.

12. THE SUM HEREIN APPROPRIATED SHALL BE REDUCED BY THE AMOUNT OF REVENUES RECEIVED:

Pursuant to 42 U.S.C. 2213, the NRC is required to assess and collect annual charges from NRC licensees and certificate holders, except for the holders of any license for a federally owned research reactor used primarily for educational training and academic research purposes. During the years FY 1991 to FY 2000, the aggregate amount of such charges approximated 100 percent of the Commission's budget authority, less any amount appropriated to the Commission from the Nuclear Waste Fund; the amount of fees collected under the Independent Offices Appropriation Act of 1952 (31 U.S.C. 9701); and in some years, any amounts appropriated for regulatory reviews and other assistance to Federal agencies and States. Subsequently, Public Law 106-377, which enacted the Energy and Water Development Appropriations Act for FY 2001, amended 42 U.S.C. 2213 to decrease the fee recovery requirement to a rate of 98 percent in FY 2001 and to further decrease the fee recovery requirement by an additional two percent per year until it is reduced to 90 percent by FY 2005. The fee recovery requirement for FY 2002 is 96 percent.

APPENDIX III
LEGISLATIVE PROGRAM PROJECTIONS

U. S. NUCLEAR REGULATORY COMMISSION
LEGISLATIVE PROGRAM PROJECTIONS
(Dollars in millions.)

	SALARIES AND EXPENSES APPROPRIATION		INSPECTOR GENERAL APPROPRIATION	
	Budget Authority[1]	Budget Outlays[1]	Budget Authority[1]	Budget Outlays[1]
FY 2001 Enacted	481	478	6	5
FY 2002 Estimate	507	501	6	6
FY 2003 Estimate	524	520	6	6
FY 2004 Estimate	543	538	7	7
FY 2005 Estimate	562	557	7	7
FY 2006 Estimate	582	577	7	7

[1] Projections as reported in OMB's MAX database.

APPENDIX IV
VERIFICATION AND VALIDATION OF NRC MEASURES AND METRICS

VERIFICATION AND VALIDATION OF NRC MEASURES AND METRICS

This appendix describes the means whereby the NRC verifies and validates the performance measures relating to its strategic and performance goals. The NRC has been working to improve its performance data since its first Performance Report in 1999. One improvement introduced in this FY 2002 Performance Plan is to link an explanation of data verification and validation with each safety or performance goal. This allows our stakeholders to see specifically what data is being collected for each measure and why the NRC believes these data are appropriate. The agency also recognizes that these performance measures can continue to be improved. As an integral part of the Commission's evolving Planning, Budgeting, and Performance Management process, the performance measures will continue to be refined.

A general description of the NRC's data collection procedures

This section presents a general description of the NRC's data collection process. Most of the data used to measure the strategic goals and the performance goals focused on maintaining safety are attained or derived from the NRC's abnormal occurrence (AO) data and reports submitted by licensees. The AO criteria were developed by NRC in order to comply with the legislative intent of Section 208 of the Energy Reorganization Act of 1974, as amended. The Act requires the NRC to inform Congress of unscheduled incidents or events that the Commission determines to be significant from the standpoint of public health and safety. Events that meet the AO criteria are included in an annual "Report to Congress on Abnormal Occurrences" (NUREG-0090). In addition, in 1997, the Commission determined that events occurring at Agreement State licensed facilities that meet the AO criteria should be reported in the annual AO report to Congress. Therefore, the AO criteria developed by the NRC are applied uniformly to events that occur at facilities licensed or otherwise regulated by the NRC and the Agreement States.

Data for the abnormal occurrences originate from external sources, such as Agreement States and NRC licensees. The NRC believes these data are credible 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 that, among other activities, audits licensees and evaluates Agreement State programs to determine that information is being reported as required by the regulations, and (3) there are Agency procedures for reviewing and evaluating licensees. The NRC database systems that support this process include the Sequence Coding and Search System (SCSS), the Accident Sequence Precursor (ASP) Database, the Nuclear Materials Events Database (NMED), and the Radiation Exposure Information Report System.

The NRC has established procedures for the systematic review and evaluation of events reported by NRC licensees and Agreement State licensees. The objective of the review is to identify events that

are significant from the standpoint of public health and safety based on criteria that include specific thresholds. The NRC uses a number of sources to determine the reliability and the technical accuracy of events information reported to NRC. Such sources include: (1) the NRC licensee reports themselves, which are carefully analyzed, (2) NRC inspection reports, (3) Agreement State reports, (4) periodic review of Agreement State regulatory programs, (5) NRC consultant/contractor reports, and (6) U.S. Department of Energy Operating Experience Weekly Summaries. In addition, there is daily interaction and exchange of events information between headquarters and regional offices, and periodic conference calls between headquarters, the region, and Agreement States to discuss event information. Events identified that meet the abnormal occurrence criteria are validated and verified by all applicable NRC headquarters program offices, regional offices, and Agency management prior to submission to Congress.

Data protection is maintained by the Agency's computer security program. This program provides administrative, technical, and physical security measures for the protection of the Agency's information, automated information systems, and information technology infrastructure. This includes special safeguards to protect classified information, unclassified safeguards information, and sensitive unclassified information that is processed, stored, or produced on designated automated information systems.

The Commission is currently focusing on improving the performance data for ten of the measures in the Nuclear Materials Safety arena that rely on data from Agreement States. With over 15,000 Agreement State regulated licensees and over 5,000 licensees regulated by the NRC, the Nuclear Materials Safety arena presents a significant challenge to reporting and collecting performance data. The Commission has recently analyzed present and past years data to verify the accuracy of the data ("Nuclear Materials Safety Arena Performance Data," SECY-00-0217). This analysis identified several concerns with the collection and analysis of the materials events data. One concern was with a lack of uniformity in the data and data reporting, especially with respect to the timeliness of reporting. Another concern is that data that are entered by licensees are subject to modification based on later analysis of the events or due to inspections in which inspectors identify reportable events that have not been previously reported.

As a result of this analysis, the NRC has adopted a number of measures to improve the data it reports. For example, NRC staff members have traveled throughout the country providing training to Agreement State, NRC regional, and headquarters personnel on the database and data collection procedures. In addition, an NRC/Agreement State Working Group has been formed to make recommendations for making the materials event program more effective, efficient, and realistic. As part of its efforts, the Working Group will identify event information that is needed to support implementation of the Strategic Plan and compare that information to the current reporting

requirements. This project is ongoing and is expected to result in improved data collection, analysis and reporting.

Validation and Verification for Each Strategic and Performance Measure

The discussion of strategic and performance measure data verification and validation for each individual measure is divided into two parts: (a) Section 1, which contains the safety-related strategic and performance goals and measures for each arena, and (b) Section 2, which contains all of the non-safety-related performance goals and measures for each arena. The reason for this division is two-fold. First, many of the non-safety-related performance goals and measures are the same across the arenas and combining similar performance goals across the arenas eliminates unnecessary duplication. Secondly, the non-safety-related performance goals and measures were only recently introduced in the FY 2000–FY 2005 Strategic Plan and are in a less developed stage than the safety-related performance goals and measures, most of which have been in place for several years and have been refined over time.

SECTION 1
SAFETY-RELATED STRATEGIC AND PERFORMANCE GOALS

NUCLEAR REACTOR SAFETY

STRATEGIC GOAL: Prevent radiation-related deaths and illnesses, promote the common defense and security, and protect the environment in the use of civilian nuclear reactors.

Measures:

- ***No nuclear reactor accidents.***
- ***No deaths resulting from acute radiation exposures from nuclear reactors.***
- ***No events at nuclear reactors resulting in significant radiation exposures.***
- ***No events that result in releases of radioactive material from nuclear reactors causing an adverse impact on the environment.***

Verification: Nuclear reactor events are reported by licensees in Licensee Event Reports (LERs). A Sequence Coding and Search System is used to review LER data. Each potential abnormal occurrence is discussed during periodic meetings of the NRC's abnormal occurrence coordinators at headquarters and the regional offices to determine if it meets the abnormal occurrence reporting criteria. Any nuclear reactor accidents, deaths from acute radiation exposure from nuclear reactors, events at nuclear reactors that result in significant radiation exposure or events that result in releases in radioactive material from reactors that cause an adverse impact on the environment that meet the criterion for an abnormal event would be identified through LERs. Licensee compliance with reporting criteria as well as radiological and environmental release criteria is periodically inspected by NRC specialists. If a licensee reports an event involving core damage, NRC inspectors carefully investigate the event. The investigation ensures the validity of the information contained in licensee reports. In addition, a resident inspector is on duty at each reactor and monitors the facility on a real-time basis. The resident inspector verifies the safe operation of the facility and would be aware of any instances in which core damage has occurred or any instance in which radiation was released from the reactor in excess of reporting limits.

Abnormal occurrence write-ups are prepared and events are evaluated at the NRC under specific criteria to select those events that are to be recommended to the Commission to be considered abnormal occurrences. The NRC's Office of Nuclear Regulatory Research makes the final determination of which events should be recommended to be considered potential abnormal

occurrences. NRC Management Directive 8.1 "Abnormal Occurrence Reporting Procedure" provides a thorough documentation of the abnormal occurrence reporting process.

Validation:

No nuclear reactor accidents

Nuclear reactor accidents are those that result in significant core damage. Nuclear reactor accidents have the potential to endanger public safety or to harm the environment.

No deaths resulting from acute radiation exposures from nuclear reactors

Determining whether or not any deaths result from acute radiation exposure is valid and fundamentally essential to protecting public health and safety. Events of this magnitude are rare. If such an unlikely event were to occur, it would result in prompt and thorough investigation of the event, its consequences, its root causes, and necessary actions needed by the licensee and NRC to mitigate the consequences and prevent recurrence. This strategic goal measure is a direct measurement of the occurrence of radiation-related deaths at nuclear reactors.

No events at nuclear reactors resulting in significant radiation exposures

Nuclear power generation produces radiation which can be harmful if not properly controlled. Measuring the number of events resulting in significant radiation exposures, as well as any deaths from radiation exposure, indicates whether radiation-related deaths and illness are being prevented.

No events that result in releases of radioactive material from nuclear reactors causing an adverse impact on the environment

The radiation which is produced in the process of generating power from nuclear materials can also potentially harm the environment if not properly controlled. Releases that have the potential to cause an adverse impact on the environment are currently undefined. As a surrogate, data on the frequency that radiation is released into the environment that exceed specified limits are collected for this performance measure. Appendix A of NUREG-0090, Criterion 1.B.1, defines such releases as those involving "the release of radioactive material to an unrestricted area in concentrations which, if averaged over a period of 24 hours, exceeds 5,000 times the values specified in Table 2 of Appendix B to 10 CFR Part 20, unless the licensee has demonstrated compliance with 20.1301 using 20.1302 (b) (1) or 20.1302 (b) (2) (ii)." The essence of the criterion is that events that result in unintended permanent functional damage to an organ or a physiological system as determined by a physician are used as the measure for events that result in releases of radioactive material causing an adverse impact on the environment. Such events are reported in LERs, which are sent to the NRC as reportable occurrences. This strategic goal measure is a direct measurement of instances in which harmful impacts on the environment occur from nuclear reactors.

- *No radiological sabotages at nuclear reactors.*

Verification: Licensees are required to call the NRC to report any breaches of security or other event that may potentially lead to sabotage at a nuclear facility within one hour of its occurrence. The NRC safeguard requirements are described in 10 CFR Part 73, "Physical Protection of Plants and Materials," Section 73.71 and Part 73 Appendix G, "Reportable Safeguards Events." Information Assessment Teams would followup any significant events and determine what further actions are needed. A written report would also be filed by the licensee within thirty days of the incident that describes the incident and the steps that were taken to protect the nuclear facility. This information will allow the NRC to adequately assess whether a radiological sabotage has occurred.

Validation: The events to be reported are those that endanger nuclear reactor facilities by deliberate acts of sabotage directed against those facilities. Events of this type are extremely rare. If such an event were to occur, it would result in prompt and thorough investigation of the event, its consequences, its root causes, and the necessary actions needed by the licensee and NRC to mitigate the situation and prevent recurrence. The investigation ensures the validity of the information and assesses the significance of the event.

PERFORMANCE GOAL: Maintain safety, protection of the environment, and the common defense and security.

Measures:

- *No more than one event per year identified as a significant precursor of a nuclear accident.*

Verification: The Commission has an ASP program to systematically evaluate U.S. nuclear power plant operating experience to identify, document, and rank those operating events that were most significant in terms of the potential for inadequate core cooling and core damage (i.e., precursors). The ASP Program evaluation process has five steps. First, operating experience data is screened to identify events and/or conditions which may be potential precursors to a nuclear accident. The data that are evaluated includes: LERs from a SCSS database, Incident Investigation Team or Augmented Inspection Team reviews; NRC's daily screening of operational events; and other events identified by NRC staff as candidates. The second step is to conduct an engineering review of these screened events, using specific criteria, to identify those events requiring detailed analysis as candidate precursors. Third, a conditional core damage probability is calculated by mapping failures observed during the event or to accident sequences in risk models. Fourth, the preliminary potential precursor analyses is provided to the NRC staff and the licensee for independent peer review. Lastly, findings from the analyses are provided to the licensee and the public.

Validation: The ASP program identifies those events which have a 1/1000 10^{-3} or greater probability of leading to a nuclear reactor accident.

- ***No statistically significant adverse industry trends in safety performance.***

Verification: 10 CFR Part 50.73, "Licensee Event Report System," requires licensees to report various types of events in LERs. The NRC staff monitors industry performance using the information in these LERs. The Department of Energy Idaho National Engineering and Environmental Laboratory tabulates data from the LERs that provide indicators of industry performance. The indicators are published annually in a NUREG.

Validation: The NRC monitors industry safety performance through its Reactor Oversight Process that includes analyzing the information contained in the LERs. Statistical techniques are applied to the data to determine trends in industry performance over time. The NRC validates the indicators of industry performance through its inspection program by evaluating the significance of each of the events which are sent to the NRC in the LERs . Tracking industry safety performance over time through the LERs provides a good indication whether there is an improving, deteriorating, or steady maintenance of safety in operating nuclear plants. Any adverse trends would indicate that safety and the protection of the environment are not being maintained and action would be taken to reverse the negative trends observed. As a refinement to the existing process, specific parameters and criteria for measuring statistically significant adverse trends in industry wide safety performance will be developed and qualified for use in phases over the next several years.

- ***No events resulting in radiation over exposures from nuclear reactors that exceed applicable regulatory limits.***

Verification: Licensees report over exposures through the LER system. A SCSS LER database, maintained at the Oak Ridge National Laboratory, receives all LERs and codes them into a searchable database. The SCSS database is used to identify those LERs reporting over exposures. The NRC conducts inspections of the licensees if there is any indication in the LER that an exposure exceeded, or could have exceeded, a regulatory limit. In addition, areas of the facility that may be subject to radiation contamination have monitors which record radiation levels. Any instances in which high levels of radiation exposure occurred would be immediately known.

Validation: Given the nature of the process of using radioactive materials to generate power, over exposure to radiation is a potential danger from the operation of nuclear power plants. Such exposure to radiation that exceeds the applicable regulatory limits may potentially occur either through a nuclear accident or other malfunctions at the plant. Tracking the number of over-

exposures to radiation which occur at nuclear reactors is therefore an important indicator of the degree to which safety is being maintained.

- ***No more than three releases per year to the environment of radioactive material from nuclear reactors that exceed the regulatory limits.***

Verification: The SCSS LER database maintained at the Oak Ridge National Laboratory receives all LERs and codes them into a searchable database. The SCSS database will be utilized to identify those LERs reporting releases. The number of releases reported by licensees are applied to this measure. The NRC conducts periodic inspections of the licensees to ensure that releases to the environment through effluent pathways are being properly monitored and controlled. Any instances in which radiation had been released into the environment would be recorded on the monitors. If there is any indication in the LER that there has been an accident or inadvertent release, the NRC would conduct followup inspections.

Validation: The generation of nuclear power creates radioactive materials which can be harmful if not properly controlled. Releases of radioactive materials that exceed regulatory limits are therefore tracked as a performance measure because they have the potential to endanger public safety or harm the environment.

- ***No breakdowns of physical security that significantly weaken the protection against radiological sabotage or theft or diversion of special nuclear materials in accordance with abnormal occurrence criteria.***

Verification: Licensees are required to report to the NRC within one hour any known breakdowns of physical security, based on the requirements in 10 CFR Part 73, "Physical Protection of Plants and Materials," Section 73.71 and Part 73 Appendix G, "Reportable Safeguards Events." If such an event is reported, the Headquarters Operations Officer prepares an official record of the initial event report. The NRC response to such an event would commence immediately upon notification with the activation of its Information Assessment Team. A licensee's initial telephonic notification(s) must be followed within a period of 30 days by a written report submitted to the NRC.

Once a quarter the NRC staff evaluates all of the reported events based on the criteria contained in 10 CFR 73.71 and a summary of the results of the evaluation is prepared and the findings reported in the NRC office operating plan. Events are also reported annually to the public in the "Safeguards Summary Event Lists," NUREG-0525, 1999, Vol. 3. While all details of the event may not be available to the public (sensitive security Safeguards Information), the existence of all events is made public.

Validation: The events to be reported are those that threaten nuclear activities by deliberate acts directed against reactor facilities, such as radiological sabotage. If a licensee reports such an event, the reports are validated by the Information Assessment Team, which evaluates the initial report and determines what further actions may be necessary. Tracking breakdowns of physical security gives an indication of whether the necessary security precautions are being taken to protect the public, given the potential consequences of a nuclear accident due to sabotage or the inappropriate use of nuclear material either in this country or abroad.

NUCLEAR MATERIALS SAFETY

STRATEGIC GOAL: Prevent radiation-related deaths and illnesses, promote the common defense and security, and protect the environment in the use of source, byproduct, and special nuclear material.

Measures:

- ***No deaths resulting from acute radiation exposures from civilian uses of source, byproduct, or special nuclear materials, or deaths from other hazardous materials used or produced from licensed material.***

Verification: Events resulting in deaths could be reported to the NRC and/or Agreement States through a number of sources, but primarily through required licensee notifications. Morning Reports are also used to communicate this information internally. For events of this magnitude, media reports would likely provide another source of reporting, which would lead us to verify and validate the information through other sources. For Nuclear Materials Safety arena activities, the NMED is an essential system used to collect information on such events. For fuel cycle activities, this extends to other hazardous materials used with, or produced from licensed material consistent with the proposed amendments to 10 CFR Part 70. The decision on whether or not to ascribe the cause of a death to conditions related to acute radiation exposures, or other hazardous materials, will be made by NRC or Agreement State technical specialists, or our consultants. The fuel cycle and materials inspection programs are key elements in verifying the completeness and accuracy of licensee reports. The Integrated Materials Performance Evaluation Program (IMPEP) also provides a mechanism to verify that Agreement States and NRC regions are properly collecting and reporting such events as received from the licensees, and entering them into NMED.

