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BUDGET ESTIMATES AND PERFORMANCE PLAN

FISCAL YEAR 2001

February 2000

U.S. Nuclear Regulatory Commission

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BUDGET SUMMARY

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FY 2001 BUDGET SUMMARY

(Dollar amounts in tables represent thousands of dollars ($K). In text, whole dollar amounts are used. Staff numbers represent full-time equivalents (FTE).)

FUNDS: The NRC's FY 2001 budget request is $488,100,000. This is an increase of $18,187,000 above that for FY 2000.

FTEs: The NRC's FY 2001 budget request is 2,785 FTE, which includes 9 reimbursable business-like FTE. This is a decrease of 28 FTE below the FY 2000 level.

TOTAL NRC BUDGET AUTHORITY BY APPROPRIATIONS

NRC Appropriation	FY 1999 Enacted	FY 2000 Estimate	FY 2001 Estimate	
			Request	Change from FY 2000
Salaries and Expenses (S&E) ($K)				
Salaries and Expenses	464,024	464,913	481,900	16,987
Offsetting Fees Receipts	443,824	442,000	447,958	5,958
Net Appropriated—S&E	20,200	22,913	33,942	11,029
Office of the Inspector General (OIG) ($K)				
Inspector General	4,800	5,000	6,200	1,200
Offsetting Fees Receipts	4,800	5,000	6,076	1,076
Net Appropriated—OIG	0	0	124	124
Total Net Appropriated—NRC[1]	20,200	22,913	34,066	11,153

[1]Net Appropriation - S&E ($K)	FY 1999 Enacted	FY 2000 Estimate	FY 2001 Estimate
Nuclear Waste Fund	17,000	19,150	21,600
General Fund	3,200	3,763	12,466

FY 2001 BUDGET SUMMARY

SUMMARY OF BUDGET AUTHORITY BY FUNCTION				
			FY 2001 Estimate	
NRC Appropriation	FY 1999 Enacted	FY 2000 Estimate	Request	Change from FY 2000
Salaries and Expenses (S&E) ($K)				
Salaries and Benefits	268,253	278,800	292,370	13,570
Contract Support	182,964	173,219	176,673	3,454
Travel	12,807	12,894	12,857	-37
Total (S&E)	464,024	464,913	481,900	16,987
Office of the Inspector General (OIG) ($K)				
Salaries and Benefits	4,400	4,800	4,970	170
Contract Support	160	0	990	990
Travel	240	200	240	40
Total (OIG)	4,800	5,000	6,200	1,200
Total NRC Appropriation ($K)				
Salaries and Benefits	272,653	283,600	297,340	13,740
Contract Support	183,124	173,219	177,663	4,444
Travel	13,047	13,094	13,097	3
Total (NRC)	468,824	469,913	488,100	18,187

SUMMARY OF BUDGET AUTHORITY AND STAFFING BY STRATEGIC ARENA				
			FY 2001 Estimate	
Summary	FY 1999 Enacted	FY 2000 Estimate	Request	Change from FY 2000
Budget Authority by Strategic Arena ($K)				
Nuclear Reactor Safety	210,599	210,662	217,130	6,468
Nuclear Materials Safety	51,947	53,311	57,407	4,096
Nuclear Waste Safety	48,368	52,416	57,837	5,421
International Nuclear Safety Support	4,037	4,738	4,802	64
Management and Support	149,073	143,786	144,724	938
Subtotal (S&E)	464,024	464,913	481,900	16,987
Inspector General ($K)	4,800	5,000	6,200	1,200
Total (NRC)	468,824	469,913	488,100	18,187
Staffing (FTE) by Strategic Arena				
Nuclear Reactor Safety	1,492	1,425	1,407	-18
Nuclear Materials Safety	407	394	396	2
Nuclear Waste Safety	258	267	272	5
International Nuclear Safety Support	35	39	39	0
Management and Support	645	632	618	-14
Subtotal (S&E)	2,837	2,757	2,732	-25
Inspector General	44	44	44	0
Total (NRC)	2,881	2,801	2,776	-25
Reimbursable Business-Like FTE	9	12	9	-3
Total FTE Ceiling	2,890	2,813	2,785	-28

HIGHLIGHTS OF THE NRC FY 2001 BUDGET REQUEST

The NRC's budget request for FY 2001 is $488.1 million and 2,776 FTE and supports the NRC's fundamental health and safety mission while continuing the agency regulatory reform efforts. Our budget adjusted for inflation is the lowest it has been in more than 20 years. The same is true for our staffing level.

Our FY 2001 budget continues our efforts to implement major reforms to the NRC regulatory programs. We are working with our stakeholders to ensure that these changes are made in a responsible, meaningful, and coherent fashion, while continuing to protection public health and safety. Our FY 2001 budget also accommodates an increasing workload in areas such as reactor license renewal, reactor license transfers, and fabrication and use of mixed oxide fuel in civilian nuclear reactors. The main focus of our regulatory programs in FY 2001 will be to maintain safety, increase public confidence, reduce unnecessary regulatory burden, and make NRC activities and decisions more effective, efficient, and realistic.

Planning, Budgeting, and Performance Management Process

The FY 2000 budget was the first to be developed as part of the Planning, Budgeting, and Performance Management (PBPM) process. The FY 2001 budget is the product of further refinement and implementation of the process. This budget once again provides the Performance Plan with the budget request.

The budget reflects the continuing efforts to implement the Government Performance and Results Act. This work served to better align programs to outcomes. The work underway for the triennial update of the NRC Strategic Plan will result in further improvements in regard to performance goals, metrics, strategies, and outputs.

The agency took an important step toward fully integrating decisionmaking and setting the foundation for becoming a fully performance-based organization. Budget reviews were conducted on an arena basis so that issues and decisions were focused on how programs and activities contributed to the outcomes being sought at the arena level as well as agencywide. The offices benefitted not only by gaining the perspective on how their programs and activities aligned with arena and agencywide considerations, but also in regard to how the planning process served to inform the development of their budgets. In addition, the offices are continuing to develop operating plans which track appropriate output measures for their programs.

Continuing Regulatory Reform Initiatives

Key to the NRC's regulatory framework is the concept of a risk-informed and, as appropriate, performance-based approach to regulation, which focuses NRC and licensee resources on the most safety-significant issues while providing flexibility in how licensees meet NRC requirements. Such a framework will allow the NRC to assess, with reasonable assurance, whether or not adverse impacts to public health and safety and the environment are likely to occur. As such, the implementation of this approach strengthens the agency's ability to achieve its performance goals and mission. Several programs have been initiated in the Nuclear Reactor Safety and Nuclear Materials Safety arenas utilizing risk-informed and, where appropriate, performance-based approaches to regulation. To facilitate this application to the NRC's regulatory framework, we have initiated an aggressive program to provide related training to technical staff and managers throughout the agency. The NRC will continue to identify additional opportunities to utilize this approach, and as we move in this direction and gain more experience, the result will be improved decisionmaking, enhanced efficiency and effectiveness, a better focus of the agency's regulatory resources on the most risk-significant aspects of the NRC's regulation, and reduced unnecessary regulatory burden on licensees.

The agency has also initiated a broad range of improvements to its regulatory programs, with particular emphasis on the NRC oversight of power reactor licensees. An aggressive agenda was established that includes both short-term progress and longer term strategies. The overall goal of these reforms is to maintain safety, while increasing our public confidence and reducing unnecessary regulatory burden, and making NRC activities and decisionmaking more effective, efficient, and realistic. The Commission believes that these areas should be considered in making decisions about what activities the agency should perform and how they contribute to overall agency performance.

The NRC is also working to maintain and improve the regulatory framework for non-reactor licensees, including those engaged in materials safety, fuel cycle, waste, transportation, and spent fuel activities. The NRC is working to make these regulations more risk-informed and performance-based. For example, in-house efforts are being supplemented by a contractor study that will identify the risks for industrial and medical operations, and reflect those changes necessary to better focus agency resources and reduce unnecessary regulatory burden while protecting public health and safety for these non-reactor licensees. Another example is illustrated by NRC's proposed regulations for disposal of spent nuclear fuel and high-level radioactive waste in a proposed repository at Yucca Mountain (10 CFR Part 63). In lieu of the subsystem-level requirements included in earlier generic regulations in Part 60, the NRC proposed a single overall system performance objective that provides the licensee with the flexibility to decide how best to comply with that objective.

At the same time, efforts are already underway to streamline the review and inspection processes. Different licensing review approaches are being explored and implemented, new inspection techniques are being identified using performance indicators, less burdensome enforcement procedures are being explored, and consolidated licensing guidance will make it possible to effect additional changes in the future.

Budget Request

The budget request for FY 2001 of $488.1 million is a $18.2 million increase over FY 2000. The FY 2001 budget includes an increase of approximately $12 million, primarily to fund a 3.7 percent government-wide pay raise. An addition $4.7 million increase is essential for the NRC to be prepared to make decisions on the Department of Energy's application to build a high-level radioactive waste geologic repository at Yucca Mountain within the three year period prescribed by statute, to provide financial assistance to Agreement States for the cleanup of formerly licensed nuclear material sites, increased workload in the area of fabrication and use of mixed oxide fuel in civilian nuclear reactors, and to respond to incidents involving orphan radioactive sources and arrange for their removal. The remaining $1.2 million reinstates base-level funding for the Office of Inspector General, which was formerly dependent on carryover funds.

Total FTE for the agency declines from the current FY 2000 estimate of 2,801 to 2,776 in FY 2001. Much of the decrease is in reactor inspection, -23 FTE. Highlighted increases are 11 FTE in reactor license renewal, and 7 in preparation of high-level waste activities at Yucca Mountain.

In order to address fairness and equity issues, we are proposing that 90 percent of the NRC's new budget authority, less the appropriations from the Nuclear Waste Fund and from the General Fund, be collected from fees. We propose to phase in the new fee policy at a rate of 2 percent per annum beginning in FY 2001. Changing the requirement to 98 percent in FY 2001 equates to $9.1 million, which would not be subject to fee recovery. We are also proposing to continue past decisions to fund support to DOE and other Federal agencies from the General Fund. Thus, we are requesting that the NRC's FY 2001 budget be financed as follows: $448.0 million from user fees, $12.3 million from the General Fund, and $21.6 million from the Nuclear Waste Fund.

Support for reactor licensing and inspection is reduced in FY 2001 as workload decreases while additional resources are concentrated in license renewal. The budget also includes funding for risk-informing Part 50 and evaluation of the oversight process. The budget supports the critical maintenance, operation, and updating of information technology (IT)

infrastructure as an important element of the budget, including Agencywide Documents Access and Management System (ADAMS) document backfit and agency applications replacement.

The budget includes $3.5 million (including 29 FTE) in FY 2001, for programs associated with antiterrorism and responding to weapons of mass destruction. The NRC continues to participate actively in the governmentwide review process for programs to counter unconventional threats to national security. The NRC staff are involved in interagency working groups and continue to review our effort and prioritize new initiatives.

The budget also recognizes the importance of our human resources by continuing our existing training opportunities to increase the NRC's skill base. It funds training and development at a level that allows continuation of the mature technical management and administrative training programs that exist to meet continuing needs; development and implementation of training to support the agency's major regulatory oversight process changes; and development and implementation of training to allow agency staff to effectively use new technology.

The General Fund includes $3.2 million and 22 FTE in FY 2001. FY 2001 resources include: AID FTEs and increased funding levels above FY 2000 for Hanford Tank Waste Remediation System.

The Nuclear Waste Fund request is $21.6 million and 60 FTE in FY 2001. The major FY 2001 increase is for oversight and management of the Licensing Support Network (LSN). Other increases reflect other high-level waste work needed to prepare for the Yucca Mountain application in FY 2002 and to complete decommissioning work.