Recently, NRC has taken a number of steps to improve the timeliness and completeness of materials event data. These steps include: assessment of the NMED data during periodic Generic Assessment Panel reviews, emphasis and analysis during the IMPEP reviews, NMED training in the regions and in Agreement States, and discussions at all Agreement State and Conference of Radiation Control Program Directors (CRCPD) meetings.

Validation: Determining whether or not any deaths result from acute radiation exposure is valid and fundamentally essential to protecting public health and safety. Events of this magnitude are not expected and would be rare. If such an event were to occur, it would result in prompt and thorough investigation of the event, its consequences, its root causes, and the necessary actions needed by the licensee and NRC to mitigate the situation and prevent recurrence.

- ***No more than six events per year resulting in significant radiation or hazardous material exposures from the loss or use of source, byproduct, and special nuclear materials.***

Verification: Events meeting this threshold would be reported to the NRC and/or Agreement States through a number of sources but primarily through required licensee notifications. Morning Reports are used to communicate this information internally. For events of this magnitude, media reports would likely provide another source of reporting, which would lead us to verify and validate the information through other sources. For Nuclear Materials Safety arena activities, the NMED is an essential system used to collect information on such events.

Significant exposures are defined as those that result in unintended permanent functional damage to an organ or a physiological system as determined by a physician, as agreed upon by NRC or Agreement State technical specialists, or our consultants. Hazardous material exposures only apply to fuel cycle activities in the Nuclear Materials Safety arena. For fuel cycle activities, this extends to other hazardous materials used with, or produced from, licensed material consistent with proposed amendments to 10 CFR Part 70. The fuel cycle and materials inspection programs are key elements in verifying the completeness and accuracy of licensee reports. The IMPEP also provides a mechanism to verify that Agreement States and NRC regions are properly collecting and reporting such events as received from the licensees, and entering them into NMED.

Recently, NRC has taken a number of steps to improve the timeliness and completeness of materials event data. These steps include: assessment of the NMED data during periodic Generic Assessment Panel reviews, emphasis and analysis during the IMPEP reviews, NMED training in the regions and in Agreement States, and discussions at all Agreement State and CRCPD meetings. In FY 2001, a working group is evaluating activities in the Nuclear Materials Safety arena to determine whether significant program changes may be warranted, with an emphasis on making the program more risk-informed, and performance-based. Another working group is analyzing the event reporting process within NRC and with the States. Their efforts will also serve to improve the data collection process for the performance measures used in this arena.

Validation: Any event resulting in unintended permanent functional damage to an organ or physiological system compromises public health and safety. Events of this magnitude are infrequent. If such an event were to occur, it would result in prompt and thorough investigation of the event, its consequences, its root causes, and the necessary actions needed by the licensee and NRC to mitigate the situation and prevent recurrence. In addition to these immediate actions, the NRC holds periodic Generic Assessment Panel meetings where management will validate previously screened events.

- ***No events resulting in releases of radioactive material resulting from civilian uses of source, byproduct, or special nuclear materials that cause an adverse impact on the environment.***

Verification: Events meeting this threshold would be reported to the NRC and/or Agreement States through a number of sources but primarily through required licensee notifications. Morning Reports are used to communicate this information internally. For events of this magnitude, media reports would likely provide another source of reporting, which would lead us to verify and validate the information through other sources. For Nuclear Materials Safety arena activities, the NMED is an essential system used to collect information on such events.

Releases that have the potential to cause "adverse impact" are currently undefined. As a surrogate, we will use those that exceed the limits for reporting AOs as given in AO criteria 1.B.1. The fuel cycle and materials inspection programs are key elements in verifying the completeness and accuracy of licensee reports. The IMPEP also provides a mechanism to verify that Agreement States and NRC regions are properly collecting and reporting such events as received from the licensees, and entering them into NMED.

Recently, NRC has taken a number of steps to improve the timeliness and completeness of materials event data. These steps include: assessment of the NMED data during periodic Generic Assessment Panel reviews, emphasis and analysis during the IMPEP reviews, NMED training in the regions and in Agreement States, and discussions at all Agreement State and CRCPD meetings. In FY 2001, a working group is evaluating activities in the Nuclear Materials Safety arena to determine whether significant program changes may be warranted, with an emphasis on making the program more risk-informed, and performance-based. Another working group is analyzing the event reporting process within NRC and with the States. Their efforts will also serve to improve the data collection process for the performance measures used in this arena.

Validation: The events reported under this measure are those that threaten the environment. Events of this magnitude are not expected and would be rare. If such an event were to occur, it would result in prompt and thorough investigation of the event, its consequences, its root causes, and the necessary actions needed by the licensee and NRC to mitigate the situation and prevent recurrence. In addition to these immediate actions, the NRC holds periodic Generic Assessment Panel meetings where management will validate previously screened events.

- ***No losses, thefts, or diversion of formula quantities of strategic special nuclear material; radiological sabotages; or unauthorized enrichment of special nuclear material regulated by the NRC.***

Verification: Licensees are required to report events in which there are losses, thefts, or diversions of formula quantities of strategic special nuclear material; radiological sabotages; or unauthorized enrichment of special nuclear material regulated by the NRC to the NRC Operations Center within one hour of their occurrence. The licensee is also required to file a followup written report within 30-days of the event to the NRC. The report must include sufficient information for NRC analysis and evaluation. Events are entered and tracked in the NMED.

The NRC initiates independent investigations that verify the reliability of reported information. NRC investigation teams evaluate the validity of materials event data, in order to assure that proper event data is being reported and collected. Any failures of appropriate licensee reporting would be discovered through the routine inspection program. The NRC holds weekly meetings to validate previously screened events.

Validation: Events collected under this performance measure are actual losses, thefts, diversions of formula quantities of strategic special nuclear material; actual radiological sabotage; or unauthorized enrichment of special nuclear material. Such events could compromise public health and safety, the environment, and the common defense and security. Events of this magnitude are not expected and would be rare. This measure does not apply to attempts or to process upsets (within regulatory guidelines and time frames). Attempts to steal, divert, or inappropriately enrich special nuclear material are covered by a parallel measure at the performance goal level. The information reported under 10 CFR Parts 73 and 74 is required so that NRC is aware of events that could endanger public health and safety or national security. Any strategic plan failures would result in immediate investigation and followup.

- ***No unauthorized disclosures or compromises of classified information causing damage to national security.***

Verification: Any alleged or suspected violations of the Atomic Energy Act, Espionage Act, or other Federal statutes related to classified information are reported to the NRC under the requirements of 10 CFR 95.57. However, for performance reporting, the NRC only counts those disclosures or compromises that actually cause damage to national security. Such events are reported to the Cognizant Security Agency and the Regional Administrator of the appropriate NRC Regional Office, as listed in Appendix A of 10 CFR Part 73. The Regional Administrator then contacts the Division of Facilities and Security at NRC headquarters. The Division of Facilities and Security conducts assessments of the violation and notifies other offices at the NRC as well as other

government agencies as appropriate. A determination is then made as to whether the compromise caused damage to national security. Any unauthorized disclosures or compromises of classified information causing damage to national security would result in immediate investigation and followup by the NRC.

Validation: Events collected under this performance measure are unauthorized disclosures of classified information causing damage to national security. Events of this magnitude are not expected and would be rare. If such an event were to occur, it would result in prompt and thorough investigation, including consequences, root causes, and actions needed by the regulatees and NRC to mitigate the consequences and prevent recurrence. NRC investigation teams validate the materials event data, in order to assure the proper event data is being reported and collected.

PERFORMANCE GOAL: Maintain safety, protection of the environment, and the common defense and security.

Measures:

- ***No more than 350 losses of control of licensed material per year.***

Verification: Events meeting this threshold would be reported to NRC and/or Agreement States through a number of sources but primarily through required licensee notifications. Morning Reports are used to communicate this information internally. For the Office of Nuclear Material Safety and Safeguards (NMSS) activities, the NMED is an essential system used to collect information of such events. This measure tracks material entering the public domain in an uncontrolled manner. Many of the events counted here do not, on an individual basis, have a public health and safety impact. For example, most of the losses of control of licensed material are of shielded material, unlikely to result in overexposures or releases to the environment. These are included because they may indicate program weaknesses, which, if ignored, could later trigger a more significant problem. The materials inspection program is a key element in verifying the completeness and accuracy of licensee reports. The IMPEP also provides a mechanism to verify that Agreement States and NRC regions are properly collecting and reporting such events as received from the licensees, and entering them into NMED.

Recently, NRC has taken a number of steps to improve the timeliness and completeness of materials event data. These steps include: assessment of the NMED data during periodic Generic Assessment Panel reviews, emphasis and analysis during the IMPEP reviews, NMED training in the regions and in Agreement States, and discussions at all Agreement State and CRCPD meetings. In addition, beginning late in FY 2001, a working group will evaluate the Nuclear Materials Safety arena program to determine whether significant program changes may be warranted, with an emphasis on

making the program more risk-informed, and performance-based. Another working group is analyzing the event reporting process within NRC and with the States. Their efforts will also serve to improve the data collection process for the performance measures used in this arena.

Validation: Nuclear material outside the control of the licensee has the potential to compromise public health and safety, and/or the environment. NRC holds periodic Generic Assessment Panel meetings where management will validate previously screened events.

- ***No occurrences of accidental criticality.***

Verification: Inadvertent criticality accidents are required to be reported whether or not they result in exposures or injuries to the workers or the public, and whether or not they result in adverse impacts to the environment. Criticality events are reported by the licensee immediately to the NRC Operations Center by telephone through the cognizant licensee safety officer. Followup written reports are required to be submitted to the NRC within 30 days of the initial report. The report must contain specific information concerning the event as specified by 10 CFR 70.50(c)(2) and 10 CFR 76.120(d)(2). The NRC also dispatches an Augmented Inspection Team that confirms the reliability of the data. The event is also tracked by the NMED. An event of this nature is immediately investigated and followed-up by the NRC.

Validation: Events collected under this performance measure are actual occurrences of accidental criticality. Such events could compromise public health and safety, the environment, and the common defense and security. Events of this magnitude are not expected and would be rare. If such an event were to occur, it would result in prompt and thorough investigation, including consequences, root causes, and actions needed by the regulatees and NRC to mitigate the consequences and prevent recurrence.

- ***No more than 40 events per year resulting in radiation over exposures from radioactive material that exceed applicable regulatory limits.***

Verification: Events meeting this threshold would be reported to NRC and/or Agreement States through a number of sources, but primarily through required licensee notifications. Morning Reports are used to communicate this information internally. For NMSS activities, the NMED is an essential system used to collect information of such events. Over exposures are those maximum annual exposures that exceed limits as provided by 10 CFR 20.2203 (a) (2). For fuel cycle activities, this extends to other hazardous materials used with, or produced from, licensed material, consistent with proposed amendments to 10 CFR 70. Reportable chemical exposures are those that exceed license commitments. It would also include chemical exposures involving uranium recovery activities under the Uranium Mill Tailings Radiation Control Act.

The fuel cycle and materials inspection programs are key elements in verifying the completeness and accuracy of licensee reports. The IMPEP also provides a mechanism to verify that Agreement States and NRC regions are properly collecting and reporting such events as received from the licensees, and entering them into NMED.

Recently, NRC has taken a number of steps to improve the timeliness and completeness of materials event data. These steps include: assessment of the NMED data during periodic Generic Assessment Panel reviews, emphasis and analysis during the IMPEP reviews, NMED training in the regions and in Agreement States, and discussions at all Agreement State and CRCPD meetings. In FY 2001, a working group is evaluating activities in the Nuclear Materials Safety arena to determine whether significant program changes may be warranted, with an emphasis on making the program more risk-informed, and performance-based. Another working group is analyzing the event reporting process within NRC and with the States. Their efforts will also serve to improve the data collection process for the performance measures used in this arena.

Validation: Radiation over exposures and reportable chemical exposures collected under this measure may be indicative of programmatic weaknesses that could ultimately compromise public health and safety. NRC holds periodic Generic Assessment Panel meetings where management will validate previously screened events.

- ***No more than 45 medical events per year.***

Verification: Medical events reported under 10 CFR 35 are counted under this performance measure. Events meeting this threshold would be reported to NRC and/or Agreement States through a number of sources, but primarily through required licensee notifications. Morning Reports are used to communicate this information internally. For NMSS activities, the NMED is an essential system used to collect information of such events. The Materials Inspection program is a key element in verifying the completeness and accuracy of licensee reports. The IMPEP also provides a mechanism to verify that Agreement States and NRC regions are properly collecting and reporting such events as received from the licensees, and entering them into NMED.

Recently, NRC has taken a number of steps to improve the timeliness and completeness of materials event data. These steps include: assessment of the NMED data during periodic Generic Assessment Panel reviews, emphasis and analysis during the IMPEP reviews, NMED training in the regions and in Agreement States, and discussions at all Agreement State and CRCPD meetings. In FY 2001, a working group is evaluating activities in the Nuclear Materials Safety arena to determine whether significant program changes may be warranted, with an emphasis on making the program more risk-informed, and performance-based. Another working group is analyzing the event reporting process

within NRC and with the States. Their efforts will also serve to improve the data collection process for the performance measures used in this arena.

Validation: Medical events can potentially be significant from a health and safety standpoint. NRC holds periodic Generic Assessment Panel meetings where management will validate previously screened events.

- ***No more than 6 releases per year to the environment of radioactive material from operating facilities that exceed the regulatory limits.***

Verification: Releases under the 30-day reporting requirement under 10 CFR 20.2203(a)(3) are counted under this performance measure. For fuel cycle activities, this extends to other hazardous materials used with, or produced from, licensed material, consistent with proposed amendments to 10 CFR Part 70. Reportable chemical releases are those that exceed license commitments. This measure also includes chemical releases from NRC regulated activities under the Uranium Mill Tailings Radiation Control Act. Events meeting this threshold would be reported to NRC and/or Agreement States through a number of sources, but primarily through required licensee notifications. Morning Reports are often used to communicate this information internally. For NMSS activities, the NMED is an essential system used to collect information of such events.

The fuel cycle and materials inspection programs are key elements in verifying the completeness and accuracy of licensee reports. The IMPEP also provides a mechanism to verify that Agreement States and NRC regions are properly collecting and reporting such events as received from the licensees, and entering them into NMED.

Recently, NRC has taken a number of steps to improve the timeliness and completeness of materials event data. These steps include: assessment of the NMED data during periodic Generic Assessment Panel reviews, emphasis and analysis during the IMPEP reviews, NMED training in the regions and in Agreement States, and discussions at all Agreement State and CRCPD meetings. In FY 2001, a working group is evaluating activities in the Nuclear Materials Safety arena to determine whether significant program changes may be warranted, with an emphasis on making the program more risk-informed, and performance-based. Another working group is analyzing the event reporting process within NRC and with the States. Their efforts will also serve to improve the data collection process for the performance measures used in this arena.

Validation: Releases are tracked in order to assure protection of the environment. NRC holds periodic Generic Assessment Panel meetings where management will validate previously screened events.

- ***No non-radiological events that occur during the NRC-regulated operations that cause impacts on the environment that can not be mitigated within applicable regulatory limits, using reasonably available methods.***

Verification: Events meeting this threshold are reported to NRC and/or Agreement States primarily through required licensee notifications, though other sources may also report events. Morning Reports are used to communicate this information internally. The reports are entered into the NMED for tracking and evaluation purposes. A failure to meet this performance target would result in immediate followup by NRC. Failures to meet performance targets in Agreement States would require followup actions coordinated through the Office of State and Tribal Programs.

Validation: This measure only involves chemical releases from the NRC-regulated activities under the Uranium Mill Tailings Radiation Control Act. It is limited to non-radiological environmental impacts from operations, including remediation. This measure does not apply to decommissioning of sites under the Nuclear Waste Safety arena. Events reported under this measure are those that could lead to a non-radiological impact on the environment that could not be mitigated within applicable regulatory limits, using reasonably available methods. Examples of events include chemical releases resulting from excursions at in situ leach facilities or releases from mill tailings piles that could contaminate the groundwater. Events of this magnitude would be rare. If such an event were to occur it would result in prompt and thorough investigation.

- ***No more than five substantiated cases per year of attempted malevolent use of source, byproduct, or special nuclear material.***

Verification: This metric was developed using management estimates based on past performance. Malevolent use includes events categorized by NRC staff as intended to intentionally cause harm to individuals using licensed material. It includes events involving NRC or Agreement State licensees. Events meeting this threshold are reported to NRC and/or Agreement States primarily through required licensee notifications, though other sources may also report events. Morning Reports are used to communicate this information internally. The reports are entered into the NMED for tracking and evaluation purposes. Allegations could be another source for such reports. The NRC responds to either a licensee report or allegation by initiating an independent investigation. Such events are tracked by the appropriate offices.

An NRC investigation team, in coordination with FBI and other law enforcement organizations, evaluate the materials event data, in order to assure the proper event data is being reported and collected. The NRC holds periodic Generic Assessment Panel meetings and monthly Operational Events briefings to validate previously screened events.

Validation: Events collected under this performance measure are substantiated cases of attempted malevolent use of source, byproduct, or special nuclear material. Such events could compromise public health and safety, the environment, and the common defense and security.

- ***No breakdowns of physical protection or material control and accounting systems resulting in a vulnerability to radiological sabotage, theft, diversion, or unauthorized enrichment of special nuclear material.***

Verification: Events as described above must be recorded within 24 hours of the identified event in a safeguards log that is maintained by the licensee. The log must be retained as a record for 3 years after the last entry is made or until termination of the license. The NRC has a safeguards inspection program to ensure the reliability of recorded data. A determination of whether a substantiated breakdown has resulted in a vulnerability to radiological sabotage, theft, diversion, or unauthorized enrichment of special nuclear material is made by the NRC. When making substantiated breakdown determinations, the NRC evaluates the materials event data, in order to assure the proper event data is being reported and collected.

Validation: Events collected under this performance measure would result in a vulnerability to radiological sabotage, theft, diversion, or loss of special nuclear materials or radioactive waste. Such events could compromise public health and safety, the environment, and the common defense and security. The NRC relies on its safeguards inspection program to ensure the reliability of recorded data.

NUCLEAR WASTE SAFETY

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

Measures:

- ***No deaths resulting from acute radiation exposures from radioactive waste.***

Verification: Events meeting this threshold are reported to the NRC and/or Agreement States primarily through required licensee notifications, though other sources may also report events. Morning Reports are used to communicate this information internally. The reports are entered into the NMED for tracking and evaluation purposes. For events of this magnitude, media reports may also provide another source of reporting. The decision on whether or not to ascribe the cause of a death to conditions related to acute radiation exposures will be made by NRC or Agreement State technical specialists, or our consultants. The IMPEP provides a mechanism to verify that Agreement States and NRC regions are properly collecting and reporting such events as received from the licensees, and entering them into NMED. Any strategic goal measure failures would result in immediate followup by NRC.