The NRC's FY 2001 Office of Inspector General (OIG) appropriation is for $6.2 million and 44 FTE. The requested resources in FY 2001 provide for procurement of audit contract services to perform, with OIG oversight, the annual audit of the NRC's financial statements as mandated by the Chief Financial Officers' (CFO) Act; maintenance and enhancement of the OIG integrated systems environment; acquisition of specialized skills of private sector experts to address audit and investigative technical requirements; and the acquisition of services from other Governmental audit agencies for the purpose of conducting contract audits to fulfill NRC's Federal Acquisition Regulations (FAR) requirements. As in the salaries and expenses appropriation, we propose to change to 98 percent, the amount which would be recoverable from fees. This equates to $0.1 million in FY 2001.

EXPLANATION OF RESOURCE CHANGES

Nuclear Reactor Safety

FY 2001 Change from FY 2000 ..... $6,468,000

The major increase in the arena is for salaries and benefits, which increase over $6.4 million, though FTE decrease by 18.

The funding in the Nuclear Reactor Safety arena supports a reactor inspection program and reactor licensing activities for 103 operating reactors in FY 2000 and 102 in FY 2001 (based on historical trends). The budget includes funding for the review of license renewal applications and for developing the associated regulatory framework. The NRC expects to receive two additional license renewal applications in FY 2000 and an additional four in FY 2001.

Additional resource increases in FY 2001 result from developing the technical basis for addressing light-water-reactor (LWR) issues associated with utilizing mixed oxide (MOX) fuel. The budget also contains a planning wedge for potassium iodide (KI). These increases are funded through decreases in FTE.

The agency was able to fund new initiatives and increases necessary for operator exams, risk-informing Part 50, and reactor license renewal using resources made available from decreases associated with licensing actions/other licensing tasks, inspection efforts related to fewer allegations and improved safety performance, and the issuance of fewer generic communications.

Nuclear Materials Safety

FY 2001 Change from FY 2000 ..... $4,096,000

The major increase in the arena is for salaries and benefits, which increase $2.5 million, though FTE increase by only two.

Resources also increase in FY 2001 as a result of increased support for MOX fuel facility fabrication pre-licensing activities. Increases also support NRC participation in the Department of Energy (DOE) Hanford Tank Waste Remediation System (TWRS) project; material safety research needed to address issues associated with high enriched fuel and to decrease conservatism in licensing actions; and the initiation of an Orphan Source program.

The increase is partially offset by reductions in staffing that reflect the transfer of material licenses to Agreement States.

Nuclear Waste Safety

FY 2001 Change from FY 2000 ..... $5,421,000

The resource increase in FY 2001 results primarily from increases for the cleanup of formerly licensed sites; preparing for decisions on the Department of Energy's application to build a high-level radioactive waste geologic repository at Yucca Mountain, including support for the Licensing Support Network; increasing workload in spent fuel storage and transportation for new designs and independent spent fuel storage installations; and for decommissioning activities.

Salaries and benefits also increase by $2.5 million, though FTE increase by only five.

International Nuclear Safety Support

FY 2001 Change from FY 2000 ..... $64,000

Contract support decreases in this arena due to completion of the IAEA Operational Safety Review Team visit in FY 2000. However, the decrease is offset by increases in salaries and benefits of $0.2 million, though FTE remain the same as FY 2000.

Management and Support

FY 2001 Change from FY 2000 ..... $938,000

The major decrease in this arena is for contract support. However, this decrease is offset by increases in salaries and benefits, which increase by $1.9 million, though FTE decrease by fourteen.

The increase is partially offset by reductions primarily for a one-time FY 2000 cost of acquiring the PeopleSoft software, a component of the agencywide integrated financial and resource management system (STARFIRE), and a savings resulting from the transition from FTS 2000 to FTS 2001 long-distance service.

The budget also supports the use of information technology. This requires spending $25–$30 million annually to maintain, operate, and replenish information technology

infrastructure and information management. It funds replacement of monitors and network printers beginning in FY 2001. The budget also includes resources for the retrofit of documents into ADAMS.

Inspector General

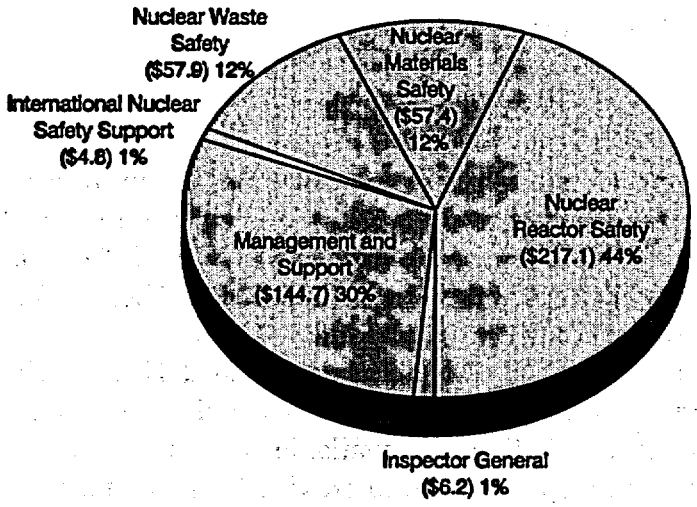
FY 2001 Change from FY 2000 ..... $1,200,000

The major increase in this arena for FY 2001 is for contract support of $1.0 million. FTE remains constant.

Funding for contract support in prior years was from OIG carryover funds. The requested resource increase for contract support in FY 2001 stems from a recognition that after FY 2000, OIG carryover funds will be inadequate to reinstate base-funding to a level so that the OIG can carry out its essential programs.

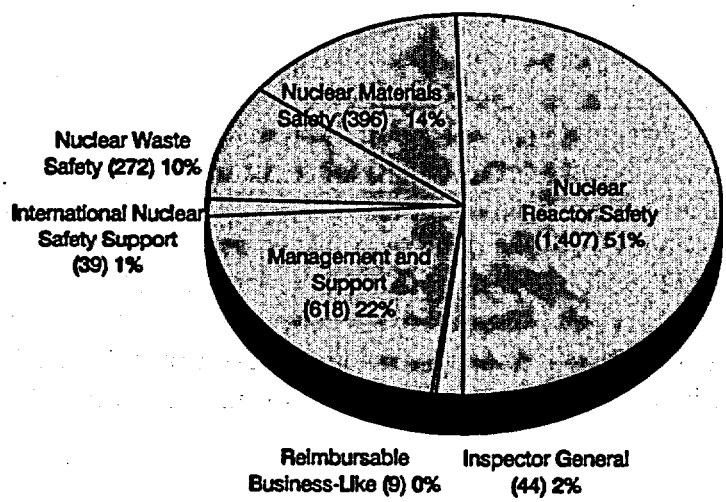
The requested funding allows for the procurement of the services of a private-sector audit firm to perform, with OIG oversight, the CFO Act mandated annual audit of NRC's financial statements; provides for specialized skills of other Governmental agencies to conduct contract audits in connection with NRC's FAR requirements; and provides for OIG's office-specific information technology requirements which were previously funded from NRC's Salaries and Expenses appropriation. The remainder of the resource increase is for salaries and benefits.

DISTRIBUTION OF NRC BUDGET AUTHORITY BY STRATEGIC ARENA



FY 2001 ($488.1 MILLION)

DISTRIBUTION OF NRC STAFF BY STRATEGIC ARENA



FY 2001 (TOTAL STAFF 2,785 FTEs)

Note: Percentages are rounded to the nearest whole number.

APPROPRIATIONS LANGUAGE

Proposed FY 2001 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), $481,900,000, to remain available until expended: Provided, That of the amount appropriated herein, $21,600,000 shall be derived from the Nuclear Waste Fund: Provided further, That revenues from licensing fees, inspection services, and other services and collections estimated at $447,958,000 in fiscal year 2001 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 $3,200,000 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 2001 so as to result in a final fiscal year 2001 appropriation estimated at not more than $33,942,000.

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, $6,200,000 to remain available until expended: Provided, That revenues from licensing fees, inspection services, and other services and collections estimated at $6,076,000 in fiscal year 2001 shall be retained and be available until expenses, for necessary salaries and expenses in this account; Provided further, That the sum herein appropriated shall be reduced by the amount of revenues received during fiscal year 2001 so as to result in a final fiscal year 2001 appropriation estimated at not more than $124,000.

Analysis of Proposed FY 2001 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 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.

3. TO REMAIN AVAILABLE UNTIL EXPENDED:

31 U.S.C. 1301

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.

4. SHALL BE DERIVED FROM THE NUCLEAR WASTE FUND:

42 U.S.C. 10131(b)(4)

42 U.S.C. 10222(a)(4)

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

42 U.S.C. 10133

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)

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.

5. REVENUES FROM LICENSING FEES, INSPECTIONS 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:

31 U.S.C. 9701

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.

42 U.S.C. 2213

42 U.S.C. 2214

Pursuant to 42 U.S.C. 2213, the NRC is required to assess and collect annual charges from persons licensed by the Commission. Except for the holder of any license for a federally owned research reactor used primarily for educational training and academic research purposes, 42 U.S.C. 2214 requires the Commission to assess and collect annual charges from persons licensed by the Commission, and the aggregate amount of such charges must equal an amount that approximates 100 percent of the Commission's budget authority, less any amount appropriated to the Commission from the Nuclear Waste Fund and the amount of fees collected under the Independent Offices Appropriation Act of 1952 (31 U.S.C. 9701), for each year of FY 1991 through FY 2000.

The 100 percent fee recovery requirement was to revert to 33 percent at the end of FY 1998, however it was extended for one fiscal year in the agency's FY 1999 appropriation legislation and through FY 2000 in the agency's FY 2000 appropriation legislation. Due to fairness and equity concerns related to charging NRC licensees for agency expenses which do not provide a direct benefit to them, the FY 2001 President's Budget proposes to continue the fee recovery requirement at a rate of 98 percent in

FY 2001, and further decreasing by an additional two percent per year beginning in FY 2002 until the fee recovery requirement is reduced to 90 percent by FY 2005.

31 U.S.C. 3302

The NRC is required to deposit all revenues collected to miscellaneous receipts of the Treasury unless specifically authorized by an appropriation to retain and use such revenue.

6. FUNDS HEREIN APPROPRIATED FOR REGULATORY REVIEWS AND OTHER ASSISTANCE PROVIDED TO FEDERAL AGENCIES AND STATES SHALL BE EXCLUDED FROM LICENSE FEE REVENUES, NOTWITHSTANDING 42 U.S.C. 2214:

42 U.S.C. 2214

42 U.S.C. 2214 requires the Commission to assess and collect annual charges from persons licensed by the Commission that approximate 100 percent of the Commission's budget authority, less any amount appropriated to the Commission from the Nuclear Waste Fund and the amount of fees collected pursuant to 31 U.S.C. 9701 (the Independent Offices Appropriation Act of 1952), for each year of FY 1991 through FY 1999.

31 U.S.C. 9701

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 100 percent cost recovery requirement, the costs of these consultation and review activities would be derived from appropriated funds.

31 U.S.C. 1535 et seq.

33 Comp. Gen. 27

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. Examples of such activities follow:

- NRC is providing support to assist DOE in establishing a regulatory program, consistent with NRC's regulatory approach, for the Hanford Tank Waste Remediation System (TWRS) privatization program which is a DOE effort to solidify the radioactive wastes presently stored in large underground tanks at the DOE Richland site. NRC is also providing support in the technical review of DOE's TWRS privatization program contractor's submittals.

- 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).

7. THE SUM HEREIN APPROPRIATED SHALL BE REDUCED BY THE AMOUNT OF REVENUES RECEIVED:

42 U.S.C. 2214

Pursuant to 42 U.S.C. 2214, the aggregate amount of the annual charges collected from all licensees shall equal an amount that approximates 100 percent of the budget authority of the Commission in the fiscal year in which such charges are collected, less any amount appropriated to the Commission from the Nuclear Waste Fund and the amount

of fees collected under the Independent Offices Appropriation Act of 1952 (31 U.S.C. 9701), for each year of FY 1991 through FY 2000.