Validation: Determining whether or not any deaths result from acute radiation exposures is valid and fundamentally essential to protecting public health and safety. Events of this magnitude are not expected and would be rare. If such an event were to occur, it would result in prompt and thorough investigation of the event, its consequences, its root causes, and the necessary actions needed by the licensee and NRC to mitigate the situation and prevent recurrence.

- ***No events resulting in significant radiation exposures from radioactive waste.***

Verification: Significant exposures are defined as those that result in unintended permanent functional damage to an organ or a physiological system as determined by a physician, as agreed upon by NRC or Agreement State technical specialists, or our consultants. Events meeting this threshold are reported to the NRC and/or Agreement States primarily through required licensee notifications, though other sources may also report events. Morning Reports are used to communicate this information internally. The reports are entered into the NMED for tracking and evaluation purposes. For events of this magnitude, media reports may also provide another source of reporting. The IMPEP provides a mechanism to verify that Agreement States and NRC regions are properly collecting and reporting such events as received from the licensees, and entering them into NMED. Failure to meet this measure would result in immediate followup by NRC.

Validation: Any event resulting in an unintended permanent function damage to an organ or physiological system, compromises public health and safety. Events of this magnitude are not expected and would be rare. If such an event were to occur, it would result in prompt and thorough investigation of the event, its consequences, its root causes, and the necessary actions needed by the licensee and NRC to mitigate the situation and prevent recurrence. In addition to these immediate actions, the NRC holds periodic Generic Assessment Panel meetings where management will validate previously screened events.

- ***No releases of radioactive waste causing an adverse impact on the environment.***

Verification: Releases of radioactive waste that have the potential to cause an adverse impact on the environment are currently undefined. Therefore, for this performance measure, releases that exceed the limits for reporting AOs as given in AO criteria 1.B.1 are counted as releases that cause an adverse impact on the environment. Events meeting this threshold are reported to NRC and/or Agreement States primarily through required licensee notifications, though other sources may also report events. For events of this magnitude, media reports may also provide another source of reporting. Morning Reports are used to communicate this information internally. The reports are entered into the NMED for tracking and evaluation purposes. The IMPEP provides a mechanism to verify that Agreement States and NRC regions are properly collecting and reporting such events as received from the licensees, and entering them into NMED. Any failure to meet this measure would result in immediate followup by NRC.

Validation: The events reported under this measure are those that threaten the environment. Events of this magnitude are rare. If such an event were to occur, it would result in prompt and thorough investigation of the event, its consequences, its root causes, and the necessary actions needed by the licensee and NRC to mitigate the situation and prevent recurrence. In addition to these immediate actions, the NRC holds periodic Generic Assessment Panel meetings where management will validate previously screened events.

- ***No losses, thefts, diversions, or radiological sabotages of special nuclear material or radioactive waste.***

Verification: Licensees report events which entail losses, thefts, diversions, or radiological sabotages of special nuclear material or radioactive waste within one hour of their occurrence to the NRC Operations Center. A followup written report is required to be submitted within 30 days of the event to the NRC. The report must include sufficient information for NRC analysis and evaluation. The NRC also initiates an independent investigation of the reported event. Events are entered and tracked by the NMED. Any strategic plan failure results in immediate investigation and followup, and is tracked in the Safeguards Summary Event List Database.

NRC investigation teams, in coordination with FBI and other law enforcement organizations, evaluate the validity of materials event data, in order to assure the proper event data is being reported and collected. Any lack of appropriate licensee reporting would be discovered through the routine inspection program. The NRC holds periodic Generic Assessment Panel meetings where management will validate previously screened events.

Validation: This measure only applies to *actual* losses, thefts, diversions, or *actual* radiological sabotage. *Attempts* to steal, divert, or conduct sabotage using special nuclear material or radioactive waste are covered by a parallel measure at the performance goal level. Such events could compromise public health and safety, the environment, and the common defense and security.

PERFORMANCE GOAL: Maintain safety, protection of the environment, and the common defense and security.

Measures:

- ***No events resulting in radiation over exposures from radioactive waste that exceed applicable regulatory limits.***

Verification: Radiation over exposures are counted as those events where maximum annual exposures exceed limits as provided by 10 CFR 20.2203 (a) (2). Events meeting this threshold are reported to the NRC and/or Agreement States primarily through required licensee notifications, though other sources may also report events. Morning Reports are used to communicate this information internally. The reports are entered into the NMED for tracking and evaluation purposes. The IMPEP provides a mechanism to verify that Agreement States and NRC regions are properly collecting and reporting such events as received from the licensees, and entering them into NMED. A working group is analyzing the event reporting process within NRC and with the States. Their efforts will also serve to improve the data collection process for the metrics used in this arena.

Validation: Radiation over exposures collected under this measure may be indicative of programmatic weaknesses that could ultimately compromise public health and safety. NRC holds periodic Generic Assessment Panel meetings where management will validate previously screened events.

- ***No breakdowns of physical protection resulting in a vulnerability to radiological sabotage, theft, diversion, or loss of special nuclear materials or radioactive waste.***

Verification: Breakdowns of physical protection resulting in a vulnerability to radiological sabotage, theft, diversion, or loss of special nuclear materials or radioactive waste are recorded within 24 hours

in a safeguards log that is maintained by the licensee. The log must be retained as a record for 3 years after the last entry is made or until termination of the license. No explicit reporting requirements exist for substantiated breakdowns of physical protection. The NRC relies on its safeguards inspection program to ensure the reliability of recorded data. The NRC uses the inspection program information to determine whether a breakdown of physical protection has occurred. The NRC evaluates the event data when making a determination whether a breakdown of physical protection has occurred in order to assure the proper event data is being reported and collected.

Validation: Vulnerability to radiological sabotage, theft, diversion, or loss of special nuclear materials or radioactive waste could compromise public health and safety, the environment, and the common defense and security.

- ***No radiological releases to the environment from operational activities that exceed the regulatory limits.***

Verification: Radiological releases to the environment from operational activities that exceed the regulatory limits are required to be reported within 30 days under 10 CFR 20.2203(a)(3). Events meeting this threshold are reported to the NRC and/or Agreement States primarily through required licensee notifications, though other sources may also report events. Morning Reports are used to communicate this information internally. The reports are entered into the NMED for tracking and evaluation purposes. The IMPEP provides a mechanism to verify that Agreement States and NRC regions are properly collecting and reporting such events as received from the licensees, and entering them into NMED. A working group is analyzing the event reporting process within NRC and with the States. Their efforts will also serve to improve the data collection process for the metrics used in this arena.

Validation: Releases are tracked in order to assure protection of the environment. NRC holds periodic Generic Assessment Panel meetings where management will validate previously screened events.

- ***No instances where radioactive waste and materials under the NRC's regulatory jurisdiction cannot be handled, transported, stored, or disposed of safely now or in the future.***

Verification:

In the Nuclear Waste Safety arena, the NRC monitors events and issues related to the safe use, transport, and storage of radioactive waste and materials that are reported to the Commission in accordance with existing regulations. Allegations also may provide information about instances

where radioactive waste and materials under the NRC's regulatory jurisdiction cannot be handled, transported, stored, or disposed of safely. The NRC monitors events that might indicate a licensee's or licensee's contractor's current or future inability to perform a required function or activity in a safe manner. Any event, condition or substantiated allegation formally reported to the NRC is evaluated for safety impact and potential generic implications. The NRC reviews formerly terminated licensed sites with potential contamination that may require cleanup and disposal. NRC identifies a responsible party that will need to cleanup such sites and requests funding if needed.

Validation: For the majority of radioactive waste or materials, there are no expected instances where they cannot be handled, transported, or disposed of safely now or in the future. However, there may be a potential to monitor instances where waste is found on sites that were thought to be previously cleaned up and NRC's licenses terminated. NRC has an ongoing project to identify and provide regulatory oversight of the cleanup of such sites by disposing of the waste. However, cleanup and disposal for the waste at some of these sites may be complicated due to inadequate funding. Failure of this measure would occur if cleanup/disposal cannot be arranged for these sites. Substantiated allegations are an important source of information for this measure. In addition, for disposal, the staff's status of funding cleanup of formerly terminated licensed sites will provide directly relevant data.

INTERNATIONAL NUCLEAR SAFETY SUPPORT

STRATEGIC GOAL: Support U.S. interests in the safe and secure use of nuclear materials and in nuclear non-proliferation.

Measures:

- ***Fulfills 100 percent of the significant obligations over which the NRC has regulatory authority arising from statutes, treaties, conventions, and Agreements for Cooperation.***

Verification: At the beginning of the fiscal year, the NRC prepares a list of its significant obligations. The list is coordinated with the NRC International Council (IC) and forwarded to the Commission for review and comment. The NRC monitors activities it undertakes during the year in regard to these obligations. A year-end status report is forwarded to the Department of State (DOS) Office of Nuclear Energy Affairs for their information and as a means of external confirmation.

Validation: The obligations to be tracked are those that, if unfulfilled, could undermine U.S. interests in the safe and secure use of nuclear materials and in nuclear non-proliferation. The circumstances surrounding any such failures of the NRC, their implications and recovery plans, are reported to the Commission and separately described in DOS or International Atomic Energy Agency (IAEA) reports, confirming their national and international significance.

Illustrative Examples of "significant obligations over which the NRC has regulatory authority arising from statutes, treaties, conventions, and Agreements for Cooperation."

Nuclear Non-Proliferation Treaty - [1969] and the U.S. Nuclear Non-Proliferation Act - [1978]

NRC is obliged to carry out procedures to facilitate the timely processing of requests for export licenses in order to enhance the reliability of the U.S. in meeting its commitments to supply nuclear reactors and fuel to countries that adhere to effective non-proliferation policies. NRC is also obliged to provide timely views to the Executive Branch when consulted regarding proposed Agreements for Cooperation in the Peaceful Uses of Nuclear Energy, subsequent arrangements and transfers of nuclear technology.

Convention on Early Notification of a Nuclear Accident - [1986]

The U.S. Government is obliged to report to the IAEA and affected countries any U.S. nuclear accidents which have the potential for international trans-boundary release of radioactive material

that could be of safety significance to another country. In that context, NRC must report such accidents within its purview to Executive Branch contacts, following established U.S. Government procedures.

Convention on Assistance in the Case of Nuclear Accident or Radiological Emergency - [1987]

The U.S. Government is obliged to cooperate in order to facilitate prompt assistance and support in the event of nuclear accidents or radiological emergencies. The U.S. Government is required to notify the IAEA of its available experts, equipment and other materials for providing assistance and would decide whether it can render requested assistance and on what terms. In that context, NRC must advise Executive Branch contacts of its assistance capabilities, following established U.S. Government procedures.

Convention on the Physical Protection of Nuclear Material - [1987]

NRC is obliged to require U.S. licensees to meet mandatory criteria for the physical protection of nuclear material during international transport.

Convention on Nuclear Safety (CNS) - [1996]

NRC is obliged to take regulatory and administrative measures to implement obligations under the CNS as they apply to NRC-licensed nuclear facilities, including provisions for Reporting, Existing Nuclear Installations, Legislative and Regulatory Framework, Regulatory Body, Responsibility of the License Holder, Priority to Safety, Financial and Human Resources, Human Factors, Quality Assurance, Assessment and Verification of Safety, Radiation. Significant obligations of the CNS which may require NRC actions beyond those inherent in our domestic regulatory program, are in the areas of Reporting, Emergency Preparedness and Siting, as follows.

Reporting - NRC has the lead responsibility within the U.S. Government to prepare, prior to each meeting of the Parties, a report on the measures taken to implement each of the obligations of the Convention.

Emergency Response - NRC must ensure that the competent authorities of Canada and Mexico are provided with appropriate information for emergency planning and response for any licensed nuclear facilities in their vicinities.

Siting - NRC must ensure that appropriate procedures are established and implemented for consulting the competent authorities of other Parties to the Convention in the vicinity of a proposed nuclear installation, insofar as they are likely to be affected by that installation and,

upon request, providing the necessary information in order to enable them to evaluate and make their own assessment of the likely safety impact on their own territory of the nuclear installation.

The Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management- [Opened for Signature, 1997]

When the Convention is ratified by the U.S. and comes into force, NRC will be obliged to take certain regulatory and administrative measures to implement its provisions. These obligations are comparable to those described above for the CNS, except that NRC would support, not lead, preparation of the U.S. reports.

- ***No significant proliferation incidents attributable to some failure of the NRC.***

Verification: The NRC monitors State Department and Central Intelligence Agency reports, as well as newspapers, nuclear journals and other open sources of information, for reports of significant proliferation incidents. Such incidents would include: the detonation of a nuclear explosive device by any country other than the U.S., U.K., Russia, France and China; refusal by any non-nuclear weapon state with which the U.S. has an Agreement for Cooperation to accept IAEA safeguards on all its nuclear activities; refusal by any such country not to give specific assurances that they will not manufacture or otherwise acquire any nuclear explosive device; engagement of any such country in activities involving source or special nuclear material and having direct significance for the manufacture or acquisition of nuclear explosive devices; or the theft or diversion from authorized peaceful use by any country, sub-national group or individual of 1 kilogram or more of U.S. supplied or obligated highly enriched uranium or plutonium-239.

The NRC prepares an analysis of any reported significant incidents to determine if some failure of the NRC contributed to its occurrence. This information is reported to the IC and, as appropriate, to the Commission.

Validation: The proliferation incidents of interest are those of such significance that they would be reported to the Congress by DOS. NRC would necessarily consider whether the incident was abetted by some action or inaction on our part. If so, the incident would represent an NRC performance failure.

- ***No significant safety or safeguards events that result from the NRC's failure to implement its international commitments.***

Verification: Significant safety events are those events which are rated 2 or above on the International Nuclear Events Scale. Significant safeguards events are those events which are judged by the IAEA Director General and staff to require notification to the IAEA Board of Governors. The NRC monitors INES reports and IAEA Board of Governors documents to identify any/all significant events during the fiscal year.

The NRC staff specialists prepare a quick-look analysis of each significant event to determine if some failure of the NRC may have materially contributed to its occurrence. This information will be promptly reported to the IC and, as appropriate, to the Commission.

Validation: Significant safety and safeguards events usually raise questions from Congressional oversight committees and the trade press, if not the major news media. NRC would necessarily consider whether the incident was abetted by some action or inaction on our part. If so, the incident would represent an NRC performance failure.

SECTION 2
NON-SAFETY-RELATED STRATEGIC AND PERFORMANCE GOALS

The Verification and Validation for the Non-Safety measures apply equally to the Nuclear Reactor Safety, Nuclear Materials Safety, and Nuclear Waste Safety arenas unless specifically noted.

PERFORMANCE GOAL: Increase public confidence.

- ***Complete the milestones in the annual Performance Plan relating to collecting, analyzing, and trending information for measuring public confidence.***

Verification: On September 5, 2000, William D. Travers, Executive Director for Operations, issued a memorandum on the use of a public meeting feedback form to assess the effectiveness of Communications Plans (CPs) and interactions with the public. This memorandum directed staff to commence use of the form on October 1, 2000, for an 18-month pilot. The staff was directed to introduce and distribute the feedback form to attendees at the start of public meetings where the NRC is the main presenter, and at select meetings between NRC and a licensee, where the public attends as observers, but does not participate, e.g., enforcement conferences. Meeting attendees can submit the completed form at the end of the meeting or mail the form to the designated NRC meeting contact following the meeting.

Following the public meetings, the meeting contact collects and reviews the completed forms. Improvements resulting from feedback comments will be tracked in the Office operating plan and communications plan for future meetings. Additionally, the completed feedback forms, along with any prepared meeting summary and staff comments or observations, are forwarded to the Office of the Deputy Executive Director for Management Services. This Office will perform a semiannual evaluation of the forwarded information in an effort to identify any generic areas for improving NRC staff communications at public meetings.

Validation: The feedback form is a qualitative method for collecting the information which will be analyzed as a measure of public confidence. This information will provide NRC with a mechanism to identify any generic areas for improving NRC staff communications at public meetings.

- ***Complete all of the public outreaches as scheduled in the annual Performance Plan.***

Verification: On May 1, 2000, William D. Travers, Executive Director for Operations, issued a memorandum on initiatives to improve the effectiveness of communications. This memorandum

directed the staff to develop CPs for important programs supporting each arena. The CPs structure, developed to reflect the importance of building and maintaining public trust, includes establishing goals, discussing the history of the effort, identifying internal and external audiences, identifying the tools that would best fit each audience, identifying key messages, determining the schedule for actions and evaluation criteria, identifying how to measure progress and obtain feedback, determining how results will be reported, and identifying who the reporting with will shared with.

In the May 1, 2000, memorandum, the EDO assigned Regional Administrators and Office Directors to incorporate CPs milestones and important implementation activities into the operating plans. For the annual performance plan, specific milestones from the six high priority CPs have been identified.

Validation: The milestones identified for the performance plan were endorsed by the EDO management and the applicable office director. The milestones for the public outreach initiatives will be reviewed at operating plan briefings with the EDO and revised as appropriate to ensure the communication plans' public outreach efforts are still valid and an effective means to increase public confidence.

- ***Complete the milestones specific to the agency allegation program effectiveness assessment plan as identified in the annual Performance Plan.***

Verification: The agency is currently developing an agency allegation program effectiveness plan (to be completed by FY 2002).

Validation: The staff will be developing performance measures that provide an indication of the contribution of the allegation program to increasing public confidence in the NRC. The performance measures will be derived from information gathered from users of the allegation program.

- ***Issue Director's Decisions for petitions filed to modify, suspend, or revoke a license under 10 CFR 2.206 within an average of 120 days.***

Verification: 10 CFR 2.206 provides persons with an opportunity to file a request to institute a proceeding to modify, suspend, or revoke a license, or for any other action as may be proper. NRC Management Directive (MD) 8.11 provides the procedures for handling and resolving such petitions filed under 10 CFR 2.206. This measure will track the staff's timeliness in reaching proposed Directors' Decisions to address such petitions.

The metric begins with the date the acknowledgment letter is sent to the petitioner (following the Petition Review Board) and ends on the date the proposed Director's Decision is sent out for comment. Supplements to the petition which require extension of the schedule will reset the

beginning of the metric to the date of issuance of a new acknowledgment letter. Petition Review Boards will determine whether or not such submissions meet the conditions of a 10 CFR 2.206 petition, as outlined in MD 8.11.

Validation: Timely assessment, review, and agency response to a proposed 10 CFR 2.206 petition is important to maintaining public confidence. The criteria established by MD 8.11 ensures that proposed petitions are appropriately assessed, provided with the appropriate management oversight and are reviewed and responded to in a timely manner.