The 100 percent fee recovery requirement was to revert to 33 percent at the end of FY 1998, however it was extended for one fiscal year in the agency's FY 1999 appropriation legislation and through FY 2000 in the agency's FY 2000 appropriation legislation. Due to fairness and equity concerns related to charging NRC licensees for agency expenses which do not provide a direct benefit to them, the FY 2001 President's Budget proposes to continue the fee recovery requirement at a rate of 98 percent in FY 2001, and further decreasing by an additional two percent per year beginning in FY 2002 until the fee recovery requirement is reduced to 90 percent by FY 2005.

Office of the Inspector General

8. 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.

9. TO REMAIN AVAILABLE UNTIL EXPENDED:

31 U.S.C. 1301

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.

10. REVENUES FROM LICENSING FEES, INSPECTIONS 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:

31 U.S.C. 9701

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.

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42 U.S.C. 2214

Pursuant to 42 U.S.C. 2213, the NRC is required to assess and collect annual charges from persons licensed by the Commission. Except for the holder of any license for a federally owned research reactor used primarily for educational training and academic research purposes, 42 U.S.C. 2214 requires the Commission to assess and collect annual charges from persons licensed by the Commission, and the aggregate amount of such charges must equal an amount that approximates 100 percent of the Commission's budget authority, less any amount appropriated to the Commission from the Nuclear Waste Fund and the amount of fees collected under the Independent Offices Appropriation Act of 1952 (31 U.S.C. 9701), for each year of FY 1991 through FY 2000.

The 100 percent fee recovery requirement was to revert to 33 percent at the end of FY 1998, however it was extended for one fiscal year in the agency's FY 1999 appropriation legislation and through FY 2000 in the agency's FY 2000 appropriation legislation. Due to fairness and equity concerns related to charging NRC licensees for agency expenses which do not provide a direct benefit to them, the FY 2001 President's Budget proposes to continue the fee recovery requirement at a rate of 98 percent in FY 2001, and further decreasing by an additional two percent per year beginning in FY 2002 until the fee recovery requirement is reduced to 90 percent by FY 2005.

31 U.S.C. 3302

The NRC is required to deposit all revenues collected to miscellaneous receipts of the Treasury unless specifically authorized by an appropriation to retain and use such revenue.

11. THE SUM HEREIN APPROPRIATED SHALL BE REDUCED BY THE AMOUNT OF REVENUES RECEIVED:

42 U.S.C. 2214

Pursuant to 42 U.S.C. 2214, the aggregate amount of the annual charges collected from all licensees shall equal an amount that approximates 100 percent of the budget authority of the Commission in the fiscal year in which such charges are collected, less any amount appropriated to the Commission from the Nuclear Waste Fund and the amount of fees collected under the Independent Offices Appropriation Act of 1952 (31 U.S.C. 9701), for each year of FY 1991 through FY 2000.

The 100 percent fee recovery requirement was to revert to 33 percent at the end of FY 1998, however it was extended for one fiscal year in the agency's FY 1999 appropriation legislation and through FY 2000 in the agency's FY 2000 appropriation legislation. Due to fairness and equity concerns related to charging NRC licensees for agency expenses which do not provide a direct benefit to them, the FY 2001 President's Budget proposes to continue the fee recovery requirement at a rate of 98 percent in FY 2001, and further decreasing by an additional two percent per year beginning in FY 2002 until the fee recovery requirement is reduced to 90 percent by FY 2005.

PERFORMANCE PLAN

FY 2001 PERFORMANCE PLAN

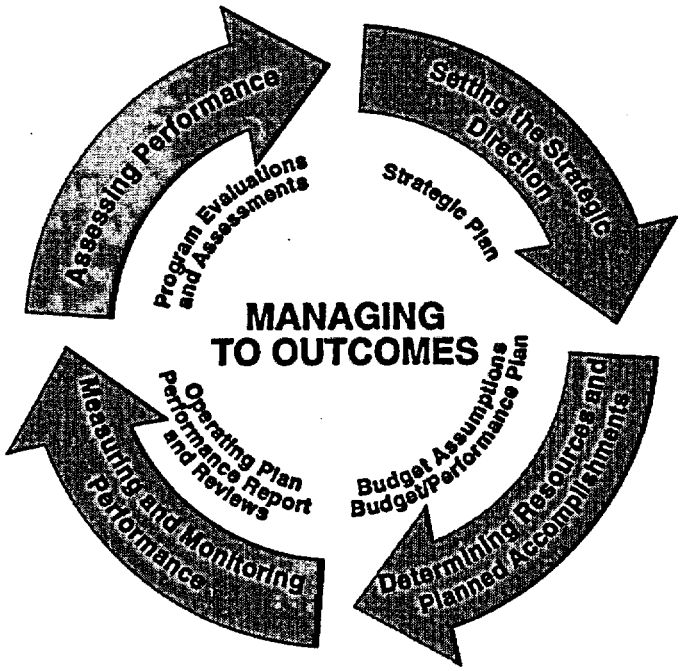
OVERVIEW

2

Background

The NRC's first strategic plan (NUREG-1614, Vol. 1, September 1997) established a strategic framework to help guide the NRC in meeting its responsibility for protecting public health and safety, promoting the common defense and security, and protecting the environment. The development of this strategic plan, and its associated strategic goals, was based on a 2-year strategic assessment and rebaselining initiative (1995–1997). The Commission initiated this internal effort to build a foundation on which to base a strategic framework for future decisionmaking, in addition to supporting the NRC implementation of the Government Performance and Results Act (GPRA) and other Congressional and Administration initiatives. It has provided the foundation and the strategic direction reflected in agency's initial strategic plan, the FY 1999 and FY 2000 Performance Plans, and the internal program-level operating plans.

The NRC has made progress in becoming a more performance-based organization. This effort began as a result of the agency's strategic rebaselining and enactment of the GPRA. The agency established a framework for implementing the performance approach throughout the agency referred to as the Planning, Budgeting, and Performance Management (PBPM) process. This process consists of setting the strategic direction, budgeting resources, and monitoring and assessing performance.



Over the past several months, the agency has been working on the triennial update of the strategic plan in accordance with the requirements of GPRA. A draft of this document will be released to the public for comment in early calendar year 2000 and the final will be provided to Congress in September 2000. The FY 2000–FY 2005 Strategic Plan will contain a description of performance goals, strategies, measures, and metrics to help focus NRC resources on the most safety-significant issues while providing flexibility in how licensees meet NRC requirements. The development of the major components of the strategic plan has already begun to influence day-to-day operations in the Nuclear Reactor Safety, Nuclear Materials Safety, Nuclear Waste Safety, and International Nuclear Safety Support arenas and funding decisions made on the FY 2001 President's budget.

FY 2001 Performance Plan

The FY 2001 combined Budget Estimates/Performance Plan reflects progress in the development of NRC's FY 2000-2005 Strategic Plan. As such, it represents a transition year for the agency. The agency through its strategic plan is evolving to a broader context for success in its regulatory oversight responsibilities. In addition to its safety mission, the agency recognizes that to be a successful regulator, agency decisions must be based on their contributions, first and foremost to public health and safety, and also consider the affect of those decisions on the public it protects, the industry it regulates, and on effective and efficient internal operations. The NRC is continuing to progress from a primarily output-based environment to a more outcome-based environment where the agency and its programs and operations are managed to performance goals.

The shift to a broader context of regulation corresponds to the development of four new performance goals for the Nuclear Reactor Safety, Nuclear Materials Safety, and Nuclear Waste Safety arenas. These performance goals represent vectors of change (e.g., maintain, increase, or decrease direction) and indicate whether performance needs to change. Performance measures are being developed for each of the performance goals for each of the arenas. Specific metrics will establish how far and how fast the agency will move in the direction established by the performance goal. Future versions of the agency's performance plan will reflect a fuller set of measures and metrics that are now being developed. At the present time, the performance plan identifies strategies for each performance goal which provide the direct link to key activities that the NRC will conduct to achieve those goals.

Last year, we combined the performance plan and the budget. This improvement contributed to the integration of planning and budgeting functions within the NRC. At the same time, this communicated a more complete picture to our stakeholders of what actions the agency was planning to take and the resources needed to get the job done. Consistent with GAO's observations on the FY 2000 Budget Estimates/Performance Plan, NRC has improved its

discussion of its strategies and resources to achieve its goals, and agency programs were aligned with specific strategies to achieve specific strategic goals and associated performance measures. However, we did not establish the relationship of agency programs and activities to performance goals in the plan. We are improving in this area as part of the FY 2001 Budget Estimates/Performance Plan. The plan identifies performance goals that more directly relate to what the agency wants to achieve and how the agency will be managed, identifying key strategies for achieving each performance goal. The plan also identifies measures and metrics for each arena's strategic goal and the performance goal to maintain safety. These safety measures were verified and validated using various sources of data including the Abnormal Occurrence Report, the Nuclear Materials Events Database, and reports submitted by licensees (see Appendix I).

Linking Performance with Program Outputs and Resources

The agency's FY 2001 Budget Estimates/Performance Plan is a single integrated document linking the goals, measures, and metrics included in the performance plan with the resources requested in the budget. This submittal includes a summary of key elements of the NRC's draft strategic plan. The budget request is presented for each strategic arena including its strategic goal and performance goals. Measures and FY 1999 actual performance data are identified for each arena's strategic goal and the performance goal to maintain safety. In addition, FY 1999 actual performance data as well as target levels for FY 2000 and FY 2001 are provided for each program's budget outputs within a strategic arena. Baseline data for FY 1998 are also provided where available.

The FY 1998 data are provided as a "snapshot in time" and do not reflect performance as a result of specific program output targets. Agency efforts to develop specific output targets for its programs began in FY 1998 to further the agency's development and implementation of GPRA, and are reflected in FY 1999, FY 2000, and FY 2001. Therefore, FY 1998 output data reflect efforts completed during that year, independent of established targets. FY 1999 reflects the first fiscal year in which specific performance targets were established for measurement and reflect an established performance baseline.

Additional information on the agency's verification and validation using abnormal occurrence data for the strategic and performance goal measures as well as crosscutting functions with other government agencies is provided in the appendix[2].

[2] No significant contribution was made to the preparation of the performance plan by any non-Federal entity.

Performance Reporting

By March 31, 2000, the NRC is required to submit to the President and the Congress its first report on program performance. This performance report will be integrated into the agency's Accountability Report and will review the success of the agency in achieving the strategic and performance goals established for FY 1999. Where these goals have not been achieved (if the target has not been achieved and the difference is significant), the agency will conduct a thorough analysis of why it did not meet the goal and the actions necessary to meet the goal in the future. In addition, documentation of plans and schedules for achieving the established performance goal will also be provided.

NRC'S STRATEGIC PLAN

This section summarizes the key elements of the NRC's strategic plan, including modifications currently under consideration, as a prelude to discussion of the agency's FY 2001 performance goals. The agency program output measures that support those goals are discussed in the FY 2001 budget request. The full text of the NRC's September 1997 Strategic Plan is available from the U.S. Government Printing Office (NUREG-1614, Vol. 1, September 1997) or it can be viewed and downloaded from the NRC's home page on the Internet [http://www.nrc.gov]. Consistent with the requirements of the Government Performance and Results Act, a revised strategic plan is being developed. A draft of the Agency's FY 2000-2005 Strategic Plan will be available in early 2000, for discussion with and comment by our stakeholders.

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.

NRC's Strategic Goals

The NRC has developed goals consistent with its mission. These strategic goals are supported by performance goals, which represent outcomes the NRC plans to achieve over the period covered by the NRC's strategic plan.

The NRC will conduct an efficient regulatory program that allows the Nation to use nuclear materials for civilian[3] purposes in a safe manner to protect the environment by working to achieve the following strategic goals:

[3] 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.

- Prevent radiation-related[4] deaths and illnesses, promote the common defense and security, and protect the environment in the use of civilian nuclear reactors (Nuclear Reactor Safety).

- 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).

- Prevent adverse impacts from radioactive waste to the current and future public health and safety and the environment, and promote common defense and security (Nuclear Waste Safety).