PERFORMANCE GOAL: Make NRC activities and decisions more effective, efficient, and realistic.

- ***Complete those specific milestones in the Risk-Informed Regulation Implementation Plan (RIRIP) identified for completion in the annual Performance Plan.***

Verification: In developing the RIRIP, milestones to be included in the Performance Plan will be identified by arena. The Office of Regulatory Research will coordinate development of semi-annual updates of the RIRIP which will document the status of these milestones.

Validation: The RIRIP replaces the Probabilistic Risk Assessment Implementation Plan. It is to be a comprehensive report on agency risk-informed plans and activities organized by arena.

- ***Complete at least two key process improvements per year in selected program and support areas that increase efficiency, effectiveness, and realism.***

Verification and Validation for the Nuclear Reactor Safety arena:

Verification: Upon selection, key processes will be evaluated using the data collection and analysis process described below:

Short term: All work is established through the Planning, Budgeting, and Performance Management (PBPM) process and assigned to a planned accomplishment (PA) area. This planning identifies and prioritizes the work required in order to deliver targeted outcomes. Individual work items in a PA are tracked by a unique tracking number, a Technical Assignment Control (TAC) number, in the NRR Work Information and Scheduling Program (WISP) and, as appropriate, the agency central accounting system (FFS), if contractors are used to complete the task. Resources expended for the individual work items are recorded as hours in WISP and dollars in FFS. Other information, such as critical dates, are also recorded in WISP. The TAC data is entered into the WISP system by those performing the tasks, and the FFS data is entered by Office financial staff. The data is also routinely

reviewed by the task manager (such as a project manager) and the immediate supervisor of those performing the work. In addition, TAC data is checked for completeness by two programs, including the WISP program itself. The data is periodically collected in monitoring reports and analyzed by management teams to determine program performance.

Long term: During FY 2002 the Office of Nuclear Reactor Regulation (NRR) is implementing a pilot for collection of data using a centralized work planning approach. A component of centralized work planning is to establish clear standards for all work processes. The first step in establishing these standards is to map each process identifying all of its steps and the resources used to support each step. This establishes the baseline for each process and its components.

Validation:
Short term: The data and the performance measures in meeting the desired outcomes is established and updated each year during the planning process. The data are analyzed monthly and at the end of each fiscal year, and over longer periods depending on the data/measure. At each of these review steps the data for those processes which are candidates for process improvement are reviewed in order to determine if the data/measure are providing the desired insight on meeting the outcome.

During FY 2001, the process maps and standards will be put in place for a number of NRR processes. Data will be tracked by each component in the process and statistical analysis will be one of the tools used to identify processes which have the greatest potential for streamlining. It is expected that during FY 2002 process streamlining will be implemented for a number of activities using this long term approach. During FY 2002, data will also be collected which will compare baseline processes against modified processes to assess contribution to increased efficiency, effectiveness, and/or realism.

Long term: This long-term approach is currently being piloted by NRR. Pending evaluation of the pilot data during FY 2002 other NRC office in the Nuclear Reactor Safety arena will continue to apply the short-term approach.

Verification and validation for the Nuclear Materials Safety and Nuclear Waste Safety arenas:

Verification: Annually, as part of the budget development cycle, each NMSS Division and the NMSS Program Management, Policy Development, and Analysis Staff will evaluate their activities to determine whether there are areas that might be conducted more efficiently or effectively and, thus, merit a process review. They will prioritize the candidate efforts based on their potential contribution to achieving greater efficiency and/or effectiveness in conduct of their activities. Resources estimated to be necessary to accomplish the effort(s) will be considered during the planning and budgeting process.

In developing their oerating pans for the upcoming fiscal year, these NMSS organizations will identify the process improvement efforts planned for that year, including the intermediate milestones that have been established as necessary to complete the effort, in their operating plans. Note that fact-of-life changes in NMSS' programs may dictate that newly-identified process improvements be given higher priority than those planned during the planning and budget cycle for a given fiscal year, and may replace those previously planned. And, an unanticipated need for a process improvement review may be identified during the operating year. In these cases, the prioritization scheme developed in connection with the PBPM process will be used to make workload decisions. The NMSS Office Director will review the proposed process improvements as part of his review of the baseline operating plans for the new fiscal year and as unanticipated reviews are identified outside of the planning, budget and operating plan development phases, and will use the PBPM prioritization as a guide for decision-making.

The progress of the process improvement reviews will be tracked in the operating plans. A general description of the process improvement will be included in the arena-based leadership level operating plan, and a more detailed description of the milestones leading to completion of the effort will be contained in the operational-level operating plans. These operating plans will be updated at the end of each quarter of the fiscal year, to reflect the current status. The updated operating plans will be briefed to the NMSS Office Director and/or Deputy Director each quarter, and the Office-approved updates will be provided to the EDO each quarter.

A process improvement effort that spans both the Nuclear Materials Safety and the Nuclear Waste Safety arenas will be counted in each arena.

Validation: In most cases, the process improvement would be considered complete at the time the staff issues its report, or briefs senior NRC management on the findings and recommendations (not including interim status briefings). Ensuing implementation efforts would be tracked as part of the operating plan process, but those efforts would be outside the scope of this measure.

- ***Complete all license renewal application reviews within 30 months.***

This performance measure applies only to the Nuclear Reactor Safety arena:

Verification: Upon acceptance of a renewal application for review, a TAC number is opened in NRR's automated WISP with a 30-month target completion date. The TAC number is used to report staff hours charged in reviewing the application and for documenting completion of the review. The TAC number and its 30-month completion date are maintained in WISP for the duration of the renewal application review.

Compliance with the 30-month schedule is monitored by the assigned Project Manager and the License Renewal and Standardization Branch Chief or his designee throughout the review of the license renewal application. WISP reports compliance with the measure either by accessing the individual TAC or through the WISP Project Manager's Report.

Validation: The WISP system provides a readily accessible reporting system that clearly demonstrates whether the NRC's 30-month measure is met. Failure to meet the measure is automatically indicated by WISP.

- ***Complete all major prelicensing milestones needed to prepare for a licensing review of the potential Yucca Mountain repository, consistent with the Department of Energy's (DOE's) schedules and before DOE submits its license application.***

This performance measure applies only to the Nuclear Waste Safety arena:

Verification: NRC will complete all of the milestones listed for this measure in the FY 2002 Performance Plan before DOE's submittal of its proposed license application in FY 2002. Two of these milestones are inputs to the DOE statutory actions, i.e., the EIS preparation and the Site Recommendation Report, and one is a statutory requirement for NRC, i.e., comments on DOE's draft environmental impact statement. The milestones and schedules, and changes thereto, are tracked by NMSS.

Validation: The milestones will provide guidance to DOE in preparing its proposed application and guidance to the NRC's review of DOE's proposed application, thereby making the licensing process more effective and efficient.

PERFORMANCE GOAL: Reduce unnecessary regulatory burden on stakeholders.

- ***Complete those specific milestones to reduce unnecessary regulatory burden as identified in the annual Performance Plan.***

Verification and validation for the Nuclear Reactor Safety arena:

Verification: Established milestones will be monitored and adjusted as stakeholder input is received and evaluated. Verification of these milestones will be accomplished by determining that the identified actions or products have been completed. Milestone completion will be tracked in the NRR Director's Quarterly Status Report.

Milestone schedule for FY 2001 includes the development of a process for collecting data and identifying activities that have the greatest impact on reducing unnecessary regulatory burden while maintaining safety. The milestone for FY 2002 is to issue final measures and a voluntary reporting approach.

Validation: Performance can be validated by timely completion of milestones as tracked in the Director's Quarterly Status Report. When the Strategic Plan was developed, it was concluded that the milestones above are appropriate for this initiative in its current phase. Once data are actually being collected from licensees, additional verification and validation will be needed relative to these data. Verification and validation will also have to be considered in establishing what type of data should be collected and how to collect it.

Verification and validation for the Nuclear Material Safety arena:

Verification: A plan to reduce unnecessary burden is under development in NMSS. This measure will be implemented in the context of active projects. The NRC Performance Plan is specifically tracking the completion of 10 CFR 35, as the only FY 2001 milestone. This rule was affirmed October 23, 2000. We are continuing efforts on a number of rulemakings that reduce unnecessary burden, including special nuclear control and accountability, and requirements for radiography-associated equipment.

Validation: Plans for validation of this new measure will be included as part of the development of the plan to reduce unnecessary burden.

Verification and validation for the Nuclear Waste Safety arena:

Verification: In an effort to reduce unnecessary regulatory burden, NRC routinely seeks licensee and other external stakeholder input on revisions to the agency's regulatory framework. This measure tracks instances where NRC may have overlooked a potential unnecessary regulatory burden associated with implementation of modification or application of Nuclear Waste Safety arena regulatory framework during the reporting period. Licensees or other external stakeholders may inform the NRC of a potential regulatory burden in writing, via E-mail, or may present a potential unnecessary regulatory burden issue to the Commission during transcribed meetings. Progress on implementation of NRC action will be reflected, reviewed, and monitored on a monthly basis in the Operational Level Operating Plan. Any deviations will be reported to the Deputy Director and Director of the Spent Fuel Project Office.

FY 2002 Performance Plan Activity: On April 18, 2000, the Nuclear Energy Institute submitted a petition for rulemaking to streamline the approval and amendment process for cask design Certificate

of Compliance (CoC). The petition, Docket 72-5 was published in a June 9, 2000, *Federal Register* and public comments were solicited. A total of 14 comments were received and are under review. The petition review board (PRB) must make its recommendation in FY 2001. Following the PRB recommendation, the staff will initiate necessary actions which may include rulemaking.

Validation: After rulemaking to streamline the CoC approval/amendment process becomes effective, NMSS will monitor (1) the resources expended for processing CoC approvals and amendments, (2) the fees charged to applicants for completed approvals, and (3) the numbers of completed approvals. This may result in a reduction of the office budget for rulemaking activities and will ensure that the streamlining provided a valid and effective means to reduce unnecessary regulatory burden.

- ***Reduce paperwork and record keeping imposed by the NRC on its licensees by at least 25 percent over a period of five years.***

This performance measure applies only to the Nuclear Materials Safety arena:

Verification: This measure excludes Agreement States, and pertains only to NRC materials and fuel cycle activities. As program changes occur (new/revised regulations, new forms, changes in licensing practices, etc.), their impacts will be tracked in terms of the paperwork and recordkeeping burdens for that class of affected licensees.

A baseline is being established using the current record keeping and paperwork burden estimates approved under the Paperwork Reduction Act. As program changes occur, a comparison calculation will determine the percentage change, and the scope of its significance. This means that a change affecting 2,000 licensees will count more significantly than a similar level change affecting a smaller number of licensees.

Validation: The validity of this new measure has not been tested. NMSS may find it necessary, during the course of implementation, to redefine or refocus this measure to provide a more meaningful measure against which it can evaluate unnecessary burden reduction.

APPENDIX V
MANAGEMENT CHALLENGES

INTRODUCTION

This appendix: (1) lists the management challenges identified by NRC's Office of the Inspector General (OIG) and the General Accounting Office (GAO); (2) shows the relationship of each challenge to the NRC's goals and strategies contained in the agency's FY 2000–FY 2005 Strategic Plan; and (3) identifies actions/milestones being taken by NRC to address the challenges.

In a January 31, 2001, report titled, "Special Evaluation of NRC's Most Serious Management Challenges (OIG-01-A-04)," OIG identified seven management challenges. Additionally, in a January 2001, report titled, "Major Management Challenges and Performance Risks, Nuclear Regulatory Commission," GAO also identified challenges. The GAO challenges are all comparable to the OIG. For each challenge, the NRC's goals, their associated strategies, and/or corporate management strategies, contained in NRC's FY 2000–FY 2005 Strategic Plan, that relate to the management challenge is identified. Additionally, page references from NRC's Strategic Plan Appendix (NUREG-1614, Vol. 2) Part 2, September 2000, are included should the reader desire more detailed information on the referenced goals and strategies.

In a February 20, 2001, memorandum which provided an assessment of the NRC's most serious management challenges, the OIG concluded that while managers must continue their focus on the challenges, NRC senior management has a planned approach through the strategic planning process to address each of the seven management challenges.

OIG MANAGEMENT CHALLENGES

CHALLENGE 1: Development and implementation of an appropriate risk-informed and performance-based regulatory oversight approach. (GAO identified comparable challenge).

Strategic Plan References

Three performance goals address this challenge in the Nuclear Reactor Safety, Nuclear Materials Safety, and Nuclear Waste Safety Arenas. They are: (1) maintain safety, protection of the environment, and the common defense and security; (2) make NRC activities and decisions more effective, efficient, and realistic; and (3) reduce unnecessary regulatory burden on stakeholders. (See NRC Strategic Plan Appendix, Part 2, pages 2, 9, 12, 20, 29, 33, 40, 48, and 51).

The associated strategies in the Nuclear Reactor Safety arena which address this challenge are: (1) to sharpen our focus on safety to include a transition to a revised NRC reactor oversight program for our inspection, assessment, and enforcement activities; (2) to evaluate operating experience and the results of risk assessments for safety implications; (3) to identify, evaluate, and resolve safety issues, including age-related degradation, and ensure that an independent technical basis exists to review licensee submittals to ensure that safety is maintained; (4) to continue to develop and incrementally use risk-informed and, where appropriate, less prescriptive performance-based regulatory approaches to maintain safety; (5) to use risk information to improve the effectiveness and efficiency of our activities and decisions; (6) to make agency decisions based on technically sound and realistic information; and (7) to utilize risk information and performance-based approaches to reduce unnecessary regulatory burden.

The associated strategies in the Nuclear Materials Safety arena which address this challenge are: (1) to continue to improve the regulatory framework to increase our focus on safety and safeguards, including incremental use of risk-informed and, where appropriate, less prescriptive performance-based regulatory approaches to maintain safety; (2) to continue to improve the regulatory framework to increase our effectiveness, efficiency, and realism; and (3) to continue to improve our regulatory framework in order to reduce unnecessary regulatory burden.

The associated strategies in the Nuclear Waste Safety arena which address this challenge are: (1) to continue developing a regulatory framework to increase our focus on safety, including the incremental use of risk-informed and, where appropriate, less prescriptive-based regulatory approaches to maintain safety; (2) to continue to improve the regulatory framework to increase our

effectiveness, efficiency, and realism; and (3) to continue to improve our regulatory framework in order to reduce unnecessary regulatory burden.

Actions/Milestones	*Schedule*
NUCLEAR REACTOR SAFETY ARENA Report on lessons learned from full implementation of the reactor oversight process.	FY 2001
Propose feasibility of changes to 10 CFR 50.46.	FY 2001
Propose revisions to 10 CFR Part 52.	FY 2001
Issue revision to Regulatory Guide 1.174, "An Approach for Using Probabilistic Risk Assessment In Risk-Informed Decisions On Plant-Specific Changes to the Licensing Basis."	FY 2001
Modify the scope of special treatment requirements and submit the proposed rule to the Commission.	FY 2002
NUCLEAR MATERIALS SAFETY AND NUCLEAR WASTE SAFETY ARENAS Solicit public and other stakeholder views in developing revisions to the fuel cycle facilities oversight program. A report discussing the results of the pilot will be provided to the Commission upon completion of the program evaluation.	FY 2001
Complete medical pilot inspection program.	FY 2001
Issue Consolidated Issue Resolution Status Report associated with proposed High-Level Waste Repository.	FY 2001
Develop case studies in Nuclear Materials Safety and Nuclear Waste Safety arena program areas to test screening criteria and develop draft safety goals.	FY 2001–FY 2002
Develop and conduct training in application of risk analysis.	FY 2001–FY 2002
Conduct a Probabilistic Risk Assessment for dry cask storage. Issue draft report on screening analysis.	FY 2001–FY 2002

CHALLENGE 2: Identification, acquisition, and implementation of information technologies. (GAO identified comparable challenge).

Strategic Plan References

The corporate management strategy to provide proactive information management and information technology services and the associated supporting strategies to address this challenge are: (1) to work jointly with program and support offices to integrate information technology and business planning as a means of achieving agency goals and strategies; (2) to make it easier for the staff to acquire, access, and use the information they need to perform their work; (3) to assume a leadership role in improving the agency staff's capability to use current and planned information technology to enhance performance; (4) to provide and maintain a robust, reliable, cost-effective, and "user-friendly" information technology infrastructure that is driven by the agency business needs; (5) to work jointly with stakeholders to optimize the delivery of information technology and management service; (6) to improve the ability of the NRC and external entities to conduct our mutual business electronically; and (7) to provide external stakeholders the ability to easily access desired publicly available information to aid in their participation in the NRC's regulatory processes, and to enhance understanding of the agency's mission, goals, and performance. (See NRC Strategic Plan Appendix, Part 2, pages 72-75).

APPENDIX V: MANAGEMENT CHALLENGES

Actions/Milestones	*Schedule*
Critical Infrastructure Protection (CIP) Update cybersecurity portion of CIP Plan.	FY 2001
Initiate computer based security awareness training for employees.	FY 2001
Monitor effectiveness of IT security protection initiatives.	FY 2001
Agencywide Documents Access and Management System (ADAMS) Release ADAMS version 3.3.	FY 2001
Report on status of ADAMS Action Plan implementation.	FY 2002
External WEB Site Complete user feedback on prototype of external web site.	FY 2001
Complete implementation of Communication Plan.	FY 2001
Deploy re-designed external web site.	FY 2002
Electronic Information Exchange (EIE) Publish announcement of EIE initiative in NMSS newsletter.	FY 2001
Issue EIE rule by Office of General Counsel.	FY 2001
Enable secured EIE for Reactor and Material stakeholders.	FY 2002
Acquisition Management Award blanket purchase agreements (BPAs).	FY 2001
Establish administrative procedures for ordering under BPA's.	FY 2001
Transition to software and consulting services contract.	FY 2002
Transition to performance based contracting for IT infrastructure.	FY 2002
Capital Planning and Investment Control (CPIC). Circulate revised draft CPIC Management Directive 2.2 (MD 2.2).	FY 2002
Issue revised MD 2.2.	FY 2002
Use CPIC lessons learned to improve CPIC process.	FY 2002

CHALLENGE 3: Administration of all aspects of financial management (aspects highlighted by the OIG were limited to financial reporting and effective oversight of the procurement process to eliminate fraud, waste, and abuse). (GAO identified comparable challenge).

Strategic Plan References

NRC has an overarching corporate management strategy to employ innovative and sound business practices and a supporting strategy to strengthen our financial systems and processes to ensure that our financial assets are adequately protected consistent with risk and that our financial information is better integrated with decisionmaking. These strategies will address this challenge. (See NRC Strategic Plan Appendix, Part 2, pages 68-69).