- Support U.S. interests in the safe and secure use of nuclear materials and in nuclear nonproliferation (International Nuclear Safety Support).

The safe and secure use of nuclear materials for civilian purposes is the responsibility of NRC licensees and Agreement State licensees, and the regulatory oversight of licensees is the responsibility of the NRC and the Agreement States. Thus, achieving these goals requires the collective efforts of the NRC, the Agreement States, and their licensees. The NRC's regulatory program is designed to ensure that the activities proposed and conducted by its licensees comply with the NRC's regulatory framework and are conducted safely. The NRC through its Office of State Programs provides for cooperation, oversight, technical assistance, and liaison with States, local governments, Indian tribes, and interstate organizations. The NRC works with Agreement States in a cooperative manner to establish and maintain adequate and compatible regulatory programs. The NRC coordinates with other Federal agencies that have missions that overlap in scope with the NRC's mission, and also maintains a level of international involvement that supports broad U.S. national interests and the NRC's domestic mission. These collective efforts strengthen the NRC's ability to achieve its goals and mission to ensure the protection of public health and safety and the environment.

[4] 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.

RELATIONSHIP TO STRATEGIC PLAN AND STRATEGIC ARENAS

The NRC's budget estimates/performance plan is directly linked to the NRC's strategic plan currently under development. To facilitate the correlation between the performance plan and the strategic plan, the budget estimates/performance plan is organized into the same four strategic arenas, as follows:

- Nuclear Reactor Safety
- Nuclear Materials Safety
- Nuclear Waste Safety
- International Nuclear Safety Support

For each of the mission related strategic arenas the following information is provided:

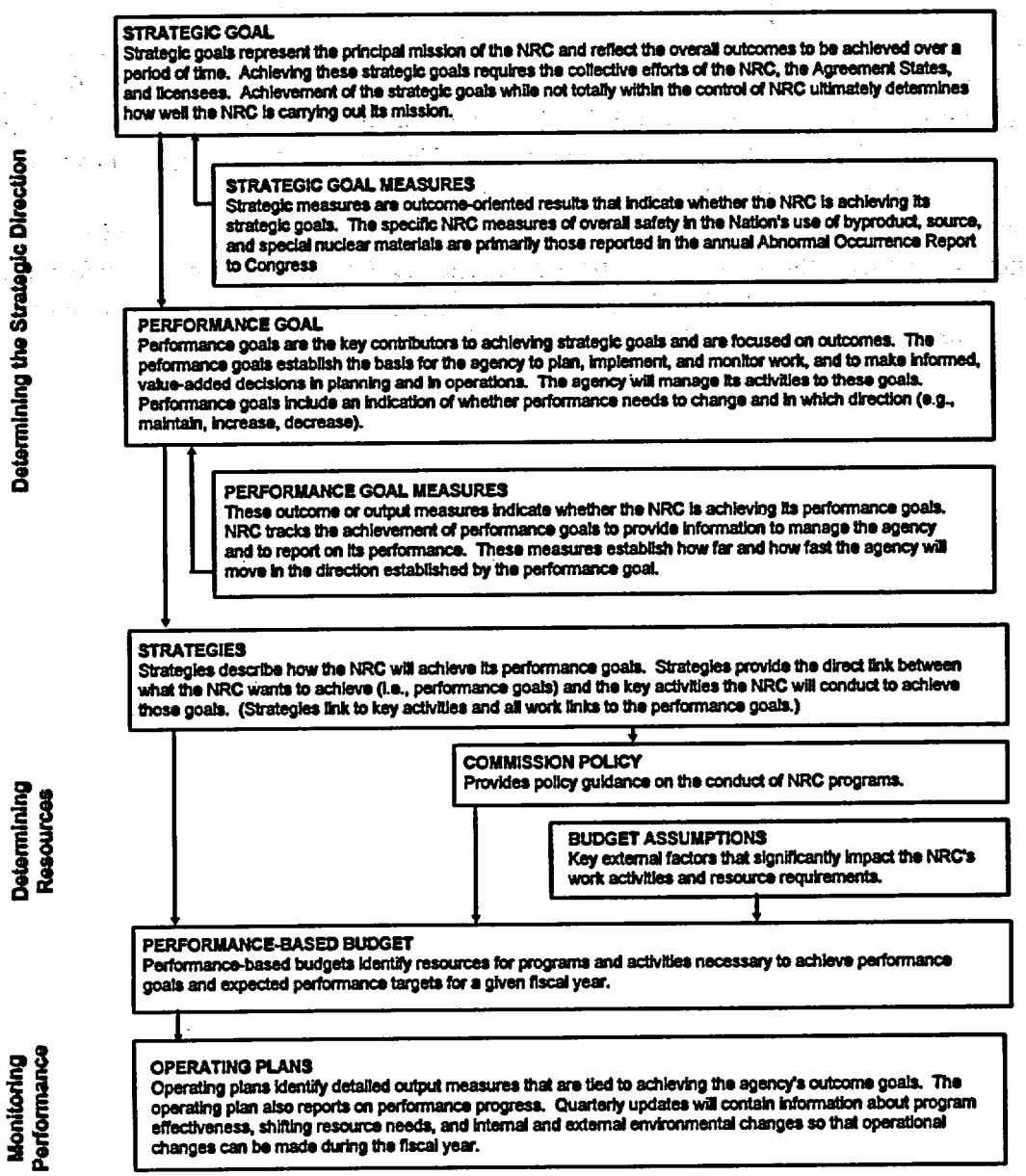
- the strategic goal,
- the strategic goal measures and metrics,
- a brief introduction to the arena,
- the performance goal measures, metrics, and strategies for the safety goal,
- the non-safety performance goals and their strategies, and
- the relationship of the agency's programs, and their associated resources, to each of the performance goals.

These sections reflect the agency's shift to a broader context of regulation and are directly linked to the strategic plan currently under development. This relationship reflects the direct relationship and linkage of the agency's work (program and activities) to the performance goals that support the strategic goals. The relationship also reflects the agency's transition to a more outcome-based environment and establishes the goals to which the agency will be managed. The goals form the basis to identify where new initiatives that will significantly contribute to achieving the goals are needed, to assess work the agency is currently doing and how it leverages the performance goals, and identify the work that minimally contributes or does not contribute to the performance goals that can be reduced or eliminated.

RELATIONSHIP TO THE BUDGET

The **strategic goals** (such as, "prevent radiation-related deaths") represent the agency's principal mission and the overall outcome the NRC wants to achieve. The **performance goals** (such as "maintain safety") are the key contributors to achieving the strategic goals and focus on outcomes over which the agency has control. The **performance goal 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 the NRC will conduct to achieve these goals. The **performance-based budget** identifies the planned accomplishments and associated resources necessary to achieve performance goals and expected performance targets for a given year.

NRC'S PLANNING, BUDGETING, AND PERFORMANCE MANAGEMENT PROCESS
PRINCIPAL COMPONENTS OF THE PROGRAM CHAPTERS OF THE STRATEGIC PLAN



NUCLEAR REACTOR SAFETY

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	FY 1999 PERFORMANCE
No nuclear reactor accidents.[5]	Zero
No deaths resulting from acute radiation exposures from nuclear reactors.	Zero
No events at nuclear reactors resulting in significant radiation exposures.[6]	Zero
No radiological sabotages at nuclear reactors.	Zero
No releases of radioactive material from nuclear reactors causing an adverse impact[7] on the environment.	Zero

DESCRIPTION OF STRATEGIC ARENA

A major part of the NRC's mission is to ensure that its licensees[8] safely design, construct, and operate civilian nuclear reactor facilities. The NRC currently regulates 103 civilian nuclear power reactors that are licensed to operate and another 19 that are undergoing decommissioning. 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.

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[5] "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.

[6] "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 Criteria I.A.3.

[7] 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}.

[8] "Licensees," as used in this plan, include persons required to be licensed (as defined in Section 11s of the Atomic Energy Act) as well as, where appropriate, applicants for licenses; certificate holders and applicants for certificates; contractors (including suppliers and consultants), subcontractors, and vendors of licensees or certificate holders; and all other persons subject to the NRC's jurisdiction.

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. 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.

These efforts are conducted primarily by the Office of Nuclear Reactor Regulation (NRR), the regions, and the Office of Nuclear Regulatory Research (RES), with the assistance and coordination of the Office of Enforcement, the Office of Investigations, the Office of the General Counsel, the Office of Human Resources, the Atomic Safety and Licensing Board Panel, and the Incident Response Organization (IRO).

In the Nuclear Reactor Safety arena, the highest NRC priority is to fulfill our fundamental mission of ensuring the adequate protection of public health and safety. The main focus in FY 2001 will be to achieve the following outcomes of the Nuclear Reactor Safety program: maintain safety, protection of the environment, and the common defense and security; increase public confidence; make NRC decisions more effective, efficient, and realistic; and reduce unnecessary regulatory burden. The NRC will continue to reinforce, accelerate, and expand efforts currently underway to review and to improve the Nuclear Reactor Safety regulatory programs, and to pursue further change to achieve these four outcomes.

The Nuclear Reactor Safety strategic arena comprises the following 11 programs: Reactor Licensing; Reactor License Renewal; Reactor Inspection; Reactor Performance Assessment; Reactor Incident Response; Reactor Technical Training; Reactor Enforcement Actions; Reactor Investigations; Reactor Safety Research; Reactor Legal Advice; and Reactor Adjudication. The contract support funds are allocated for work done by the U.S. Department of Energy (DOE) contractors, commercial contractors, small business entities, nonprofit organizations (e.g., universities and foundations), and grantees. Efforts in these 11 program areas have been guided, in part, by the four outcome goals used as "filters" to evaluate, prioritize, and sunset activities. Each activity is examined to see how it contributes to (1) maintaining public safety, protecting the environment and the common defense and security; (2) increasing public confidence; (3) making NRC decisions more effective, efficient, and realistic; and (4) reducing unnecessary NRC and license burden.

MEASURING RESULTS—PERFORMANCE GOALS

The NRC has established the following performance goal to maintain safety and its measures, metrics, and strategies as well as non-safety performance goals and their strategies that will be used to achieve the performance goals in the FY 2001 Budget Estimates/Performance Plan for measuring results that contribute to achieving the Nuclear Reactor Safety strategic goal to prevent radiation-related deaths and illnesses, promote the common defense and security, and protect the environment in the use of civilian nuclear reactors. A fuller set of measures and metrics for the non-safety performance goals will be provided in future performance plans.

NUCLEAR REACTOR SAFETY

PERFORMANCE GOAL: Maintain safety, protection of the environment, and the common defense and security.

MEASURES	FY 1999 PERFORMANCE
No more than one event per year identified as significant precursors of nuclear accidents.[9]	Zero
No statistically significant adverse industry trends in performance.	No adverse trends
No events resulting in radiation overexposures[10] from nuclear reactors that exceed applicable regulatory limits.	Zero
No more than three releases per year to the environment of radioactive material from nuclear reactors that exceed the regulatory limits.[11]	Zero
No breakdowns of physical security that significantly weaken the protection against radiological sabotage, theft or diversion of special nuclear materials in accordance with abnormal occurrence criteria.	Zero

The following key strategies will be used to achieve the performance goal of maintaining safety:

- *We will sharpen our focus on safety to include transitioning to a revised NRC reactor oversight program for our inspection, assessment, and enforcement activities.*
- *We will respond to operational events involving potential safety consequences.*
- *We will evaluate operating experience and the results of risk assessments for safety implications.*

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

[10] Overexposures are those that exceed the limits as provided by 10 CFR 20.2203(a)(2).

[11] Releases for which 24 hour notification is required under 10 CFR 20.2202(b)(2) and 30 day reporting requirement under 10 CFR 20.2203(a)(3).

- *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 that safety is maintained for renewed licenses 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 regulatory approaches to maintain safety.*

PERFORMANCE GOAL: Increase public confidence.