Actions/Milestones	*Schedule*
CFO and EDO staff participated in agencywide interdisciplinary group to develop a statement of work (SOW) for the new CISSCO II program that addresses the financial management weaknesses of the original CISSCO I program that ends in August 2001.	Completed
CFO and EDO staff will participate in agencywide interdisciplinary group to select vendors for the new CISSCO II program.	FY 2001
Evaluate the status of the implementation of new systems that support cost accounting and revise the cost accounting remediation plan for implementing new cost accounting system.	FY 2001
Review the potential of creating more meaningful cost reports to better meet the needs of managers on an interim basis (prior to implementing new cost accounting system).	FY 2001
Continue to refine the pay/personnel time and labor reporting process.	FY 2001–FY 2002
Prepare the FY 2001 financial statements and receive an unqualified audit opinion.	FY 2002

CHALLENGE 4: Clear and balanced communication with NRC external stakeholders.

Strategic Plan References

The NRC has established performance goals and supporting strategies in the Nuclear Reactor Safety, Nuclear Materials Safety, and Nuclear Waste Safety arenas to increase public confidence. (See NRC Strategic Plan Appendix, Part 2, pages 6-8, 26-29, and 45-47).

The associated strategies in the Nuclear Reactor Safety, Nuclear Materials Safety, and Nuclear Waste Safety arenas which address this challenge are: (1) to make public participation in the regulatory process more accessible; (2) to listen to the public's concerns and involve them more fully in the regulatory process; (3) to communicate more clearly. We will add more focus, clarity, and consistency to our message, be timely, and present candid and factual information in the proper context with respect to the risk of the activity; (4) to continue to enhance the NRC's accountability and credibility by being a well-managed, independent regulatory agency. We will increase efforts to share our accomplishments with the public; and (5) to continue to foster an environment in which safety issues can be openly identified without fear of retribution. Specific to the Nuclear Reactor Safety Arena is the strategy to report on the performance of nuclear power facilities in an open and objective manner.

In addition, the Agency has established a corporate management strategy to communicate strategic change to address this challenge. The supporting strategies will establish, evaluate, and sustain effective methods of communication with our external stakeholders. They are: (1) assess the effectiveness of communications by evaluating the effectiveness of communications channels or methods used to provide information to the public; (2) improve communication with the public by using strategies that recognize the ongoing changes in the environment external to the agency; (3) respond to requests and inquiries from stakeholders in a timely, courteous, and professional manner; and (4) identify regulatory decisions or issues that are most likely to generate substantial public interest at an early stage of development and initiate actions to inform and involve the public. (See NRC Strategic Plan Appendix, Part 2, page 77).

Actions/Milestones	*Schedule*
Public Meeting Feedback Form Conduct semiannual analysis.	FY 2001–FY 2002
Make recommendation on continued use.	FY 2002
Reactor Oversight Process (ROP) Issue public comment Federal Register Notice.	FY 2001
Issue internal stakeholder survey.	FY 2001
Conduct internal lessons learned workshop.	FY 2001
Conduct external lessons learned workshop.	FY 2001
Obtain Commission decision on industry trends measure.	FY 2001
Obtain Commission decision on ROP initial implementation.	FY 2001
Conduct Agency Action Review Meeting (AARM).	FY 2001
Conduct AARM Commission briefing.	FY 2001
Conduct Commission briefing on ROP initial implementation.	FY 2001

Actions/Milestones	*Schedule*
Communication Plans	
NUCLEAR REACTOR SAFETY ARENA Issue Reactor Oversight Process Communication Plan.	FY 2001
Issue Safeguards and Security Communication Plan.	FY 2001
Issue Reactor License Renewal Communication Plan.	FY 2001
NUCLEAR MATERIALS SAFETY AND NUCLEAR WASTE SAFETY ARENAS Completed the Event Response and Assessment Communication Plan.	FY 2000
Completed the MOX Facility Communication Plan.	FY 2000
Completed the High-Level Waste (including transportation) Communication Plan.	FY 2000
Completed the Materials Inspections Communication Plan.	FY 2001
Completed the Risk-Informing Materials Regulatory Program Communication Plan.	FY 2001
Complete the Part 35-Medical Uses Communication Plan.	FY 2001
Develop the Decommissioning Program Communication Plan.	FY 2001
Develop draft Enrichment Technology Communication Plan.	FY 2001
Develop draft Uranium Recovery Issues Communication Plan.	FY 2001
Implement the High-level Waste (including transportation) Communication Plan.	FY 2001
Post rulemakings, guidance, and meeting summaries on web site. Continue efforts to expand and redesign Office of Nuclear Materials Safety and Safeguards (NMSS) web site.	Ongoing

CHALLENGE 5: Intra-agency communication (up, down, and across agency organizational lines).

Strategic Plan References

The Agency has established a corporate management strategy to communicate strategic change to address this challenge. The supporting strategies will establish, evaluate, and sustain effective methods of communication with our internal stakeholders. They are: (1) review and assess the effectiveness of communication channels and methods within the NRC to ensure that they support the needs of a changing environment; and (2) on the basis of this assessment, we will develop and implement communication plans that support strategic change and foster the desired work environment. (See NRC Strategic Plan Appendix, Part 2, page 76).

Additionally, the corporate management strategy to employ innovative and sound business practices and the supporting strategies will help in this challenge. They are: (1) strengthen collaborative processes for conducting business among support offices and between support and program offices; and (2) improve customer service, balancing internal customer needs with overall agency priorities and available resources. (See NRC Strategic Plan Appendix, Part 2, pages 67-68).

Actions/Milestones	*Schedule*
NUCLEAR REACTOR SAFETY ARENA Initiate periodic meetings with intra-agency stakeholders to enhance communications and support.	FY 2001
Complete Phase 3 of Centralized Work Planning in NRR	FY 2001
NUCLEAR MATERIALS SAFETY AND NUCLEAR WASTE SAFETY ARENA Conduct Materials Arena Division Director Counterpart Meeting.	FY 2001
Complete communication plans (see Management Challenge 4).	FY 2001
Conduct bi-weekly conference calls with regions.	Bi-weekly
Conduct monthly conference calls with States.	Monthly
Manage and coordinate decommissioning activities, policies, and efforts with managers from other NRC offices through the bi-weekly meeting of the Decommissioning Management Board.	Bi-weekly
Managers meet quarterly to review status of cooperative efforts and discuss issues or concerns (Office of Nuclear Materials Safety and Safeguards and the Office of Nuclear Regulatory Research).	Quarterly
Conduct regularly scheduled meetings with staff at all levels--Division, Section, Branch, and office-wide to communicate essential information and ensure open lines of communication up and down the organization.	Ongoing

CHALLENGE 6: Regulatory processes that are integrated and continue to meet NRC's safety mission in a changing external environment.

Strategic Plan References

Performance goals in the Nuclear Reactor Safety, Nuclear Materials Safety, and Nuclear Waste Safety arenas to make NRC activities and decisions more effective, efficient, and realistic and reduce unnecessary regulatory burden on stakeholders and their supporting strategies address this challenge. (See NRC Strategic Plan Appendix, Part 2, pages 9-14, pages 29-35, and pages 48-54).

Actions/Milestones	*Schedule*
NUCLEAR REACTOR SAFETY ARENA Develop a Commission paper on preliminary impact assessments of industry consolidation.	FY 2001
Issue a final Commission paper recommending followup actions.	FY 2001
NUCLEAR MATERIALS SAFETY AND NUCLEAR WASTE SAFETY ARENAS Manage and coordinate decommissioning activities, policies, and efforts with managers from other NRC offices through the bi-weekly meeting of the Decommissioning Management Board.	Bi-weekly
Conduct meetings with stakeholders to provide an opportunity for exchange of information so that stakeholder viewpoints can be understood.	Ongoing
Review and update listing of external factors influencing our activities. Also, continue analysis of external environment and document planning assumptions each year as part of NRC's PBPM process.	Ongoing

CHALLENGE 7: Maintenance of a highly competent staff to carry out NRC's public health and safety mission (i.e., human capital management). (GAO identified comparable challenge).

Strategic Plan References

The Agency has established a corporate management strategy to sustain a high-performing, diverse workforce. The NRC will employ the following supporting strategies: (1) recruit, hire, and retain a high-quality, diverse workforce with the skills needed to achieve our mission and goals; (2) assess our scientific, engineering, and technical core competency needs and design a strategic workforce plan to address critical skills gaps and guide the agency in the recruitment, development, and retention of a highly skilled diverse workforce; (3) foster a work environment that is free of discrimination and provides opportunities for all employees to optimally use their diverse talents in support of our mission and goals; (4) base our human resource decisions on sound workforce planning and analysis and develop succession strategies for key positions and critical skills; (4) improve the capability of our workforce through training, development, and continuous learning; (5) select and develop strong managers who can provide vision and strategic leadership; and (6) focus on results by linking rewards and recognition to outcomes and organizational effectiveness. These strategies will address this challenge. (See NRC Strategic Plan Appendix, Part 2, pages 70-72).

Actions/Milestones	*Schedule*
Develop Strategic Workforce Plan.	FY 2001
Continue current strategies to close skills gaps.	FY 2002
Identify and implement additional gap closure strategies.	FY 2002
Validate existing skill needs and identify new needs in NMSS, NRR, & RES.	FY 2002
Adjust/implement new gap closure strategies to new needs.	FY 2002
Expand strategic workforce plan to Regions & other offices as appropriate.	FY 2002

APPENDIX VI
PROGRAM LINKS TO PERFORMANCE GOALS

FY 2002 NUCLEAR REACTOR SAFETY PROGRAM LINKS TO PERFORMANCE GOALS

LINKS TO PERFORMANCE GOALS	PERFORMANCE GOALS			
FY 2002 PROGRAMS ($231,397K, 1,425 FTE)	Maintain Safety	Increase Public Confidence	Make NRC Activities & Decisions More Effective, Efficient, and Realistic	Reduce Unnecessary Regulatory Burden
Reactor Licensing ($57,802K, 411 FTE)	X	X	X	X
Reactor License Renewal ($15,707K, 90 FTE)	X	X		X
Reactor Inspection and Performance Assessment ($74,255K, 627 FTE)	X	X	X	X
Reactor Incident Response ($5,978K, 28 FTE)	X	X	X	
Reactor Safety Research ($58,654K, 149 FTE)	X	X	X	X
Reactor Technical Training ($9,160K, 44 FTE)	X	X	X	
Reactor Enforcement Actions ($1,685K, 15 FTE)	X	X	X	X
Reactor Investigations ($4,107K, 31 FTE)	X	X	X	X
Reactor Legal Advice ($2,629K, 22 FTE)	X	X	X	X
Reactor Adjudication ($1,420K, 8 FTE)	X	X	X	X

FY 2002 NUCLEAR MATERIALS SAFETY PROGRAM LINKS TO PERFORMANCE GOALS

LINKS TO PERFORMANCE GOALS	PERFORMANCE GOALS			
FY 2002 PROGRAMS ($55,038K, 382 FTE)	Maintain Safety and Safeguards	Increase Public Confidence	Make NRC Activities & Decisions More Effective, Efficient, and Realistic	Reduce Unnecessary Regulatory Burden
Fuel Facilities Licensing and Inspection ($16,038K, 111 FTE)	X	X	X	X
Nuclear Materials Users Licensing and Inspection ($25,540K, 184 FTE)	X	X	X	X
State and Tribal Programs ($4,043K, 31 FTE)	X	X	X	X
Materials Safety Research ($2,509K, 8 FTE)	X	X	X	X
Materials Incident Response ($235K, 2 FTE)	X	X	X	
Materials Technical Training ($1,751K, 7 FTE)	X	X	X	
Materials Enforcement Actions ($880K, 8 FTE)	X	X	X	X
Materials Investigations ($1,422K, 11 FTE)	X	X	X	X
Materials Legal Advice ($1,781K, 15 FTE)	X	X	X	X
Materials Adjudication ($839K, 5 FTE)	X	X	X	X

FY 2002 NUCLEAR WASTE SAFETY PROGRAM LINKS TO PERFORMANCE GOALS

LINKS TO PERFORMANCE GOALS	PERFORMANCE GOALS			
FY 2002 PROGRAMS ($63,157K, 271 FTE)	Maintain Safety and Safeguards	Increase Public Confidence	Make NRC Activities & Decisions More Effective, Efficient, and Realistic	Reduce Unnecessary Regulatory Burden
High-Level Waste Regulation ($23,650K, 69 FTE)	X	X	X	X
Spent Fuel Storage and Transportation Licensing and Inspection ($11,802K, 69 FTE)	X	X	X	X
Regulation of Low-Level Waste ($432K, 3 FTE)	X	X	X	X
Regulation of Decommissioning ($15,811K, 92 FTE)	X	X	X	X
Waste Safety Research ($8,100K, 25 FTE)	X	X	X	X
State and Tribal Programs ($2,016K, 3 FTE)	X	X		
Waste Training and Development ($145K, 0 FTE)	X	X	X	
Non-High-Level Waste Safety Legal Advice ($1,201K, 10 FTE)	X	X	X	X

APPENDIX VII
REPORT ON DRUG TESTING

U.S. NUCLEAR REGULATORY COMMISSION REPORT TO CONGRESS ON DRUG TESTING

The Nuclear Regulatory Commission's (NRC's) Drug Testing Plan was initially approved in August 1988 and updated in November 1997. NRC drug testing requirements on the nuclear industry through regulations are separate from this program and are not covered by this report. The NRC's Drug Testing Program under Executive Order (E.O.) 12564 includes random, applicant, voluntary, follow up, reasonable suspicion, and accident-related drug testing. Testing was initiated for non-bargaining unit employees in November 1988 and for bargaining unit employees in December 1990 after an agreement was negotiated with the National Treasury Employees Union.

The NRC positions meeting the following criteria are considered testing-designated positions, and the employees filling these positions are subject to random testing: (1) regional and headquarters employees who have unescorted access to vital or protected areas of nuclear plants, Category I fuel facilities and uranium enrichment facilities; (2) employees who have assigned responsibilities or are on call for regional or headquarters incident response centers; (3) employees who require access to classified information (e.g., national security information or restricted data); and (4) employees who are motor vehicle operators carrying passengers.

Approximately 1,560 NRC employees occupy testing-designated positions and are subject to random testing. Potential selectees interviewed for positions in these categories are subject to applicant testing.

Approximately 830 tests of all types were conducted between October 1, 1999, and September 30, 2000. Since each employee subject to random testing has an equal chance of being selected each time, some NRC employees were randomly tested more than once. All random testing results during this time period have been negative.

Internal quality control reviews were completed during the past year to ensure NRC's program continues to be administered in a fair, confidential, and effective manner.

The NRC's Drug Testing Program is based on the principles and guidance provided through E.O. 12564, Public Law 100-71, Department of Health and Human Services guidelines, and Commission decisions.

APPENDIX VIII
SUMMARY OF
REIMBURSABLE WORK AGREEMENTS

APPENDIX VIII: REIMBURSABLE WORK AGREEMENTS

U.S. NUCLEAR REGULATORY COMMISSION SUMMARY OF REIMBURSABLE WORK AGREEMENTS (New Budget Authority)			
	FY 2000	**FY 2001 (Estimate)**	**FY 2002 (Estimate)**
INTERNATIONAL ASSISTANCE TO FOREIGN GOVERNMENTS AND ORGANIZATIONS			
Core Conversion Project	$0	$0	$0
International Invitational Travel	$80,000	$60,000	$80,000
Material Protection, Control, and Accounting Support	$165,000	$0	$425,000
Implementation of Additional Protocol to the US-IAEA Safeguards Agreement	$0	$0	$200,000
Nuclear Safety Initiatives for Central and Eastern Europe	$150,000	$0	$0
Nuclear Safety Initiatives for the New Independent States	$2,000,000	$3,000,000	$4,000,000
ADMINISTRATIVE AGREEMENTS			
Agreement States Training	$196,498	$200,000	$200,000
Characterization of Fuel Stored in Dry Casks	$412,000	$206,000	$75,000
Criminal History Program	$650,000	$570,000	$570,000
Department of State Employee Detail	$11,000	$0	$0
Information Access Authorization Program	$6,000	$15,000	$15,000
Material Access Authorization Program	$250,000	$230,000	$230,000
University of Illinois Employee Detail	$113,000	$119,000	$0
Westinghouse Electric Company Participation in the Second USNRC International Steam Generator Tube Integrity Research Program	$50,000	$50,000	$0
OTHER AGREEMENTS			
Aluminum-Based Research Reactor Spent Nuclear Fuel	$0	$0	$0
Closure of High-Level Waste Tanks at Savannah River	$0	$0	$0
Expert Witness Service	$0	$0	$0
Fissile Materials Disposition	$11,000	$60,000	$0

APPENDIX VIII: REIMBURSABLE WORK AGREEMENTS

	FY 2000	FY 2001 (Estimate)	FY 2002 (Estimate)
Foreign Cooperative Research Agreements	$2,500,000	$2,500,000	$2,000,000
Foreign Research Reactor Spent Nuclear Fuel	$0	$0	$200,000
Naval Nuclear Propulsion Program-Spent Fuel Dry Storage Facility Review	$772,500	$94,500	$0
Navy Porting Reviews	$15,000	$15,000	$15,000
VIRGINIA Class Submarine Propulsion Plant Review	$77,600	$300,000	$761,400
West Valley Demonstration Project Fuel Shipments Review	$575,000	$0	$0
ORNL Fuel Shipment Preview	$0	$193,000	$0
TOTAL	$8,034,598	$7,612,500	$8,771,400

SUMMARY OF REIMBURSABLE WORK AGREEMENTS

1. Core Conversion Project

Source: Department of Defense (DoD)

Description of Work: The NRC will provide technical assistance to the Russian reactor regulator, Gosatomnadzor (GAN), in support of its review and approval of core conversion activities at Russia's three weapons-grade plutonium production reactors. The reimbursable FTE requirement for this agreement is less than 1 FTE in FY 2001.

Justification for NRC Involvement: DoD has the lead in a U.S.-Russian project to alter the core design of the three Russian reactors referred to above. NRC was assigned by the U.S.-Russian Joint Commission on Economic and Technological Cooperation to provide to GAN assistance in the safety review and licensing of the conversion designs. The NRC and GAN have signed a Statement of Intent to cooperate in this assistance program and DoD has issued an Interagency Cost Reimbursement Order (IACRO) to NRC defining NRC's role and providing for all approved assistance to GAN.

Reimbursement Procedures: DoD provides budget authority in advance for the full cost of the assistance which it approves for NRC to provide to GAN. The NRC bills DoD quarterly for all direct staff hours and contractual support expended for work specified in the reimbursable agreement. The hourly rate charged to DoD for NRC direct staff time is established in 10 CFR Part 170. This agreement was entered into pursuant to the authority of the Economy Act, 31 U.S.C. 1535 and 1536.