The following key strategies will be used to achieve the performance goal of increasing public confidence:

- *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 information in the proper context with respect to the risk of the activity.*

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

PERFORMANCE GOAL: Make NRC activities and decisions more effective, efficient, and realistic.

The following key strategies will be used to achieve the performance goal of making NRC activities and decisions more effective, efficient, and realistic:

- *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 that allow for the most improvement.*

PERFORMANCE GOAL: Reduce unnecessary regulatory burden.

The following key strategies will be used to achieve the performance goal of reducing unnecessary regulatory burden:

- *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 unnecessarily regulatory burden.*

The following table depicts the relationship of the Nuclear Reactor Safety programs to the performance goals. Detailed information on the resources, programs, and their associated output measures is provided in the Nuclear Reactor Safety arena of the FY 2001 budget request.

FY 2001 NUCLEAR REACTOR SAFETY PROGRAM LINK TO PERFORMANCE GOALS

LINKS TO PERFORMANCE GOALS	PERFORMANCE GOALS			
FY 2001 PROGRAMS ($217,130K, 1,407 FTE)	Maintain Safety	Increase Public Confidence	Make NRC Activities & Decisions More Effective, Efficient, and Realistic	Reduce Unnecessary Regulatory Burden
Reactor Licensing ($57,102K, 429 FTE)	X	X	X	X
Reactor License Renewal ($11,307K, 77 FTE)	X	X		X
Reactor Inspection ($65,857K, 573 FTE)	X	X	X	X
Reactor Performance Assessment ($6,053K, 51 FTE)	X	X	X	X
Reactor Incident Response ($5,777K, 26 FTE)	X	X		
Reactor Safety Research ($56,018K, 151 FTE)	X	X	X	X
Reactor Technical Training ($5,594K, 25 FTE)	X	X	X	
Reactor Enforcement Actions ($1,862K, 16 FTE)	X	X	X	X
Reactor Investigations ($3,949K, 31 FTE)	X	X	X	X
Reactor Legal Advice ($2,426K, 21 FTE)	X	X	X	X
Reactor Adjudication ($1,185K, 7 FTE)	X	X	X	X

BUDGET AUTHORITY BY FUNCTION AND BY PROGRAM
FULL-TIME EQUIVALENT EMPLOYMENT BY PROGRAM

(Dollar amounts in tables represent thousands of dollars ($K). In text, whole dollar amounts are used. Staff numbers represent full-time equivalents (FTEs).)

Total FY 2001 Estimate $217,130,000

Summary	FY 1999 Enacted	FY 2000 Estimate	FY 2001 Estimate	
			Request	Change from FY 2000
Budget Authority by Function ($K)				
Salaries and Benefits	144,755	147,751	154,155	6,404
Contract Support	58,112	54,704	54,830	126
Travel	7,732	8,207	8,145	-62
Total	210,599	210,662	217,130	6,468
Budget Authority by Program ($K)				
Reactor Licensing	53,844	55,771	57,102	1,331
Reactor License Renewal	6,920	9,321	11,307	1,986
Reactor Inspection	64,538	65,172	65,857	685
Reactor Performance Assessment	6,787	5,614	6,053	439
Reactor Incident Response	4,865	5,000	5,777	777
Reactor Safety Research	59,290	55,453	56,018	565
Reactor Technical Training	5,440	5,256	5,594	338
Reactor Enforcement Actions	1,922	1,869	1,862	-7
Reactor Investigations	3,841	3,802	3,949	147
Reactor Legal Advice	2,088	2,397	2,426	29
Reactor Adjudication	1,064	1,007	1,185	178
Total	210,599	210,662	217,130	6,468

Summary	FY 1999 Enacted	FY 2000 Estimate	FY 2001 Estimate	
			Request	Change from FY 2000
Full-Time Equivalent Employment by Program				
Reactor Licensing	455	433	429	-4
Reactor License Renewal	46	66	77	11
Reactor Inspection	629	596	573	-23
Reactor Performance Assessment	61	51	51	0
Reactor Incident Response	27	26	26	0
Reactor Safety Research	170	152	151	-1
Reactor Technical Training	26	25	25	0
Reactor Enforcement Actions	19	17	16	-1
Reactor Investigations	33	31	31	0
Reactor Legal Advice	19	21	21	0
Reactor Adjudication	7	7	7	0
Total	1,492	1,425	1,407	-18

EXPLANATION OF RESOURCE CHANGES BY PROGRAM

Reactor Licensing. The net resource increase in FY 2001 is primarily associated with increased personnel costs. This increase is partially offset by decreases due to a significantly reduced inventory of licensing actions and other licensing tasks and the expectation that there will be fewer incoming other licensing tasks as a result of fewer generic communications. Resources also decrease to reflect a phase down of the development of the Reactor Program System (RPS) and the elimination of information technology systems being replaced.

Reactor License Renewal. The resource increase in FY 2001 is required to conduct reviews of license renewal applications, develop the associated regulatory framework, and to support increased personnel costs. NRC expects to receive two additional license renewal applications in FY 2000 and an additional four in FY 2001.

Reactor Inspection. The net resource increase in FY 2001 is associated with increased personnel costs and is partially offset by decreases due to the reduced operating reactor workload; expected

improved plant performance; and completion of program development efforts associated with revising the reactor oversight process.

Reactor Performance Assessment. The resource increase in FY 2001 is required to conduct a comprehensive evaluation of the revised oversight process and to support increased personnel costs.

Reactor Incident Response. The resource increase in FY 2001 reflects the periodic updating of the training and response manuals, the purchasing of potassium iodide, the effort associated with achieving agency compliance with PDD 63 (Critical Infrastructure Protection), training for incident investigation, the enhancements of the emergency telecommunications systems, and increased costs of salaries and benefits. The increases are partially offset by the decrease due to the completion of the updates to the computer codes supporting dose assessment and the efficiencies gained with the Emergency Response Data System.

Reactor Safety Research. The resource increase in FY 2001 reflects increased personnel costs.

Reactor Technical Training. The resource increase in FY 2001 reflects increased costs for internal training to meet user needs. This training is vital to provide qualification, development, and training programs.

Reactor Enforcement Actions. The resource decrease in FY 2001 is attributable to recent enforcement program experience.

Reactor Investigations. The resource increase in FY 2001 reflects increased personnel costs.

Reactor Legal Advice. The net resource increase in FY 2001 is primarily based on increased personnel costs. This increase is almost totally offset by a decrease in resources associated with the anticipated conclusion of the Thermal Science, Inc. litigation.

Reactor Adjudication. The resource increase is associated with support and management of adjudicatory proceedings. Costs include transcript services and rental of hearing room space.

JUSTIFICATION OF PROGRAM REQUESTS

Reactor Licensing

OUTPUT MEASURES				
Output/Baseline	FY 1999 Target	FY 1999 Actual	FY 2000 Target	FY 2001 Target
Licensing actions completed per year. (FY 1998: 1,425 licensing actions completed.)	1,670 actions, including conversions to improved Standard Technical Specifications.	1,727 licensing actions completed.	1,500 actions, including conversions to improved Standard Technical Specifications.	1,500 actions, including conversions to improved Standard Technical Specifications.
Size of licensing action inventory. (FY 1998: 1,113 actions.)	1,000 actions or less.	857 actions.	750 actions or less.	650 actions or less.
Age of licensing action inventory. (FY 1998: 66 percent of inventory ≤ 1 year old; 86 percent ≤ 2 years old; 95 percent ≤ 3 years old.)	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.	86 percent ≤ 1 year old; 100 percent ≤ 2 years old; 100 percent ≤ 3 years old.	95 percent of inventory should be 1 year old or less; all actions 2 years old or less.	95 percent of inventory should be 1 year old or less; all actions 2 years old or less.
Other licensing tasks completed per year. (FY 1998: 1,006 other licensing tasks completed.)	800.	939.	800.	775.
Number of operator licensing examinations administered. (FY 1998: administered 413 initial exams; and 393 GFEs.)	Meet licensee demand estimated at 400 initial operator licensing examinations and 400 generic fundamentals examinations.	Met licensee demands for 429 initial operating licensing exams and 265 generic fundamentals exams.	Meet licensee demand estimated at 565 initial operator licensing examinations and 400 generic fundamentals examinations.	Meet licensee demand estimated at 600 initial operator licensing examinations and 400 generic fundamentals examinations.

OUTPUT MEASURES				
Output/Baseline	FY 1999 Target	FY 1999 Actual	FY 2000 Target	FY 2001 Target
Reactor Program System will develop demonstrable returns on investment to the agency.	No significant deviations (as defined by Clinger-Cohen Act of 1996).	Under expected budget costs and on schedule.	No significant deviations (as defined by Clinger-Cohen Act of 1996).	No significant deviations (as defined by Clinger-Cohen Act of 1996).

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 accomplishment areas in the reactor licensing area are intended to support overhauling the NRC 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, predictability, and transparency of our processes; and to increase public confidence in NRC's reactor licensing program. Major planned accomplishment areas in the reactor licensing program and their relative contributions to the four outcome goals are discussed below.

Each operating reactor site will be assigned a project manager whose primary responsibility will be 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 overall licensee performance, assisting the regions in developing and implementing inspection plans, consulting with State and local officials, and responding to public and Congressional inquiries. Power reactor project management activities contribute most to NRC's goals of increasing efficiency and effectiveness 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 changes to operating license requirements. As a result, the NRC is receiving an increasing number of requests from its power reactor licensees to approve the transfer of operating licenses. Also, the NRC expects to continue its efforts to review and amend, as necessary, its regulatory processes, including those for license transfers, to keep pace with the challenges associated with the economic deregulation of the electric utility industry. A detailed technical review of applications from licensees for amendments to their operating licenses, such as technical specification changes, modification of license conditions, and exemption and relief requests, are necessary 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. Without such approval, the licensee cannot make the changes requested and, in some cases, may be

required to shut down the plant if operation is not feasible under the current license conditions. The review and approval of licensing actions focuses first on maintaining safety but also makes a significant contribution to reducing unnecessary burden.

In FY 2001, 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 licensing action inventory at the end of FY 2000 will be at a historic low of 750 and will be further reduced in FY 2001. The age of the licensing action inventory will also be reduced in FY 2000, 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. This goal will be maintained through FY 2001.

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 will receive five applications for conversion to the iSTS in FY 2001. Each conversion review is scheduled to be completed within one year of its submission. 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.

Another licensing action effort involves the review and approval of applications to increase reactor power ratings, which will result in cost savings to the licensee. Since the end of FY 1998, many power uprate licensing actions have been completed, resulting in an increase in the available electric generating capacity in the United States in excess of 2300 megawatts—which is equivalent to building two new 1150 MW electric plants—with minimal plant modification and minimal impact on plant safety. Four to five power-uprates are scheduled for completion in FY 2000 and we expect to complete about three in FY 2001.

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 800 other licensing tasks in FY 2000 and 775 in FY 2001. The review of other licensing tasks contributes to NRC's goals by contributing strongly to maintaining safety and moderately to increasing public confidence.