2. International Invitational Travel

Source: International Atomic Energy Agency (IAEA), various foreign governments, and other international organizations.

Description of Work: IAEA and various foreign governments reimburse NRC travel costs pertaining to the organization's or government's work.

Justification for NRC Involvement: The NRC is assisting IAEA, other international organizations, and foreign governments by providing support in the area of nuclear safety because of the NRC's specialized expertise in the regulation of the uses of nuclear energy and materials. The NRC is authorized by its appropriation legislation to retain and use funds for services rendered to foreign governments and international organizations.

Reimbursement Procedures: The NRC initially funds the travel cost and is then reimbursed, generally by check, by the organization or country that sponsored the travel.

3. Material Protection, Control, and Accounting (MPC&A) Support

Source: Department of Energy (DOE)

Description of Work: Under the agreement, technical support will be provided to the regulatory agencies in Russia, Ukraine, and Kazakhstan in their development of MPC&A regulations, licensing and inspection programs, and in their training of MPC&A personnel. This support is anticipated in the following areas: (1) support in developing and revising MPC&A regulations and associated guidance documents; (2) support in the development of an MPC&A licensing program and associated standard review plans, and assistance in the development of MPC&A licensing facility plans; (3) support in further development of inspection programs, including the conduct of MPC&A inspection and licensing workshops; (4) assistance in developing inspection and enforcement procedures; and (5) associated regulatory support-related training activities. The reimbursable FTE requirement for this agreement will be up to 2 FTE in FY 2001 and FY 2002.

Justification for NRC Involvement: Presidential Decision Directive/NSC-41 (PDD-41), "U.S. Policy on Improving Nuclear Material Security in Russia and the Other Independent States," dated September 20, 1995, defines the roles of DOE and NRC in this area. It indicates that the DOE is the lead agency for MPC&A activities and is responsible for funding work under this program. NRC is directed to continue its support to the regulatory agencies.

Reimbursable Procedure: DOE will approve NRC projects in advance, including funds for staff costs, contractors, and NRC travel. NRC bills DOE for all direct staff hours expended for work specified in the reimbursable agreement, as well as contract support costs, via the Department of the Treasury's on-line payment and collection system. The hourly rate charged to DOE for NRC direct staff time is established in 10 CFR Part 170. This agreement was entered into pursuant to the authority of the Economy Act, 31 U.S.C. 1535 and 1536.

4. Implementation of Additional Protocol to the U.S.-IAEA Safeguards Agreement

Source: Department of State (DOS)

Description of Work: Congressional approval of the Additional Protocol to the U.S.-IAEA Safeguards Agreement and implementing legislation will establish new statutory requirements for the reporting of information to the IAEA on U.S. nuclear and nuclear-related facilities, as well as new requirements for providing access to facilities identified by the IAEA. These requirements include the collection and reporting of information on nuclear activities for which information is

currently not reported under the Safeguards Agreement and on manufacturing and export of fuel cycle related equipment and materials. The requirements also include providing clarifications and access to the IAEA to permit them to resolve questions and inconsistencies in information they have received regarding the nuclear fuel cycle in the U.S. The effort will require identifying those locations required to submit reports, notifying them of their responsibility, collecting and reviewing the submitted information, submitting reports to the IAEA, and responding to IAEA questions and access requests resulting from their evaluation of information received on the locations. It is anticipated that the reimbursable FTE requirement for this agreement will be up to 1 FTE in FY 2002.

Justification for NRC Involvement: Responsibilities for implementing the Additional Protocol at certain U.S. facilities will be assigned to the NRC either through a PDD or through a Memorandum of Understanding with the DOS that is based on a PDD. The PDD will be issued after approval to ratification of the Additional Protocol by the Senate and passage by Congress of the implementing legislation. Through the implementing legislation, Congress will provide to the NRC the statutory authority to collect the required information and to provide the IAEA with access to the necessary facilities. NRC will be asked to take on these additional responsibilities because NRC has current responsibility for implementing the U.S.-IAEA Safeguards Agreement at licensee facilities (10 CFR Part 75).

Reimbursable Procedure: The terms of reimbursement will be established through the Memorandum of Understanding and associated funding documents. These documents have yet to be drafted.

5. Nuclear Safety Initiatives for Central and Eastern Europe

Source: Agency for International Development (AID)

Description of Work: The purpose of this AID initiative, started in 1991, is to assist the countries of Central and Eastern Europe (Czech Republic, Slovak Republic, Lithuania, Bulgaria, and Hungary) develop effective regulatory organizations, advance safety culture awareness and practices, strengthen the legal framework and regulatory capability, improve analytic capabilities for performing safety analyses, strengthen inspectorates through intensive training in NRC regulatory inspection philosophy, procedures and techniques and respond quickly to changing assistance priorities. The NRC has continually emphasized a regional approach by including representatives from all the Central and Eastern European countries so that when AID assistance comes to an end, technical experts in each country will be familiar with and can help their counterparts in adjacent countries.

Justification for NRC Involvement: The NRC is assisting AID in providing support to the countries of Eastern and Central Europe in the area of nuclear safety because of the NRC's specialized expertise in the regulation of civilian uses of nuclear energy and materials.

Reimbursement Procedures: AID provides budget authority in advance to the NRC for travel, contractor support, and administrative expenses. As costs are incurred by NRC, AID is billed via the Department of Treasury's on-line payment and collection system. For FY 1999, the Commission waived recovery of salary and benefit costs for NRC employees working under this agreement, based on the small resources involved. FY 2000 salaries and benefits costs for AID-related work were funded from the General Fund portion of NRC's Salaries and Expenses appropriation. FY 2001 salaries and benefits costs are funded under the General Fund. The FY 2002 budget also includes funding for these costs under the General Fund appropriation.

6. Nuclear Safety Initiatives for the New Independent States (NIS)

Source: Agency for International Development

Description of Work: The purpose of this AID initiative is to continue to implement nuclear safety initiatives in Russia, Ukraine, Armenia, and Kazakhstan. Activities under this agreement include (1) analytical support activities, (2) development of a training center for regulatory personnel, (3) creation of an incident response center, (4) work in the technical area of probabilistic risk assessment, and (5) assistance in legal enforcement and development of draft regulatory legislation. The FTE required for this work are funded from the General Fund portion of NRC's Salaries and Expenses appropriation.

Justification for NRC Involvement: The NRC is assisting AID in providing support to the NIS in the area of nuclear safety because of the NRC's specialized expertise in the regulation of civilian uses of nuclear energy and materials.

Reimbursement Procedures: AID allocates budget authority to the NRC for travel, contractor support, and administrative expenses (e.g., interpreters). FY 1999 salaries and benefits costs for NRC employees working under this agreement were also charged to these funds. As costs are incurred by the NRC, the costs are charged to NRC's AID transfer allocation account. FY 2000 and FY 2001 salaries and benefits costs for AID-related work are funded from the General Fund portion of NRC's Salaries and Expenses appropriation. The FY 2002 budget also includes funding for these costs under the General Fund appropriation.

7. Agreement States Training

Source: Agreement State Governments

Description of Work: The purpose of this program is to offer nuclear materials technical training to the Agreement States. Contracted courses are provided on a cost reimbursable basis.

Justification for NRC Involvement: NRC conducts technical training to ensure that the NRC staff possesses the requisite knowledge, skills, abilities, and competencies to accomplish the agency's nuclear safety oversight mission. NRC also makes this training available to the Agreement States to assist the states in carrying out their oversight mission. Contracted courses are provided on a cost reimbursable basis.

Reimbursement Procedures: The various Agreement States are billed for their proportionate share for participation in the NRC's Technical Training contracted courses. Payments will be made either by check or by electronic funds transfer.

8. Characterization of Fuel Stored in Dry Casks

Source: Electric Power Research Institute (EPRI)

Description of Work: The NRC and the EPRI have signed an agreement to work together to determine the long-term integrity of dry storage cask systems and spent nuclear fuel under dry storage conditions. The intent of this cooperative research program is to perform a visual inspection of the dry storage cask and its contents, and to conduct detailed evaluations of the fuel rods. The fuel has been in continuous storage in the cask for nearly 15 years.

Justification for NRC Involvement: The NRC Office of Nuclear Material Safety and Safeguards, Spent Fuel Project Office, is developing the technical basis for renewals of licenses and Certificates of Compliance for dry storage systems for spent nuclear fuel and high-level radioactive waste at independent spent-fuel storage installation sites. These renewals would cover periods from 20 to 100 years, and would require development of a technical basis for ensuring continued safe performance under the extended service conditions. Verification of past performance of selected components of these systems is required as part of that technical basis.

Reimbursement Procedures: NRC invoices EPRI on a scheduled basis for funds to be used on this program. Funds will be received from EPRI in advance. Payments will be made either by check or by electronic funds transfer. The NRC is authorized by Section 506 of the FY 1999 Energy and Water Development Appropriations Act, P.L. 105-245, to receive, retain, and use funds under the cooperative nuclear research program for the salaries and expenses associated with the program.

Once the funds are received, they are then obligated on Idaho National Engineering and Environmental Laboratory (INEEL) and Argonne National Laboratory (ANL) projects according to the agreement and costs against these funds are incurred on a monthly basis.

9. Criminal History Program (CHP)

Source: NRC licensees

Description of Work: The NRC has entered into a written agreement with the Federal Bureau of Investigation's (FBI's) Identification/Information Management Division to conduct user fee non-criminal justice fingerprint card checks for which the FBI provides criminal history records for applicants if such exist in FBI files and/or databases. The reimbursable FTE requirement for this workload is approximately 1 FTE in FY 2001 and FY 2002.

Justification for NRC Involvement: 10 CFR Part 73, issued under the authority of the Atomic Energy Act (AEA) to protect public health and safety and provide for common defense and security.

Reimbursement Procedures: Funds are received from the licensees for fingerprint checks. Payments are made to the FBI via the Department of Treasury's on-line payment and collection system.

10. Department of State Employee Detail

Source: Department of State

Description of Work: The NRC detailed an employee to assist the DOS in performing responsibilities in the area of intra-Department and inter-agency coordination for the Joint Convention on the Safety of Radioactive Waste and the Memorandum of Understanding between OECD/Nuclear Energy Agency (NEA) and the International Atomic Energy Agency.

Justification for NRC Involvement: The NRC employee detailed has relevant international program expertise in the areas of radioactive waste management and nuclear safety.

Reimbursement Procedures: DOS provided budget authority in advance to the NRC for the direct salary and benefits of the employee. On the basis of actual salary and benefits costs, the DOS will be billed via the Department of Treasury's on-line payment and collection system. This agreement was entered into pursuant to the authority of the Economy Act, 31 U.S.C. 1535 and 1536.

11. Information Access Authorization Program

Source: NRC licensees

Description of Work: Licensee personnel with access to classified national security information and restricted data are subject to personnel security background investigations conducted by the Office of Personnel Management (OPM) at the NRC's request to ensure their eligibility for such access. This background investigation is necessary under the AEA and Executive Order 12968 to determine their eligibility for access to classified information.

Justification for NRC Involvement: 10 CFR Part 25, issued under the authority of the AEA to protect public health and safety and provide for common defense and security.

Reimbursement Procedures: Funds are received from the licensees for background investigations. Payments are made to OPM via the Department of Treasury's on-line payment and collection system. Salary costs for NRC employees administering this program are not reimbursed by the requestor.

12. Material Access Authorization Program (MAAP)

Source: NRC licensees

Description of Work: Licensee personnel with access to, or control of, formula quantities of special nuclear material are subject to personnel security background investigations conducted by the Office of Personnel Management (OPM) at the NRC's request to ensure their eligibility for such access. Such screening is necessary to protect against the theft or diversion of special nuclear material or acts of sabotage.

Justification for NRC Involvement: 10 CFR Part 11, issued under the authority of the AEA to protect public health and safety and provide for common defense and security.

Reimbursement Procedures: Funds are received from the licensees for background investigations. Payments are made to OPM via the Department of Treasury's on-line payment and collection system. Salary costs for NRC employees administering this program are not reimbursed by the requestor.

13. University of Illinois Employee Detail

Source: University of Illinois

Description of Work: The NRC provides assistance in the planning, design, coordination and deployment of a new National Center for Technology Transfer. This includes establishing an operational center as a national resource, and assisting the National Center for Super Computing Applications (NCSA) Deputy Directors with planning, outreach and management activities associated with these objectives. This work also includes working directly with the NCSA Director and Deputy Directors to provide assistance in the concept, development, management and operations of the Center. The reimbursable requirement for this workload is approximately 1 FTE in FY 2000 and in FY 2001 and 0.5 FTE in FY 2002.

Justification of NRC Involvement: The NCSA is a recipient of the University of Illinois, National Science Foundation's new Partnerships for Advanced Computational Infrastructure (PACI) Program. The center has begun its new role as the leading edge site for research and academic individuals and institutions nation wide for the National Computational Science Alliance. A critical objective of the PACI program is outreach and technology transfer. To further this objective a new Technology Transfer Center is being established to operate as a national resource. NRC's experience in managing the NRC Technology Center provides valuable assistance to NCSA in the coordination of technology transfer to federal agencies, states and local governments, as well as the National Science Foundation.

Reimbursable Procedures: Funds are received in advance from the University of Illinois on an annual basis. Payments are either made by check or electronic funds transfer. The University of Illinois reimburses NRC for the assignee's actual salary and benefits costs. This agreement was entered into pursuant to the Intergovernmental Personnel Act.

14. Westinghouse Electric Company Participation in the Second U.S. NRC International Steam Generator Tube Integrity Research Program

Source: Westinghouse Electric Company

Description of Work: The purpose of this research program is to develop experimental data and predictive correlations and models needed for the independent evaluation of the integrity of steam generator tubes as plants age and degradation proceeds, as new forms of degradation appear, and as new defect-specific management schemes are implemented.

Justification for NRC Involvement: NRC is conducting this research under 10 CFR Part 73, issued under authority of the AEA to protect public health and safety and provide for the common

defense and security. Westinghouse participation under the cooperative nuclear research program contributes to offsetting the associated costs.

Reimbursement Procedures: Funds will be received from Westinghouse in advance. Payments will be made either by check or by electronic funds transfer. The NRC is authorized by Section 506 of the FY 1999 Energy and Water Development Appropriations Act, P.L. 105-245, to receive, retain, and use funds under the cooperative nuclear research program for the salaries and expenses associated with the program.

15. Aluminum-Based Research Reactor Spent Nuclear Fuel

Source: Department of Energy

Description of Work: The NRC provides technical assistance to DOE in connection with DOE's identification of potential issues relating to the ultimate disposition, in a geologic repository, of aluminum-based research reactor spent nuclear fuel (SNF) from both foreign and domestic research reactors. The reimbursable FTE requirement for this agreement is less than 1 FTE in FY 2001. This work is currently expected to be completed by December 31, 2001.

Justification for NRC Involvement: DOE has developed a technical strategy regarding the interim management and eventual ultimate disposition of aluminum-based research reactor SNF. This strategy calls for technology development efforts to be conducted which will allow DOE to make a decision by the year 2000 on one or more disposition approaches for aluminum-based research reactor SNF. DOE seeks NRC's technical support to assist DOE's Savannah River Operations Office in identifying issues relating to NRC disposal requirements that may be applicable to the ultimate disposition of the aluminum-based SNF.

Reimbursement Procedures: DOE provides budget authority in advance to the NRC for the full cost of NRC assistance. The NRC bills DOE for all direct staff hours expended for work specified in the reimbursable agreement, as well as contract support costs, via the Department of the Treasury's on-line payment and collection system. The hourly rate charged to DOE for NRC direct staff time is established in 10 CFR Part 170. This agreement was entered into pursuant to the authority of the Economy Act, 31 U.S.C. 1535 and 1536.

16. Closure of High-Level Waste Tanks at Savannah River

Source: Department of Energy

Description of Work: The NRC reviewed the methodology established by DOE-Savannah River for closure of high-level waste (HLW) tanks and considered DOE-Savannah River's proposed

approach for classification of residual waste in the tanks as "incidental" waste. NRC advised DOE-Savannah River of the results of the review in June 2000. The reimbursable agreement is extended through September 30, 2001. Follow-on work may consist of similar reviews for evaporator or ancillary pipe closure, or technical review comments on the draft environmental impact statement for HLW tank closure.

Justification for NRC Involvement: DOE's Savannah River Operations Office has established a HLW tank closure program for the 51 HLW tanks at the Savannah River Site. DOE-Savannah River seeks NRC technical assistance in reviewing DOE-Savannah River's methodology for classification of the residual waste in, after waste removal operations, as "incidental" waste.

Reimbursement Procedures: DOE provides budget authority in advance to the NRC for the full cost of NRC assistance. The NRC bills DOE for all direct staff hours expended for work specified in the reimbursable agreement, as well as contract support costs, via the Department of the Treasury's on-line payment and collection system. The hourly rate charged to DOE for NRC direct staff time is established in 10 CFR Part 170. This agreement was entered into pursuant to the authority of the Economy Act, 31 U.S.C. 1535 and 1536.

17. Expert Witness Service

Source: Internal Revenue Service (IRS)

Description of Work: The NRC provides an expert witness in the area of nuclear maintenance to conduct a review of nuclear work orders in support of, and at the direction of, an IRS trial attorney. The expert will be available to advise the trial attorney, to evaluate the merits of the taxpayers' petition in the United States Tax Court, and assist in trial preparation as necessary. The work performed will be established by the trial attorney. The reimbursable FTE requirement for this agreement is approximately less than 1 FTE in FY 2001.

Justification for NRC Involvement: The NRC, through the regulatory process, verifies that electric utilities at their nuclear power plants implement a qualified equipment maintenance program. Therefore, the NRC has the expertise to provide technical assistance to the IRS in connection with the IRS's identification of potential issues relating to the deductibility of cost of electrical utility plant maintenance.

Reimbursement Procedures: IRS provides budget authority in advance for the full cost of NRC's assistance. The NRC utilizes the On-Line Payment and Collection for reimbursement of expenses. The NRC prepares invoices on a quarterly basis which detail actual costs incurred described in the Agreement between NRC and IRS. The NRC bills the IRS for all direct staff hours expended for work specified in the reimbursable agreement. The hourly rate charged to the IRS for

NRC direct staff time is established in 10 CFR Part 170. This agreement was entered into pursuant to the authority of the Economy Act, 31 U.S.C. 1535 and 1536.

18. Fissile Materials Disposition

Source: Department of Energy

Description of Work: The NRC provides review and advice to DOE on licensing and permitting strategies and plans being developed by DOE addressing the implementation of technologies selected for disposition of surplus fissile materials. This includes NRC comments on DOE strategies and plans with the principal technical effort being NRC's review of information provided by DOE and interactions between NRC and DOE/DOE contractors to discuss regulatory strategies and associated plans and schedules.