In another planned accomplishment area, 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 2001, the staff will continue to maintain the iSTS with insights from the ongoing iSTS conversions and will start to 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 efficiency and effectiveness 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. In FY 2001, the NRC will administer approximately 600 initial operator licensing examinations and 400 generic fundamentals examinations nationwide. 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 will result in improved regulatory efficiency, but the NRC will still prepare a significant number 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 conducted four regional workshops and is continuing to solicit and resolve additional industry feedback on the rule and guidance. During FY 2000 and FY 2001, the NRC is working with the Institute for Nuclear Power Operations (INPO) on establishing an examination question bank to reduce costs associated with preparation and approval of operator licensing examinations. The staff is also working to revise 10 CFR 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 moderate contribution to maintaining safety and a moderate contribution to 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 develop and complete approximately six rulemakings per year in FY 2000 through FY 2001. Milestones for completing rulemakings are established in the semiannual NRC Rulemaking Activity Plan. Among the priority rulemakings identified for completion during this period are the following: a change to 10 CFR 50.59 (changes, tests, and experiments) to provide clarity and flexibility in the existing requirements; a revision to event-reporting requirements to reduce the reporting burden

associated with events of little or no risk significance; a rule regarding the use of potassium iodide as a protective measure for the general public after a severe reactor accident; a change as a result of a rulemaking petition concerning burden reduction for Quality Assurance Program change control; a rule change to allow an operating power reactor licensee to voluntarily amend the facility design basis to use revised source terms in design-basis accident radiological analyses, a revision to the maintenance rule, and changes to fire protection regulations concerning noncombustible seal material and developing a new risk-informed and performance-based fire protection regulation. The NRC is examining and modifying its regulatory approach to become more risk-informed and performance-based. Although all rulemakings in the Rulemaking Activity Plan are projected with this in mind as well as their impact on the four outcome goals, additional resources in the rulemaking area are planned for FY 2000 to risk-inform the current Part 50 of the reactor regulations. This increased effort will be continued in FY 2001. In general, rulemaking activities provide important contributions to outcomes in all four areas of maintaining safety, increasing public confidence, reducing unnecessary burden, and increasing efficiency and effectiveness.

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. In FY 2000 through FY 2001, prompt technical screening and assessments of approximately 3,000 nuclear reactor event reports and other incoming data will result in approximately 400 potential issues that require followup. Follow- up 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 50 of these generic communications are expected to be issued in FY 2001. Event evaluations and generic communications activities are an important factor in the outcome of maintaining safety as well as a moderate contribution to reducing unnecessary burden.

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, 10 CFR 50.59, final safety analysis report, circuit analysis for fire protection concerns, 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 a new risk-informed and performance-based industry consensus standard in FY 2001 to complement a comprehensive fire protection regulatory guide for operating reactors

planned for completion in FY 2000; and other regulatory process improvements all contribute to increasing the NRC's efficiency and effectiveness. Regulatory improvement activities also contribute to the NRC's goals by a moderate contribution to maintaining safety, reducing unnecessary burden, and increasing public confidence.

The NRC is responsible for licensing, inspecting, and decommissioning 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 2001, the NRC will conduct inspections as well as licensing reviews for approximately 50 non-power reactors. In addition, during FY 2001, 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.

The NRC will continue to proceed with the development of the RPS. The RPS is being developed to provide for the effective and efficient integration and analysis of information associated with nuclear reactor regulation programs. The RPS will 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. The licensing and other planning portions will be completed and deployed in FY 2000. Development of the remaining portion, including interfaces with other agency systems, will be completed by the end of FY 2001.

Reactor License Renewal

OUTPUT MEASURES				
Output/Baseline	FY 1999 Target	FY 1999 Actual	FY 2000 Target	FY 2001 Target
Completion of license renewal application reviews. (FY 1998: Major milestones completed.)	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.	Major milestones completed.	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 from receipt of the application to a Commission decision.	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.

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 NRC will continue in FY 2000 to conduct technical and environmental reviews of the Calvert Cliffs and Oconee license renewal applications. Resources are included to support two additional license renewal applications expected in FY 2000 and four in FY 2001. 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 experience gained from the reviews of the Calvert Cliffs and Oconee renewal applications, the generic industry renewals reports, and the resolution of technical and process issues is being used to help focus renewal reviews and improve the guidance contained in the regulatory guides, standard review plans, and staff positions implementing 10 CFR Parts 51 and 54. 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 and making documents publicly available.

Reactor Inspection

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

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The reactor inspection 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 safety operations. The inspection program is composed of three major elements: core inspections, plant-specific inspections, and generic safety issue inspections. These elements provide a strong positive contribution to maintaining safety and contribute to public confidence in NRC regulatory oversight of reactor safety.

The core 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. Resident inspectors carry out the major part of the core inspection program and participate in regional initiative 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 follow-up activities, and licensee activities and processes that are important to safety and reliability.

The conduct of plant-specific regional initiative inspections contribute 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 regional initiative inspection performed at each site is commensurate with that site's performance. NRC inspectors also respond to allegations of safety and safeguards violations at nuclear facilities and provide technical support to investigative personnel. Allegations often are a valuable source of potential safety-related concerns not previously known to the NRC. 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.

Based on operating experience in recent years that shows overall performance at reactors has been improving, the NRC has reduced the total direct onsite inspection hours conducted at each site. Direct onsite inspection hours planned for individual units are adjusted on the basis of licensee performance. For example, the core inspection 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 staff is working to develop and implement a more risk-informed, efficient, and effective baseline inspection program including the conduct of a pilot program at nine reactor sites. The staff is evaluating the results of the pilot program completed in November 1999, with initial implementation of the revised program at all reactor sites scheduled for April 2000. By risk-informed, we mean that the scope of the inspection program will be defined primarily by those areas that are significant from a risk perspective, and inspection methods used to assess these areas will take advantage of both generic and plant-specific risk insights. No resource adjustments will be made for the revised oversight process until the agency garners enough experience, evaluates the results, and provides recommendations to the Commission. The effectiveness and implementation of the revised inspection program will continue to be evaluated on an ongoing basis.

The NRC also conducts approximately 35 reactor operator licensing requalification program inspections each year to evaluate licensee examination and training programs and to improve operational safety through early identification and correction of programmatic weaknesses.

Reactor Performance Assessment

OUTPUT MEASURES				
Output/Baseline	FY 1999 Target	FY 1999 Actual	FY 2000 Target	FY 2001 Target
Timeliness of assessments conducted and reports issued. (FY 1998: 45 reports issued and meetings conducted; four did not meet the target.)	All assessment reports issued and meetings with licensees held within 60 days of the end of the assessment cycle.	Not applicable given suspension of Systematic Assessment of Licensee Performance (SALP) program.	All assessment reports issued and meetings with licensees held within 60 days of the end of the assessment cycle.	All assessment reports issued and meetings with licensees held within 60 days of the end of the assessment cycle.
Plant performance review. (FY 1998: 2 reviews per site conducted.)	Conduct 2 reviews per site.	2 reviews per site conducted.	Conduct 2 reviews per site.	Conduct 2 reviews per site.
Senior management meetings. (FY 1998: 2 meetings conducted.)	Conduct an annual meeting.	Conducted a meeting in April 1999.	Conduct an annual meeting.	Conduct an annual meeting.

The NRC conducts an integrated assessment of licensee performance by collecting and assessing inspection and operational 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, and 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.

The NRC will transition from the current processes during FY 2000, which include the Systematic Assessment of Licensee Performance (which has been suspended by the Commission), Plant Performance Reviews, and Senior Management Meetings, into a single integrated process. As part of this transition, the NRC changed the conduct of the Senior Management Meeting from two meetings per year to an annual meeting beginning in FY 1999. In FY 2000 and FY 2001, the NRC will continue to collect and assess inspection and operational 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.

Reactor Incident Response

OUTPUT MEASURES				
Output/Baseline	FY 1999 Target	FY 1999 Actual	FY 2000 Target	FY 2001 Target
Emergency Response Performance Index (ERPI).	90 percent.	99.7 percent	90 percent.	90 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 90 percent, management will determine what is contributing most to the decline and conduct appropriate corrective measures based on this review.

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 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 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 2001, 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. Also in FY 2001, independent reviews will be conducted for actions assigned from previous IITs and will be published in the NRC's Annual Report.

In FY 2001, 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 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.

During FY 2001, 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'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 2001. 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.

Reactor Safety Research

OUTPUT MEASURES				
Output/Baseline	FY 1999 Target	FY 1999 Actual	FY 2000 Target	FY 2001 Target
Technical bases for safety and regulatory guidance and decisionmaking.	Issue 39 research products that respond to high- and medium-priority needs from the Commission and NRC's licensing organizations. Develop, maintain, or improve 8 engineering codes/models for use by RES and licensing organizations for regulatory analyses/ decisionmaking. Key improvements include the consolidation of codes to reduce maintenance costs and the development of a Graphical User Interface to increase user productivity.	Completed 45 research products. Maintained 8 codes.	Issue 45 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.

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. Reactor safety research was previously comprised of three separate programs: Reactor Operational Experience Evaluation; Reactor and Plant Performance Research; and Reactor Materials and Component Behavior Research. The structure of the Reactor Safety Research program has been revised to better focus on the outcomes of the Nuclear Reactor Safety arena. As a result, these programs have now been combined into the Reactor Safety Research program, which is comprised of eight major program areas.

The first program area, "Developing the Technical Bases to Address Identified or Potential Safety Issues," primarily supports the NRC performance goal to maintain safety. To maintain safety at nuclear reactors, some technical issues associated with new requirements, operational events and

licensing decisions require new information in order to resolve them. This program area will continue to address several significant issues:

Environmentally-assisted cracking of reactor pressure boundary components and vessel internals: During FY 2000 and 2001, this research will provide the technical bases to resolve questions related to the cracking of reactor pressure or coolant system components, including reactor vessel internals caused by the environmental conditions such as water chemistry and temperature. This work will also include an assessment of the effect of the cracking and effectiveness of repair strategies in maintaining safety. Cracking of reactor pressure boundary components, such as piping, vessel penetrations, and vessel internals has been observed and has been attributed to the deleterious effects of the water coolant environment. Degradation of these components could impair the ability to shut down and cool the reactor core. The information produced by this research will be used by the licensing office to evaluate plant-specific and generic environmental cracking issues such as crack initiation, crack propagation, and changes in structural properties for operating plants and future license renewal reviews. The outcomes of this research primarily relates to the performance goal of maintaining safety, particularly as plants age and the effects of this degradation continue. This continuing degradation requires application of more accurate and robust models for prediction of environmentally-assisted crack initiation and growth in nuclear plant reactor components.

Assuring the integrity of the reactor pressure vessel: During FY 2000–FY 2001, research in this area will continue to provide improved data and analytical tools to support decisions by the licensing office on the integrity of reactor pressure vessels (RPV) for the current operating and renewal periods. RPV integrity continues to be a high priority, since single failure of the RPV in some locations could lead directly to significant core damage since the core might not be able to be cooled. The outcomes of this research relate primarily to the performance goal of maintaining safety through evaluation of the deleterious effects of neutron irradiation on pressure vessel integrity. Also, improvements in fracture analyses and embrittlement estimation methods will likely result in reduction of unnecessary conservatism.

In-service inspection effectiveness and reliability: During FY 2000–FY 2001, research in this area will support the performance goal of maintaining safety by continuing to provide the technical bases to support licensing office decisions related to the technical adequacy and limitations of nondestructive inspection methods and programs. The reliability and effectiveness of nondestructive evaluation methods used by licensees to detect degradation before structural integrity is impaired are key factors in maintaining safety by assuring the integrity of components such as the reactor pressure vessel, vessel penetrations, piping, and other components and structures, such as spent fuel storage casks.

Environmental qualification of aging electric cables: During FY 2000, the NRC will complete evaluations of naturally and artificially aged cables under a range of normal and postulated accident conditions. During FY 2000–FY 2001, research in this area will evaluate equipment qualification of power cables and electrical penetrations and the adequacy of potential condition monitoring methods that may be used at operating plants and during license renewal terms. 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 design-basis accidents. 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 program will also provide the technical bases to resolve Generic Safety Issue 168, "Environmental Qualification of Electrical Equipment." The outcomes of this research relate to the performance goal of maintaining safety by evaluating the degree to which the original qualification process adequately bounds actual plant operating conditions, thereby assuring that aged cables can withstand the design-basis loss-of-coolant accident.

Maintaining adequate safety margins for aging reactor containments: During FY 2000–FY 2001 this research effort will provide information to the licensing office to assess the effectiveness of containment inspection procedures and more accurate methods for prediction of reactor containment safety margin. More than 40 incidents of degradation have been observed in containments; some resulting in a loss of containment integrity. Research in this area will provide the tools and data to assess the significance or extent of the degradation identified during inspections. The outcomes of this research support the NRC performance goal of maintaining safety through focused inspection procedures and the application of more accurate methods for prediction of reactor containment safety margin.

Maintaining adequate safety margins for steam generator tube integrity: During FY 2000–FY 2001, the NRC will contribute to the performance goal of maintaining safety by conducting research to address questions about the nature and effects of steam generator tube degradation mechanisms; effectiveness and reliability of inspection techniques; new repair techniques; and the accuracy of predictive models. Steam generator tubes account for approximately 90 percent of the primary coolant pressure boundary, and failure of these tubes could result in a radiation release directly to the atmosphere. Cracking and wastage are degradation mechanisms being identified in operating plants; these may unacceptably erode the integrity of steam generator tubes. The experimental data provided by this program will provide the licensing office with technical bases for decisions involving steam generator 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. The outcomes of this research relate primarily to the performance goal of maintaining

safety by providing the data and analysis tools for the licensing office to independently confirm assessments of steam generator tube integrity.

Risk important aspects of digital instrumentation and control (DI&C) equipment: During FY 2000–FY 2001, this research will provide the data and models necessary to develop the technical bases for licensing office decisions involving DI&C equipment. This area of technology is rapidly evolving and DI&C equipment is being installed in operating nuclear plants at an increasing rate. Because the design, DI&C systems may have unique failure modes, different reliability than analog equipment currently used in nuclear power plants, and may present challenges to operators that are not currently well understood. The outcomes of this research support the NRC performance goal of maintaining safety by resolving technical and risk important issues associated with new equipment.

Managing and resolving generic safety issues (GSIs): Generic safety issues are issues of potential safety significance that affect a group of licensed facilities (usually a class of commercial reactors). In addition to those GSIs currently being worked on, history tells us that new GSIs will continue to arise from licensing actions, safety research programs, and operational experience, and the NRC must have a capability to respond appropriately to these issues in a timely and realistic manner in order to maintain safety. By estimating the potential risk associated with the issue, the number of licensed facilities affected, and, as appropriate, costs or burden reduction, this activity provides a rational, risk-informed basis for decisions regarding the need for further regulatory action, and thus, has a positive effect on public confidence. During FY 2000–FY 2001, procedures and methods for addressing generic issues will be enhanced by incorporating improved PRA techniques in order to make the process more efficient and effective.

Important aspects of human performance: Risk methods and operational data are being used to prioritize important human performance issues to be addressed under the NRC Human Performance Plan. During FY 2000–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 program as well as licensing decisions related to operating plants. 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 and inspection of human performance issues within the plant assessment context.

Acceptance criteria for extended fuel burnup: NRC regulatory criteria on fuel behavior were developed when high burnup was thought to occur around 40 Giga Watt day/metric tonne (Gwd/t). International test data on reactivity-initiated accidents along with increases in the rate of cladding corrosion at higher burnup suggest that these regulatory criteria are not representative of

experimental evidence. In addition to confirming the adequacy of fuel behavior under the currently approved burnup limit of 62 GWd/t, the staff must be prepared to respond in a timely fashion to industry plans for further burnup extensions. During FY 2000–FY 2001, tests and analyses will be conducted to confirm existing regulatory requirements or serve as the basis for revising them. The results will provide the bases for the licensing office confirming existing burnup limits, and approving additional burnup extension that will be requested by the industry. The outcomes of this research relate to primary potential safety enhancement through the application of more accurate models for predicting fuel behavior under accident conditions.

The second program area, "Developing and Employing Risk Information and Insights to Improve Regulatory Effectiveness," primarily supports three NRC performance goals — maintain safety, reduce unnecessary regulatory burden, and make NRC activities and decisions more effective, efficient, and realistic. This program area will continue to address several significant issues:

Integrated evaluation of regulatory information: Overly prescriptive regulatory requirements sometimes decrease effectiveness and impose burdens by preventing licensees from using cost-effective technologies or other innovative approaches to conducting operations. Using a performance-based approach to regulation will focus NRC and licensee resources on the most safety significant issues, while providing flexibility in how licensees meet NRC requirements, thus reducing some burden. Significant opportunities to improve effectiveness and reduce unnecessary burden are expected to present themselves during FY 2000–FY 2001 when risk information is used to propose modifications, updates, and deletions to 10 CFR Part 50. During the same period, the revisions to the reactor oversight process will also present such opportunities. The integrated experience from all these efforts will be used to assess the effectiveness of two sets of regulatory requirements each year during FY 2000–FY 2001. For FY 2000, the station blackout (SBO) issue and the issue of anticipated transients without scram (ATWS) are two sets of rules and guidance that will be assessed.

Scrutable and risk-informed plant safety assessments: A more scrutable and risk-informed process to monitor and assess trends in plant-specific and industry-wide safety performance will improve the NRC's ability to conduct effective plant safety assessments. During FY 2000–FY 2001, the following sources of operational data will be used to support further development of this plant assessment process: (1) the Reliability and Availability Database System (RADS); (2) the Sequence Coding and Search System (SCSS) database; and (3) the Equipment Performance and Information Exchange (EPIX) database, which is supplied by the Institute of Nuclear Power Operations (INPO). These operational data will provide information on relevant operating experience that will be used to enhance plant inspections of risk-important systems. In addition, the data will be used by the NRC staff to perform technical reviews of proposed license amendments, including risk-informed

applications. The data will also be used in the development of risk-based performance indicators to support improvements in the new reactor oversight process.

PRA methods and standards: Current PRA methods do not adequately address certain key aspects of plant risk, including the effects of quality assurance, human reliability, fire, and low-power and shutdown operations. During FY 2000 and FY 2001, research will be conducted to better define and reduce the uncertainty in these aspects of PRA. The staff and industry will use the results of this research to provide more complete and more quantitative estimates of risk to be used in plant-specific risk-informed decisionmaking and in more general uses of risk information. The outcomes of this work relate to potential safety enhancements and licensee burden reductions through greater use of risk analysis methods and results.

Risk-inform NRC regulations and regulatory actions: Many of NRC's existing regulations (e.g., Part 50) and practices were derived using deterministic bases and do not always focus on the most risk-significant items, leading to unnecessary burden on licensees and, potentially, less priority given to important safety matters. During FY 2000–FY 2001, the NRC will establish the feasibility and provide recommendations for modifying, updating, or deleting regulations in 10 CFR 50. Beginning in FY 2000, the technical basis for the recommended changes will be developed to support the rulemakings necessary to implement the changes, as well as to provide up-to-date risk analysis software tools and detailed PRA models for use in regulatory processes. The outcomes of this work relate to potential safety enhancements and licensee burden reductions through explicit modifications of NRC's regulations and regulatory processes.

Improving risk informed decisions associated with natural hazards: During FY 2000–FY 2001, this research will provide data for decisions involving advanced analytical models in the earth sciences. These models reflect risk-informed approaches that will be used to reduce uncertainties associated with natural hazards. The results of this research will be used to assess potential changes to plant systems and structures. The outcomes of this research support three NRC performance goals: maintain safety, reduce unnecessary regulatory burden, and make NRC activities and decisions more effective, efficient, and realistic by providing the tools, methods, and data necessary for improving risk-informed decisions associated with natural hazards.

Risk informing the inspection process: During FY 2000–FY 2001, research will be conducted in several areas to support the licensing office in the development of a risk-informed inspection and assessment process. This research will be conducted in the following areas: generate plant-specific risk information matrices for all plants; develop risk-based performance indices; develop a significance determination process for shutdown operations, barriers, and fire protection inspection issues; and assess the feasibility of establishing measures and processes for addressing human performance as a cross-cutting issue within the oversight process. The development of a risk-

informed inspection process will improve the agency's effectiveness and efficiency by focusing licensee and NRC resources on the most safety-significant issues.

The third program area, "Improving Program/Process Efficiency and Product Quality" supports the NRC performance goal to make NRC activities and decisions more effective, efficient, and realistic. This program area will continue to address several significant issues:

Timely development and endorsement of consensus codes and standards: During FY 2000–FY 2001, the NRC will continue to participate in the development of codes and standards to help assure promulgated codes and standards can be endorsed in the regulatory process. Public Law 104-113 requires Federal agencies to review regulations and regulatory guidance to determine which regulations can be replaced by utilization of consensus standards. The outcomes of this effort contribute to the program goal of making NRC activities and decisions more effective, efficient, and realistic by increasing the assurance that published codes and standards can be endorsed in lieu of using NRC developed technical basis products, such as regulations, regulatory guides, or staff review guidance.

Thermal-hydraulic and severe accident code consolidation: During FY 2000–FY 2001, development of a single, consolidated thermal-hydraulic neutronics code capable of analyzing all design and phenomena (currently covered by four different codes) will continue. Also, during FY 2000–FY 2001, consolidation of the capabilities of the four NRC severe-accident codes into a single state-of-the-art code will continue. The aim of the thermal-hydraulic and severe-accident code consolidation is to make the consolidated codes more robust, user friendly, fast running, and modular. The consolidated codes can be used to address emerging issues such as risk-informed decisionmaking, potential burden-reductions, and resolution of technical issues. The outcomes of these research activities relate to potentially increasing the agency's efficiency and effectiveness by eliminating the need to spend efforts in quadruplicate for code improvements, assessment, maintenance, and development of staff to use them.

The fourth program area, "Determining the Regulatory Significance of New Technical Information" primarily supports the NRC performance goal to make NRC activities and decisions more effective, efficient, and realistic. This program area will address the following issues:

Operational data assessment: During FY 2000–FY 2001, periodic assessment of the trends and risk-significance in recent operational data is needed so that safety vulnerabilities can be identified on a timely basis and probabilistic risk analysis (PRA) assumptions can be updated to improve the accuracy and credibility of risk assessments. This will improve the NRC's ability to conduct effective plant safety assessments. These assessments of operational data will provide information on relevant operating experience that can be used to enhance plant inspections of risk-important

systems. In addition, the assessments will be used by the NRC staff to perform technical reviews of proposed license amendments, including risk-informed applications. The assessments will also be used in the development of risk-based performance indicators to support improvements in the new reactor oversight process. Operating events at power reactors will also be reviewed to disclose risk significant interactions, phenomena, and behavior in the design and operation of power reactors that were not previously recognized or analyzed.

Advancements in earth sciences: During FY 2000–FY 2001, research in this area will evaluate advances in understanding seismic issues, advanced instrumentation, and data analysis capabilities in the earth sciences. The results of these activities will be used to assess the impact of new data and interpretations in the earth sciences which result from events such as the Kobe, Japan, and North Ridge, California earthquakes and will provide the technical bases for more realistic analyses, which could reduce costs associated with system modifications. Research in this area will also contribute to a better understanding of loads caused by seismic activity, which affect nuclear plant structures such as reactor containment. The outcomes of this research support the NRC performance goal to make NRC activities and decisions more effective, efficient, and realistic by providing the tools, methods, and data to assure maintenance of safety and to provide opportunities for reducing unnecessary licensee burden.

Advancements in the field of piping integrity: Piping analysis, inspections, maintenance and replacement represent significant operational costs and affect safety. The utilization of revised standards during system modification will significantly affect the performance of piping systems during normal and accident conditions. Licensee burden may be reduced as pipe restraints are removed on the basis of new standards. During FY 2000-FY 2001, the results of this research will provide the technical bases to review piping system integrity to ensure that piping systems perform their intended safety function. The outcomes of this effort contribute to the program goal of making NRC activities and decisions more effective, efficient, and realistic by providing the analysis methods and supporting data needed to evaluate emerging piping issues and new applications of technology.

Effectiveness of as low as is reasonably acceptable (ALARA) programs: The NRC monitors licensee workers' radiation exposure data, assesses the significance of any changes in licensee performance in meeting the objectives of the ALARA program, and disseminates information on the effectiveness of individual licensee programs. During FY 2000 and FY 2001, the NRC will continue to publish the results of this analysis. The collection and publication of this information is an effective tool to ensure that worker doses are kept ALARA. Information on individual exposures is also being collected to support the conduct of epidemiological studies on the health effects due to exposure to radiation once a sufficiently complete database is available.