DOE plans to institute a new agreement to include NRC assistance to DOE regarding the Russian mixed oxide fuel program. The task would specifically provide for NRC participation on the Special Working Group on Regulatory Matters, an advisory group to the Joint U.S.-Russian Steering Committee. It is expected that NRC participation on the special working group will be performed in FY 2001–FY 2002 on this reimbursable agreement. The reimbursable FTE requirement for this agreement is less than 1 FTE each year in FY 2001 and FY 2002.

Justification for NRC Involvement: NRC's review and advice to DOE on licensing and permitting strategies and plans being developed to address the implementation of technologies selected for disposition of surplus fissile materials, including the Russian mixed oxide fuel program, is needed to assure that the information being developed to support DOE's plans for implementation is correct and that the licensing strategies being considered by DOE have the potential to succeed.

NRC participation on the Special Working Group on Regulatory Matters is needed to assure that regulatory and licensing perspectives and requirements are taken fully into account by other Joint Technical Working Groups that are implementing the Agreement between the U.S. and the Russian Federation on the Management of Plutonium that has been withdrawn from nuclear military programs.

Reimbursement Procedures: DOE provides budget authority in advance to the NRC for the full cost of NRC assistance. The NRC bills DOE for all direct staff hours expended for work specified in the reimbursable agreement via the Department of the Treasury's on-line payment and collection system. The hourly rate charged to DOE for NRC direct staff time is established in 10 CFR Part 170. This agreement was entered into pursuant to the authority of the Economy Act, 31 U.S.C. 1535 and 1536.

19. Foreign Cooperative Research Agreements

Source: Various foreign entities

Description of Work: The NRC enters into nuclear safety cooperative research agreements with foreign entities under the NRC's Foreign Cooperative Nuclear Safety Research Program for the purpose of exchanging nuclear safety-related information, conducting joint projects of mutual interest, and interacting with other organizations concerned with nuclear safety. The research programs subject to these cooperative research agreements are carried out as a part of the agency's nuclear regulatory responsibilities. The foreign entities participating in the Cooperative Nuclear Safety Research Program enter into cooperative research agreements that provide in-kind technical or financial contributions to the NRC.

Justification for NRC Involvement: These foreign contributions are provided to the NRC in return for access to information that has been developed and continues to arise from the NRC research programs before final publication and release to the public domain. These contributions support broad safety research programs and also allow the foreign entity direct participation in the execution of the research program. Both parties benefit from the cooperative efforts.

Reimbursement Procedures: The foreign entity provides an advance of funds to the NRC using the Fedwire Deposit System (i.e., electronic funds transfer) or by check or money order. The NRC is authorized by Section 506 of the FY 1999 Energy and Water Development Appropriation Act, P.L. 105-245, to receive, retain, and use funds under the cooperative nuclear research program for the salaries and expenses associated with the program.

20. Foreign Research Reactor Spent Nuclear Fuel

Source: Department of Energy

Description of Work: The DOE has established a program to accept and manage foreign research reactor spent nuclear fuel containing uranium enriched in the United States. The purpose of the DOE program is to support the broad United States' nuclear weapons nonproliferation policy calling for the reduction and eventual elimination of the use of highly enriched (weapons grade) uranium in civil commerce worldwide. The scope of the Interagency Agreement with DOE includes: (1) package reviews to support Department of Transportation (DOT) revalidation of foreign certified packages; (2) resolution of technical issues; (3) route approvals; (4) shipment inspections; (5) NRC participation in public meetings; and (6) other related activities. The reimbursable FTE requirement for this program is approximately 2 FTE in FY 2001 and 1 FTE in FY 2002.

Justification for NRC Involvement: The NRC is assisting DOE by providing expedited transport package reviews to support DOT revalidations of foreign certified transport packages. These expedited reviews, along with route approvals and shipment oversight, are needed to support scheduled shipments under the U.S. nuclear weapons nonproliferation policy. The NRC is assisting DOE because of the NRC's specialized expertise in the regulation of civilian uses of nuclear energy and materials.

Reimbursement Procedures: DOE provides budget authority in advance for the full cost of NRC's assistance. The NRC bills DOE quarterly for all direct staff hours and contractual support expended for work specified in the reimbursable agreement. The hourly rate charged to DOE for NRC direct staff time is established in 10 CFR Part 170. This agreement was entered into pursuant to the authority of the Economy Act, 31 U.S.C. 1535 and 1536.

21. Naval Nuclear Propulsion Program-Spent Fuel Dry Storage Facility Review

Source: Department of Energy-Naval Reactors (DOE-NR)

Description of Work: The NRC is performing a review of a safety analysis report for storage of spent fuel at the Naval Reactors Facility (NRF) to be located on the site of the INEEL. The storage facility will not be licensed by NRC, however, DOE-NR has requested NRC review of the safety analysis report and a determination that the facility provides protection comparable to a facility licensed under 10 CFR Part 72. The reimbursable FTE requirement for this agreement is less than 1 FTE in FY 2001, with expected completion in FY 2001.

Justification for NRC Involvement: The NRC is assisting DOE by reviewing the site characteristics of surface and subsurface hydrology, geology and seismology and meteorology. The spent fuel will eventually be transported to the geologic repository for disposal. The spent fuel will be stored within a welded steel canister, and placed within a ventilated concrete storage overpack. The storage casks will be placed on concrete pads within a building.

Reimbursement Procedures: DOE provides budget authority in advance for the full cost of NRC's assistance. The NRC bills DOE quarterly for all direct staff hours and contractual support expended for work specified in the reimbursable agreement. The hourly rate charged to DOE for NRC direct staff time is established in 10 CFR Part 170. This agreement was entered into pursuant to the authority of the Economy Act, 31 U.S.C. 1535 and 1536.

22. Navy Porting Reviews

Source: United States Navy

Description of Work: The NRC conducts porting reviews for the United States Navy. The reimbursable FTE requirement for this agreement is approximately less than 1 FTE in both FY 2001 and FY 2002.

Justification for NRC Involvement: The NRC provides technical advice to the United States Navy on health and safety matters concerning the Navy's nuclear propulsion reactors. These reactors and the special nuclear material used therein are held by the Department of Defense pursuant to directives of the President under Section 91b. of the Atomic Energy Act of 1954. As such, neither these reactors nor the special nuclear material is licensed under that act. From the beginning of the nuclear Navy program in 1946 until the present, such technical advice has been furnished by the NRC or its predecessors when requested.

Reimbursement Procedures: The United States Navy provides budget authority in advance for the full costs of NRC services at the beginning of each fiscal year. The NRC charges a flat rate for each service performed. The flat rate is based on the hourly rate for NRC direct staff time, which is established in 10 CFR Part 170. The NRC will evaluate this rate annually and inform the United States Navy of any changes required to the service charges. The adjusted service charges will be an appendix to the memorandum of understanding. The NRC will bill the United States Navy at the end of each quarter for services performed. This agreement is entered into pursuant to the authority of the Economy Act, 31 U.S.C. 1535 and 1536.

23. VIRGINIA Class Submarine Propulsion Plant Review

Source: Department of Energy (Naval Reactors)

Description of Work: The NRC will conduct a review of the propulsion plant for the new VIRGINIA class submarine. The reimbursable FTE requirement for this review is approximately 1 FTE in FY 2001 and 4 FTE in FY 2002. Naval Reactors will submit a Safety Analysis Report to NRC in the summer of 2001.

Justification for NRC Involvement: When requested, the NRC provides technical advice to the Department of Energy, Naval Reactors on health and safety matters concerning nuclear propulsion plant designs. Naval nuclear propulsion reactors and the special nuclear material used in the reactors are held by the Department of Defense pursuant to directives of the President under Section 91b. of the Atomic Energy Act of 1954 and are not licensed by NRC under the Act. From the beginning of

the Nuclear Navy Program in 1946 until the present, technical advice on new nuclear propulsion designs has been furnished by the NRC or its predecessors when required.

Reimbursement Procedures: DOE provides budget authority in advance to the NRC for the full cost of NRC assistance. The NRC bills DOE for all direct staff hours expended for work specified in the reimbursable agreement, as well as contract support costs, via the Department of the Treasury's on-line payment and collection system. The hourly rate charged to DOE for NRC direct staff time is established in 10 CFR Part 170. This agreement was entered into pursuant to the authority of the Economy Act, 31 U.S.C. 1535 and 1536.

24. West Valley Demonstration Project Fuel Shipments Review

Source: Department of Energy

Description of Work: The NRC is performing a review of a safety analysis report for transportation casks proposed by DOE for the shipment of spent fuel from the West Valley Demonstration Project (WVDP) to the INEEL. DOE has 125 spent nuclear fuel assemblies in safe storage at the WVDP. These assemblies are the only remaining fuel assemblies at the WVDP. WVDP must remove the spent fuel from the spent fuel pool and ship it to INEEL by 2001. The reimbursable FTE requirement for this agreement is approximately 1 FTE in FY 2001, with expected completion in FY 2001.

Justification for NRC Involvement: The NRC is assisting DOE by reviewing the safety analysis report to determine if the transportation casks can be used to ship fuel assemblies that have defects that are greater than hairline cracks or pinholes. Additionally, reactor records indicate that a number of fuel assemblies may have one or more failed rods. DOE and the New York State Energy Research and Development Authority have entered into an Agreement which specifies that DOE will seek an NRC Certificate of Compliance for use of the shipping casks used to transport the spent fuel from the WVDP to INEEL.

Reimbursement Procedures: DOE provides budget authority in advance for the full cost of NRC's assistance. The NRC bills DOE quarterly for all direct staff hours and contractual support expended for work specified in the reimbursable agreement. The hourly rate charged to DOE for NRC staff time is established in 10 CFR Part 170. This agreement was entered into pursuant to the authority of the Economy Act, 31 U.S.C. 1535 and 1536.

25. ORNL Fuel Shipment Review

Source: Department of Energy

Description of Work: The NRC is performing a review of the Cask Safety Analysis Report addendum for the Transnuclear Fort St. Vrain Cask for shipment of spent nuclear fuel from the Oak Ridge Reservation to the INEEL. This shipment must be conducted by DOE in 2002 to comply with a Federal Facilities Agreement milestone. The reimbursable FTE requirement for this agreement is approximately 1 FTE in FY 2001.

Justification for NRC Involvement: The NRC is assisting DOE by reviewing an addendum to the Safety Analysis Report for a shipping cask that was previously used to ship spent nuclear fuel from the Fort St. Vrain site to INEEL. The NRC previously reviewed the Safety Analysis Report for the original design. For overall government efficiency, it is desirable to have the NRC do this review of a modified design. Oak Ridge National Laboratory is transporting DOE fuel from one DOE laboratory to another, and therefore the review falls outside the scope of the routine NRC fee-based reviews.

Reimbursable Procedures: DOE provides budget authority in advance for the full cost of NRC assistance. The NRC bills DOE quarterly for all direct staff hours and contractual support expended for work specified in the reimbursable agreement. The hourly rate charged to DOE for NRC staff time is established in 10 CFR Part 170. This agreement was entered into pursuant to the authority of the Economy Act 31 U.S.C. 1535 and 1536.

APPENDIX IX
CROSS-CUTTING FUNCTIONS WITH OTHER GOVERNMENT AGENCIES

CROSS-CUTTING FUNCTIONS WITH OTHER GOVERNMENT AGENCIES

Several Government agencies have missions that are related to the NRC. The NRC identified no inconsistent or duplicative areas in this Plan compared to other agencies' Strategic Plans, but the agency continues to be alert to potential inconsistencies or duplication in its cooperative activities. These interaction and coordination efforts are important in accomplishing the agency's mission. Where needed, the NRC has, or is developing, memoranda of understanding or other agreements with these agencies to ensure that areas of mutual interest and cooperation are treated in a consistent, coordinated, and complementary way that avoids unnecessary duplication or conflict. To develop programs in those areas that are critical to the NRC's mission, senior agency management meet with other agency counterparts and establish plans and strategies in the areas of common programs and goals. Interagency committees are established, as necessary, to facilitate consensus on programs and promote consistent approaches in implementation. One such example is the Interagency Steering Committee on Radiation Standards. Commission briefings on the status of programs are held as well, such as the periodic briefings by DOE on the High-Level Waste program. In other areas of mutual interest, agency staff coordinates with other agencies as appropriate. The review of cross-cutting programs, the coordination of those programs, and the identification of any issues are also an integral part of the NRC's internal technical program review process. In the area of intra-agency cross-cutting activities and functions within the NRC, there is no substantive cross-cutting or overlap between the programs within the agency. A table of the major cross-cutting functions with other agencies and their relationship to NRC programs is provided below, followed by descriptions of the specific NRC areas of mutual interest with other agencies.

APPENDIX IX: CROSS-CUTTING FUNCTIONS

Agency	Areas of Mutual Interest	NRC Program/(Strategic Arena)
Department of Energy	High-Level Waste Disposal	High-Level Waste (Nuclear Waste Safety)
	Transportation and Storage of Spent Fuel and Waste	Spent Fuel Storage and Transportation Licensing and Inspection (Nuclear Waste Safety)
	Uranium Mill Tailings Radiation Control Act	Fuel Facilities Licensing and Inspection (Nuclear Materials Safety)
	Low-Level Waste	Regulation of Low-Level Waste (Nuclear Waste Safety)
	Excess Plutonium Disposition Mixed Oxide Fuel Fabrication Regulatory Oversight at Gaseous Diffusion Plants Gas Centrifuge Program	Fuel Facilities Licensing and Inspection (Nuclear Materials Safety)
	Mitigation of Threat from Certain Discrete Radioactive Material	Regulation of Low-Level Waste (Nuclear Waste Safety)
	Security of Classified National Security Information and Restricted Data	Fuel Facilities Licensing and Inspection (Nuclear Materials Safety)
Department of Energy Federal Bureau of Investigation Customs Service Defense Intelligence Agency Central Intelligence Agency Department of State	Threat Assessment	Reactor Incident Response (Nuclear Reactor Safety) Fuel Facilities Licensing and Inspection Materials Incident Response (Nuclear Materials Safety) Spent Fuel Storage and Transportation Licensing and Inspection (Nuclear Waste Safety)
Environmental Protection Agency	Groundwater Protection Site Release Standards Review of Grading of Environmental Impact Statements More Efficient Regulation of Mixed Waste, In-Situ Leach Uranium Recovery Facilities, and Low-End Source Material	(Nuclear Materials Safety) (Nuclear Waste Safety)
	High-Level Waste Site-Specific Standards	High-Level Waste Regulation (Nuclear Waste Safety)
Council on Environmental Quality	Administers Environmental Policy Under the National Environmental Policy Act	High-Level Waste Regulation Regulation of Decommissioning (Nuclear Waste Safety)

APPENDIX IX: CROSS-CUTTING FUNCTIONS

Agency	Areas of Mutual Interest	NRC Program/(Strategic Arena)
Federal Bureau of Investigation	Response to Suspected Terrorist or Criminal Initiated Threat or Incident Involving Licensed Reactor, Material or Fuel Facilities	Reactor Incident Response (Nuclear Reactor Safety) Fuel Facilities Licensing and Inspection (Nuclear Materials Safety)
Federal Emergency Management Agency	Offsite Nuclear Power Plant Emergency Planning	Reactor Licensing Reactor Incident Response (Nuclear Reactor Safety)
	Offsite Fuel Cycle Facility Emergency Planning	Fuel Facilities Licensing and Inspection Materials Incident Response (Nuclear Materials Safety)
	National Dam Safety Program	Fuel Facilities Licensing and Inspection (Nuclear Materials Safety)
	Potassium Iodide Supplement Program	Reactor Incident Response (Nuclear Reactor Safety)
Federal Energy Regulatory Commission	Utility Economic Deregulation, Antitrust and Market Power Issues	Reactor Licensing (Nuclear Reactor Safety)
Department of Transportation	Transportation of Radioactive and Fissile Materials Emergency Transportation	Spent Fuel Storage and Transportation Licensing and Inspection Incident Response (Nuclear Waste Safety)
Surface Transportation Board	Private Fuel Storage Environmental Impact Statement	Spent Fuel Storage and Transportation Licensing and Inspection (Nuclear Waste Safety)
Food & Drug Administration	Approval of Medical Devices Incorporating Byproduct Materials, Radiopharmaceuticals, and Radioactively Labeled Biologic Materials	Nuclear Materials Users Licensing and Inspection (Nuclear Materials Safety)
Occupational Safety & Health Administration	Worker Health and Safety	Reactor Licensing and Inspection (Nuclear Reactor Safety) Fuel Facilities Licensing and Inspection (Nuclear Materials Safety)

APPENDIX IX: CROSS-CUTTING FUNCTIONS

Agency	Areas of Mutual Interest	NRC Program/(Strategic Arena)
Department of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry	Public Health and Safety in the Release and Transportation of Ionizing Radiation	Reactor Inspection Reactor Incident Response (Nuclear Reactor Safety) Fuel Facilities Licensing and Inspection Materials Incident Response State and Tribal Programs (Nuclear Materials Safety) High-Level Waste Regulation (Nuclear Waste Safety)
Department of Interior	Protection of the Environment	Reactor Licensing (Nuclear Reactor Safety) Fuel Facilities Licensing and Inspection (Nuclear Materials Safety) Spent Fuel Storage and Transportation Licensing and Inspection (Nuclear Waste Safety)
Department of Labor Department of Justice	Enforcement	Reactor Enforcement Actions (Nuclear Reactor Safety) Materials Enforcement Actions (Nuclear Materials Safety)
	Investigations	Reactor Investigations (Nuclear Reactor Safety) Materials Investigations (Nuclear Materials Safety)
Department of State Department of Defense Agency for International Development Department of Energy	Nuclear Safety Assistance to Other Countries	Participation in International Activities (International Nuclear Safety Support)
Department of State Department of Defense Department of Energy Department of Commerce	Export of Nuclear and Nuclear Related Materials, Equipment, and Technology	Participation in International Activities (International Nuclear Safety Support)
National Security Council Department of State Department of Energy	Nuclear Safeguards Assistance to Other Countries	Participation in International Activities (International Nuclear Safety Support)

APPENDIX IX: CROSS-CUTTING FUNCTIONS

Agency	Areas of Mutual Interest	NRC Program/(Strategic Arena)
Department of State Department of Energy Department of Defense Representatives from various intelligence and investigative agencies	Compliance with Nonproliferation and Safeguards Treaties and Agreements	Participation in International Activities (International Nuclear Safety Support)
Department of State Department of Energy Department of Defense Representatives from various intelligence and investigative agencies	Assistance to Strengthen International Atomic Energy Agency Safeguards	Participation in International Activities (International Nuclear Safety Support)

Department of Energy (DOE)--The NRC and DOE share responsibility for high-level waste (HLW) disposal. As specified in the Nuclear Waste Policy Act of 1982, as amended, DOE is responsible for characterizing the site and for the design and construction of the repository and NRC is responsible for regulatory oversight, including licensing the construction and operation of the facility. Our strategy is to provide regulatory guidance to DOE and prepare to license a high-level waste repository at a pace consistent with the national program. An agreement is in place with DOE that outlines the procedures for staff consultation and exchange of information. This procedural agreement was updated in 1999 to incorporate changes to the HLW program since 1993.

DOE is responsible for commercial, research, and naval spent nuclear fuel. Due to the nature of the Naval Nuclear Propulsion Program's (NNPP) spent nuclear fuel, NRC communicates directly with NNPP to gather information on issues involving criticality specific to NNPP.

The NRC also interacts with DOE on a number of activities associated with the transportation and storage of spent nuclear fuel and high-level radioactive waste. The NRC and DOE have a procedural agreement regarding spent fuel and HLW transportation packaging. Further, DOE is required by law to use NRC-certified packaging for certain waste and spent fuel shipments. NRC and DOE have signed a cost-reimbursable interagency agreement whereby NRC provides DOE with oversight of physical security arrangements for certain foreign research reactor spent fuel shipments. NRC and DOE have signed a second cost-reimbursable interagency agreement whereby NRC provides DOE with review of a cask design for shipment of spent fuel from the West Valley Demonstration Project to the Idaho National Engineering and Environmental Laboratory. Lastly, NRC and DOE-Naval Reactors (NR) have signed a cost-reimbursable interagency agreement whereby NRC provides DOE-NR with review of a spent fuel dry storage facility for navy fuel.

APPENDIX IX: CROSS-CUTTING FUNCTIONS

The NRC and DOE have a joint responsibility in carrying out the Uranium Mill Tailings Radiation Control Act Title I Program and in the long-term care of reclaimed uranium mill tailings sites. Although DOE has the responsibility for carrying out remedial action, the NRC must concur in DOE's selection and completion of the remedial action, including groundwater corrective action, and must license the sites for long-term care. The NRC and DOE have a memorandum of understanding (MOU) to minimize or eliminate unnecessary duplication of effort between the two agencies.

NRC and DOE are assigned responsibilities for the management of low-level radioactive waste (LLW) under the Low-Level Radioactive Waste Policy Act of 1980 and its 1985 amendments. These responsibilities are different but complementary; thus, an MOU or other type of agreement has not been necessary. NRC and DOE interact on LLW policy, regulatory, and technical issues.

DOE and NRC have established a cost-reimbursable agreement for NRC to provide technical assistance and coordinate with DOE on regulatory issues associated with DOE's disposition of excess plutonium through measures other than mixed oxide (MOX) fuel fabrication/irradiation. Under the agreement, NRC advises DOE on regulatory issues associated with activities such as pit disassembly, conversion and immobilization.

The FY 1999 Defense Authorization Act (P.L. 105-261) gave NRC statutory licensing authority over any MOX fuel fabrication facility constructed by DOE or its contractors to convert excess weapons plutonium into MOX reactor fuel. The facility will be located at DOE's Savannah River Site. This program depends on a number of factors outside of NRC control, including national policy, DOE funding, and Russian progress on dispositioning excess plutonium.

The NRC and DOE have regulatory oversight of different portions of the Portsmouth and Paducah Gaseous Diffusion Plants. The NRC regulates those portions which are leased by the United States Enrichment Corporation (USEC) while DOE has the regulatory oversight for the remainder of the sites. DOE has expressed an interest in NRC providing licensing-related assessments to it for application in its gas centrifuge technology program. NRC anticipates a reimbursable agreement to cover this work. Regulatory issues occasionally arise which concern both DOE and NRC. An MOU establishes the protocol between the NRC and DOE to address those issues.

The NRC and DOE currently have an agreement that outlines the procedures for NRC requests for DOE assistance to mitigate threats to the public from certain discrete radioactive material, including material that exceeds Class C waste (10 CFR 61.55) classification. This agreement is being formalized in an MOU.

The NRC and DOE share responsibility for the security of classified National Security information and Restricted Data at certain licensees (principally Naval Nuclear Fuel Facilities) and at USEC. Although DOE has principal responsibility at Naval Nuclear Fuel Facilities under the auspices of its

classified contracts with those firms, NRC has responsibility for the personnel security program for access to or control over strategic nuclear material and for information related to the physical protection plans for the protection of the strategic nuclear material. At USEC, NRC has primary responsibility for the protection of classified information and DOE for the personnel security program. The NRC and DOE have several MOUs in place to minimize or eliminate duplication of effort between the two agencies, and are instituting an additional MOU to address the MOX fuel fabrication facility.

Department of Energy, Federal Bureau of Investigation (FBI), Central Intelligence Agency (CIA), Customs Service, Defense Intelligence Agency (DIA), Department of State (DOS)-- The NRC, as part of its mission to protect public health and safety and ensuring the common defense and security, maintains close working relationships with other agencies to ensure the design basis threat for radiological sabotage and theft or diversion are current and accurate. For this reason, NRC has established Memoranda of Understanding and Letters of Agreement for the exchange of relevant threat information. These arrangements also facilitate the timely receipt by NRC of any potential threats to NRC-licensed materials or facilities.

Environmental Protection Agency (EPA)--The NRC and EPA share responsibility for protection of public health and safety and the environment. There are numerous MOUs and interrelated activities between the NRC and EPA. NRC and EPA have been successful in many of these interrelated activities, including the development of the Multi-Agency Radiation Site Survey and Investigation Manual and the Multi-Agency Radiation Laboratory Protocols Manual, support for the National Research Council Committee on the Biological Effects of Ionizing Radiation, development of the Joint NRC/EPA Guidance for Testing Requirements for Mixed Radioactive and Hazardous Waste, development of a Technical Position for Disposition of Cesium-137 Contaminated Emission Control Dust, development of a nationwide survey to analyze for radioactive contamination of sewer sludge and ash at publicly-owned treatment works, and development of modeling scenarios in support of potential rulemakings for recycle/reuse of radioactively contaminated materials. The NRC is currently working with EPA to define roles, responsibilities, and jurisdictions regarding orphan source issues and to develop regulations to facilitate the disposal of mixed wastes. The NRC is also working with EPA and authorized States to determine the extent to which the NRC can rely on EPA programs to protect groundwater at in-situ leach uranium recovery facilities.

Under Section 309 of the Clean Air Act, the Administrator of the EPA is directed to review and publish any comments on the environmental impacts of Federal activities, including actions for which Environmental Impact Statements (EISs) are prepared. Therefore, NRC must file all EISs with the EPA. EPA reviews these EISs, rates them, and publishes the results in the *Federal Register*. EISs found to be unsatisfactory by EPA are referred to the Council on Environmental Quality.

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As specified in the Energy Policy Act of 1992, EPA is tasked to develop site-specific HLW standards consistent with the recommendations of the National Academy of Sciences report on the Technical Bases for Yucca Mountain Standards. NRC has one year to develop an implementing rule after issuance of final EPA standards. EPA proposed a HLW standard in August 1999 for public comment. Both Houses of Congress have legislation pending that would, among other things, prescribe an overall performance standard for Yucca Mountain, and, depending on which bill is enacted, could impact NRC and EPA responsibilities. The NRC maintains a formal liaison with the EPA staff and has implemented a strategy for the conforming requirements to ensure that the NRC completes the implementing rule within a year of issuance of the final EPA standards. Differences continue between the EPA and the NRC on groundwater protection requirements and other matters; they may impact the requirements, complexity, and costs of licensing the repository.

One area in which the NRC and EPA have been unsuccessful in their interrelated activities is setting standards to establish radiological criteria for decommissioning/cleanup of contaminated sites, and high-level waste disposal. EPA is responsible for developing general radiation standards, which are then reflected in NRC regulations and other requirements. The NRC continues to seek legislation as reflected in the House Report 2531, "The Nuclear Regulatory Commission Authorization Act for Fiscal Year 2000, Title II", that would make it clear that, with very limited exception, the standard issued by NRC and Agreement States governs cleanup of Atomic Energy Act material at facilities licensed by them. EPA expressed concerns with certain provisions of NRC's license termination rule and included in their guidance, "Establishment of Cleanup Levels for Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Sites with Radioactive Contamination," a statement that the dose limits established in the NRC license termination rule would not provide a protective basis for establishing preliminary remediation goals for cleanup at CERCLA sites and that the NRC sites could require further remediation. Top-level NRC and EPA management will continue to address these issues to resolve the question of finality for sites that have complied with the NRC cleanup standards for license termination based on the House Report 2684, "Hazardous Substance Superfund (Including Transfers of Funds)." It is NRC's current position that changes to legislation are needed to resolve these issues, however, NRC will continue to engage EPA in resolution of this matter as directed by the House Report 2684. The NRC has also supported provisions in high-level waste legislation in both Houses of Congress that would effectively remove EPA from the standard-setting role for the Yucca Mountain repository and establish a Congressional standard for which NRC would issue implementing regulations. While the bills differ on specifics, either would be preferable to the current statutory provisions on standard setting.

Federal Bureau of Investigation--The NRC and the FBI share responsibility (along with the Federal Emergency Management Agency) for a response to a suspected terrorist or criminal initiated threat or incident involving NRC licensed facilities or material. The FBI has lead responsibility for law enforcement during a threat or incident and the NRC retains the responsibility for radiological

matters. The NRC and FBI have an MOU to minimize or eliminate unnecessary duplication of effort between the two agencies.

Council on Environmental Quality (CEQ)--The CEQ was established by Title II of the National Environmental Policy Act. The CEQ role is to assist and advise the President on policies and programs of the Federal Government affecting environmental quality. In cases where EISs are found to be unsatisfactory or where there is disagreement between NRC and a consulting agency, the CEQ may be called upon to resolve such disagreement.

Federal Emergency Management Agency (FEMA)--FEMA has the lead responsibility for offsite nuclear power plant emergency planning and for nuclear materials emergency planning. FEMA also has the lead in assessing offsite emergency plans and preparedness for adequacy. NRC is responsible for onsite radiological emergency preparedness and for review of FEMA findings and determinations as to whether offsite plans are adequate and can be implemented. NRC also has the responsibility to make radiological health and safety decisions with regard to the overall state of emergency preparedness, such as assurance for continued operation and shutdown of operating reactors. Should an actual peacetime radiological emergency require more than one agency to respond, the Federal Radiological Emergency Response Plan (FRERP) provides for coordination of all Federal response activities. The FRERP is maintained by the Federal Radiological Preparedness Coordinating Committee (FRPCC); NRC is an active member in several FRPCC subcommittees that develop Federal procedures and guidance. In the event of an emergency involving an NRC-regulated entity, NRC is the lead Federal agency and works closely with six agencies: FEMA, DOE, EPA, the United States Department of Agriculture (USDA), Health and Human Services, and National Oceanic and Atmospheric Administration. Representatives of these agencies train with, and are integrated into, the NRC response team. Response coordination on a broader scale is provided by the Federal Response Plan for emergencies of all kinds, including responses under the National Contingency Plan (NCP) for emergencies involving chemical and radiological hazards occurring together. NRC is a member of the teams that coordinate actions under the NCP. The NRC and FEMA share responsibility (along with FBI) for a response to a suspected terrorist or criminal initiated threat or incident involving NRC licensed facilities or material. FEMA has lead responsibility for consequence management during a threat or incident and the NRC retains the responsibility for radiological matters. The NRC and FEMA have an MOU to minimize or eliminate unnecessary duplication of effort between the two agencies.

FEMA and the NRC share involvement in the National Dam Safety Program. The primary purpose of this program is to bring together the expertise and resources of the Federal and non-Federal communities to achieve national dam hazard reduction. The NRC has regulatory authority over only uranium mill tailings dams and those dams integral to the operation of NRC-licensed facilities, or the possession and use of NRC-licensed material, that pose a radiological hazard if these dams should fail.

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Federal Energy Regulatory Commission (FERC)--The NRC and the FERC have ongoing interaction regarding issues of mutual concern, such as: (1) FERC actions with respect to economic deregulation of the electric utility industry and the potential impact of FERC's deregulation activities on the NRC's mandate to protect public health and safety, and (2) the respective roles of the NRC and FERC in evaluating antitrust and market power issues arising from NRC power reactor license applicants or licensees. NRC supports those aspects of the President's electric sector restructuring legislation that pertain to it, in particular, the elimination of NRC's duplicative role in antitrust reviews.

Department of Transportation (DOT)--Under an MOU, the NRC and the DOT share responsibility for developing, establishing, implementing, and enforcing consistent and comprehensive regulations and requirements for the safe transportation of radioactive and fissile materials, often through interagency committees. Generally, the NRC works with DOT to develop regulations for transporting materials, and the NRC adopts DOT requirements into its regulations.

Surface Transportation Board (STB)--The NRC staff has signed an MOU with the STB (an independent agency administratively housed under DOT), which has a major Federal action to take with regard to the Private Fuel Storage (PFS) project. The memoranda will enable this agency to be a cooperating Federal agency with NRC for the development of the PFS environmental impact statement.

Food and Drug Administration (FDA)--The NRC and the FDA have an MOU that outlines procedures for sharing information of mutual interest relating to the approval of medical devices, radioactive drugs, and radioactive biologies when these products contain NRC-regulated material. The NRC routinely relies on prior FDA approval of medical devices as an essential component of the NRC's sealed source and device safety evaluations. The MOU also establishes procedures for notification, sharing of information, and coordination of joint inspections of events related to design and manufacturing defects and failures of these devices or of radioactive drugs or radioactive biologies.

Occupational Safety and Health Administration (OSHA)--By an October 1988 OSHA/NRC MOU, NRC and OSHA share responsibility for worker health and safety at NRC-regulated facilities. NRC regulates worker safety concerning radiation and chemical risks resulting from processing radioactive material and OSHA regulates worker safety concerning non-radiological and other industrial hazards.

Agency for Toxic Substances and Disease Registry (ATSDR)--The NRC coordinates with ATSDR on issues relevant to the agency's mission to prevent exposure and human health effects and diminished quality of life associated with exposure to hazardous substances from waste sites, unplanned releases, and other sources of pollution in the environment. This coordination includes

ATSDR's hazardous substances role in public health, including the impact of radioactive releases from power plants on adjacent communities' and Indian reservations' air, water, and food chain and impacts resulting from transportation of nuclear waste.

Department of the Interior, Fish and Wildlife Service (FWS)--Under the Endangered Species Act, the NRC has responsibility to assure that its actions are protective of endangered species. NRC consults with the FWS in evaluating effects on endangered species of proposed NRC actions. If a proposed NRC action has the potential to affect endangered species, NRC prepares a biological assessment of the effects, and the FWS then renders a biological opinion. This consultation process can be extensive, as in the Atlas uranium mill tailings remediation case.

Bureau of Land Management (BLM), and Bureau of Indian Affairs (BIA)--The NRC staff has signed memoranda of understanding with the DOI's BLM and BIA which each have a major Federal action to take with regard to the PFS project. The memoranda will enable these agencies to be cooperating Federal agencies with NRC for the development of the PFS environmental impact statement.

Department of Labor (DOL)/Department of Justice (DOJ)--The NRC monitors discrimination actions filed with the DOL under Section 211 of the Energy Reorganization Act and develops enforcement actions where there are properly supported findings of discrimination, either from NRC's Office of Investigations or from DOL adjudications. Suspected criminal activities concerning NRC licensees, and others within NRC's regulatory jurisdiction, are referred to the DOJ. Coordination with DOJ occurs prior to initiating any civil enforcement action for matters under DOJ consideration for criminal prosecution.

Department of State, Department of Defense (DoD), Agency for International Development (AID), Department of Energy, Department of Commerce (DOC)--The NRC shares responsibility with the DOS, DOE, DoD and the AID in providing nuclear safety and safeguards assistance to other countries. DOS provides foreign policy guidance for U.S. government agencies in carrying out such assistance, while NRC contributes actively to the formulation of this guidance and clears its assistance programs with DOS to ensure they are within U.S. Government policy. The NRC also shares responsibility with DOE for providing nuclear safety and safeguards assistance internationally. The NRC and DOE coordinate their efforts with each other and with other countries providing assistance to ensure they are complementary and to avoid duplication and conflict. The National Security Council and the Office of the Vice President provide high-level policy guidance on key issues in the international assistance area and resolve questions that arise in providing such assistance.

The NRC, DOE, DOS, DoD, and DOC have interrelated roles in controlling exports of nuclear and nuclear-related materials, equipment, and technology. The NRC's primary role involves issuing export licenses for nuclear materials and equipment, including reactors. The following issue licenses

or authorizations in related areas: DOE for nuclear technology exports and for retransfers or changes in form or content of previously exported nuclear materials and equipment; DOS for munitions made with depleted uranium; and DOC for nuclear reactor balance-of-plant equipment and "dual use" commodities. Each agency is obliged to consult with the others (including, if warranted, DoD) for significant cases.

The NRC, DOE, DOS, DoD, and representatives from various intelligence and investigative agencies have interrelated roles for implementing International Atomic Energy Agency (IAEA) safeguards at U.S. facilities under the U.S.-IAEA Safeguards Agreement and for providing assistance to strengthen IAEA safeguards. NRC has responsibility for facilitating IAEA safeguards at licensee facilities and for providing technical support to IAEA safeguards strengthening efforts. DOS has lead responsibility for establishing foreign policy guidance and providing funding for IAEA technical support and inspection activities; DOE has responsibility for implementing IAEA safeguards at the DOE sites and for coordinating technical support to the IAEA; and DoD and the various intelligence and investigative agencies provide oversight to ensure that national security is not degraded by IAEA safeguards activities. Coordination of U.S. involvements with IAEA safeguards is provided by the IAEA Steering Committee and its subordinate subcommittees and subgroups. NRC is represented in each of these groups.

DOE and NRC established a cost-reimbursable agreement for NRC to provide Material Protection, Control, and Accounting Support to the regulatory agencies of Russia, Ukraine, and Kazakhstan through the development of regulations and the development of the licensing, inspection, and enforcement programs.

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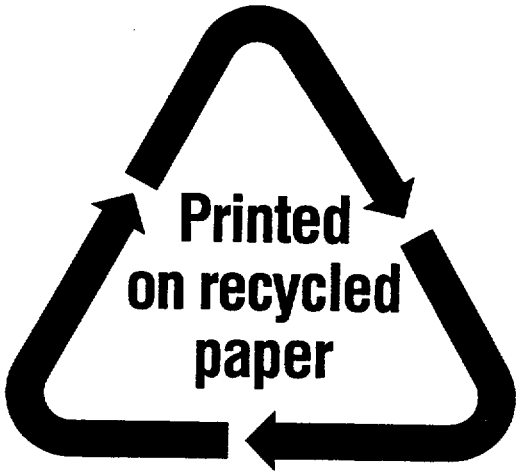

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