Validation of current health effects models: Models used by NRC and its licensees to estimate health effects due to 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 will be analyzed to determine the impact of these exposures on the worker's health. During FY 2000 and FY 2001, the results obtained from this research will be published for review by the scientific community. The results of this research will then be used to validate or revise, as needed, the existing health effects models used by NRC and its licensees in accident consequence analysis and other applications.

The fifth program area, "Improving Analytical Tools and Data to Support Sound, Realistic Decisions," primarily supports the NRC performance goal to make NRC activities and decisions more effective, efficient, and realistic. These tools and data can either be used to address safety issues or to reduce unnecessary licensee burden. This program area will address the following issues:

Developing and assessing thermal-hydraulic, fuel behavior, severe accident, and neutronics codes: During FY 2000–FY 2001, the NRC will maintain and improve the usefulness of codes to support analysis of risk-informed initiatives and resolution of thermal-hydraulic issues, severe accident technical issues, and resolution of fuel behavior technical issues. The licensing office will use these codes to effectively interact with applicants and licensees on the complex issues associated with plant performance under normal and accident conditions, to review vendor and licensees' codes, and perform audit calculations. The outcomes of this research relate to potential safety enhancement and licensee burden reduction through the application of more accurate models for predicting plant behavior under accident conditions.

The sixth program area, "Preparing the NRC to Make Timely Future Decisions," supports the NRC performance goal to make NRC activities and decisions more effective, efficient, and realistic. This program area will address the following issues:

Prepare for MOX licensing: Licensing applications to utilize MOX fuel in commercial power plants are anticipated in mid-2000, including the submittal of several topical reports addressing the regulatory and technical issues related to MOX fuel performance, core behavior, thermal-hydraulics and source terms. During FY 2000–FY 2001, research will develop data and codes to support review of licensees' reports in order to make sound regulatory decisions. The outcomes of this research relate to making NRC decisions more effective, efficient, timely, and realistic by capitalizing on experience in Europe with the technical and regulatory issues of using MOX fuel and addressing those unique technical issues associated with weapons-grade MOX fuel in a timely fashion.

Systematic assessment of future changes in regulatory environment: NRC should anticipate future challenges presented by the ever-changing regulatory environment (e.g., new technology that industry is likely to introduce) with sufficient foresight to allow the timely development of needed tools and data necessary to prepare the agency for sound, timely, and realistic decisionmaking. In FY 2000–FY 2001, NRC's research office will take the lead for this issue and appropriately involve both internal and external stakeholders.

The seventh program area, "Developing the Technical Bases to Allow Reductions to Unnecessary Licensee Burden," primarily supports the NRC performance goal to reduce unnecessary regulatory burden. This program area will continue to address several significant issues:

Improve analytical tools for 10 CFR 50.46: During FY 2000–FY 2001, the NRC will perform research to improve modeling of emergency core cooling and to address inherent conservatisms in requirements. The research outcome will enable the staff to assess plant safety margins more realistically and to apply more accurate models for prediction of plant behavior under accident conditions, which will result in reduction of unnecessary burden.

Changing the pressurized thermal shock (PTS) rule and pressure-temperature (P-T) limits for reactor pressure vessels: During FY 2000–FY 2001, the NRC will continue to conduct research to provide a basis for more realistic analysis of pressurized thermal shock. Integrated information from three research disciplines have a high likelihood of substantially reducing unnecessary licensee burden by changing PTS screening criteria in 10 CFR 50.61. This effort will contribute to the NRC program goal of 'reduce unnecessary regulatory burden' by providing the technical basis for what is expected to be a significant reduction in unnecessary burden based on recent research results and advances in analysis methods.

The eighth program area, "Enhancing Public Confidence," supports the NRC performance goal to increase public confidence. To a large extent, public confidence is achieved by being successful at maintaining safety, reducing unnecessary regulatory burden, making realistic decisions that are timely and predictable, and achieving effectiveness and efficiency in our regulatory programs and processes.

During FY 2000–FY 2001, NRC will continue to sponsor the Water Reactor Safety Meeting. This will provide an opportunity for public understanding of its programs and enhance public involvement in NRC's research program.

Reactor Technical Training

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

Nuclear reactor technical training is conducted to ensure that NRC staff possess the requisite knowledge, skill, and abilities and competencies to accomplish the mission 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 (TTC) 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 2001, 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.

Reactor Enforcement Actions

OUTPUT MEASURES				
Output/Baseline	FY 1999 Target	FY 1999 Actual	FY 2000 Target	FY 2001 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.)	90 percent of reactor enforcement cases will average 90 days or less. 100 percent of reactor enforcement cases will average 120 days, or less.[12]	Enforcement case average of 75.2 days for 90 percent of cases. Enforcement case average of 90.6 days for 100 percent of cases.	90 percent of reactor enforcement cases will average 90 days or less. 100 percent of reactor enforcement cases will average 120 days, or less.[12]	90 percent of reactor enforcement cases will average 90 days or less. 100 percent of reactor enforcement cases will average 120 days, or less.[12]

The NRC's 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 notices of violation, civil monetary penalties, and various enforcement orders. The nature and extent of the enforcement action taken by the NRC reflect the seriousness of the violation involved.

Approximately 1,500 enforcement issues are expected to be dispositioned during FY 2001. This reflects implementation of the new reactor oversight process and revised enforcement policy. Of this total, 150-200 actions will be considered for formal issuance of Notices of Violation or other significant enforcement action.

The Commission is revising its enforcement policy to be in alignment with the overall agency reactor oversight process. This projection is based on historical trends as well as projections

[12] The measuring period starts on the latest of the following dates: (1) inspection exit, for non-OI cases, (2) the date of the OI memorandum forwarding the OI investigation to the staff, for OI cases, (3) the date that the Department of Justice 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.

involving the new reactor oversight process. The implementation of the new assessment process and enforcement policy is not expected to reduce the number of noncompliances that must be dispositioned. However, violations of lessor significance will be dispositioned through reliance on licensee corrective action programs rather than through formal enforcement action. A slight increase may occur in the number of noncompliances dispositioned through licensee corrective action programs as those violations will no longer be aggregated into a single enforcement action. Therefore, the Office of Enforcement must continue to provide resources for oversight of these processes.

The NRC also monitors discrimination actions filed with the U.S. Department of Labor under Section 211 of the Energy Reorganization Act and develops enforcement actions where there are properly supported findings of discrimination, either from the Office of Investigations or from the Department of Labor adjudications.

Reactor Investigations

OUTPUT MEASURES				
Output/Baseline	FY 1999 Target	FY 1999 Actual	FY 2000 Target	FY 2001 Target
Timeliness in completing investigations. (FY 1998: Complete cases, on average, in 6.3 months; 7.9 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.	Completed cases, on average, in 6.3 months; 12.6 percent of cases open for more than 12 months due to circumstances outside of NRC's control (Dept. of Justice involvement).	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.

The NRC investigates allegations of wrongdoing by NRC reactor licensees and others within its regulatory jurisdiction. All findings and conclusions that result from investigations are sent to the appropriate program office, the regional office, the Office of Enforcement, and the Office of the General Counsel 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. In FY 2001, 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 exchange of information of mutual interest.

Reactor Legal Advice

The *Office of the General Counsel* (OGC) provides legal advice and assistance to the NRC Staff, including the regions, 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.

Reactor Adjudication

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. ASLBP judges 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. 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.

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NUCLEAR MATERIALS SAFETY

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.[13]

MEASURES	FY 1999 PERFORMANCE
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 license material.	Zero
No more than six[14] events per year that result in significant radiation or hazardous material exposures[15] from the loss or use of source, byproduct, and special nuclear materials.	TBD
No events resulting in releases of radioactive material from civilian use of source, byproduct, or special nuclear materials that case an adverse impact on the environment.[16]	Zero
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.[17]	Zero

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[13] 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.

[14] The non-zero metrics have been developed using statistical methods and event data from NRC and Agreement States, for those years for which voluntary commitments to report the data under comparable reporting requirements were in effect. There are randomnesses in the occurrences of each category of events and the chosen metrics represent about 99% confidence levels, given the available data. Therefore, exceeding a value is not likely to have occurred by chance. It is a significant indicator that the level of safety represented by the historical data has changed and could prompt a reevaluation of the NRC's regulatory activities.

[15] 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 activities in the Materials arena.

[16] 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}. In accordance with the requirements of 10 CFR 95.57.

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

MEASURES	FY 1999 PERFORMANCE
No unauthorized disclosures or compromises of classified information causing damage to national security.[18]	Zero

DESCRIPTION OF STRATEGIC ARENA

The Nuclear Materials Safety strategic arena encompasses NRC efforts to ensure that NRC-regulation aspects of nuclear fuel cycle facilities and nuclear materials activities are handled in a manner that adequately protects public health and safety. The Nuclear Materials Safety arena encompasses more than 20,000 specific and 100,000 general licensees that are regulated by the NRC and 31 Agreement States.[19] This diverse regulated community includes: 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 latter group 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 of 1954, as amended, and the Energy Reorganization Act of 1974, as amended, 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 safeguard issues; operating experience evaluation; incident investigation; threat assessment; emergency response; technical training; and investigation of alleged wrongdoing by licensees, applicants, certificate holders, and contractors. This arena also provides regulatory assistance to the Department of Energy (DOE).

These efforts are conducted primarily by the Office of Nuclear Material Safety and Safeguards, the Office of Nuclear Regulatory Research and the Incident Response Organization staff with the assistance and coordination of the Office of Nuclear Reactor Regulation, Office of Enforcement,

[18] In accordance with the requirements of 10 CFR 95.57.

[19] Under Section 274 of the Atomic Energy Act of 1954, as amended, a State may assume and the NRC discontinue regulatory jurisdiction for certain uses of byproduct, source, and limited quantities of special nuclear materials within the State. The assumption in authority is accomplished through an agreement with the State upon an NRC finding that the State's program is adequate to protect public health and safety, and is compatible with the NRC regulatory program.

Office of Investigations, Office of State Programs, Office of Administration, Office of the Chief Information Officer, Office of Human Resources, Office of the General Counsel, and Atomic Safety and Licensing Board Panel.

The Nuclear Materials Safety strategic arena comprises the following programs: Fuel Facilities Licensing and Inspection; Nuclear Materials Users Licensing and Inspection; State Programs; Materials Safety Research; Materials Incident Response; Materials Technical Training; Materials Enforcement Actions; Materials Investigations; Materials Legal Advice; and Materials Adjudication; and one General Fund program that includes the Tank Waste Remediation System. The contract support funds are allocated for work done by DOE contractors, commercial contractors, small business entities, nonprofit organizations (e.g., universities and foundations), and grantees.

MEASURING RESULTS—PERFORMANCE GOALS

The NRC has established the following performance goal to maintain safety and its measures, metrics, and strategies as well as non-safety performance goals and their strategies that will be used to achieve the performance goals in the FY 2001 Budget Estimates/Performance Plan for measuring results in achieving its nuclear materials safety strategic goal to prevent radiation-related deaths and illnesses, promote the common defense and security, protect the environment in the use of source, byproduct, and special nuclear material. A fuller set of measures and metrics for the non-safety performance goals will be provided in future performance plans.

Performance Goal: Maintain safety, protection of the environment, and the common defense and security.

MEASURES	FY 1999 PERFORMANCE
No more than 356 losses of licensed material.[20]	188
No occurrences of accidental criticality.	Zero.
No more than 19 events pr year resulting in radiation overexposures[21] from radioactive material that exceed applicable regulatory limits.	15
No more than 43 medical events[22] per year.	36
No more than 39 releases per year to the environment of radioactive material from operating facilities that exceed the regulatory limits.[23]	17
No more than five substantiated cases per year of attempted malevolent use of source, byproduct, or special nuclear	2
No breakdowns of physical protection or material control and accounting systems that result in a vulnerability to radiological sabotage, theft, diversion, or unauthorized enrichment of special nuclear material.[24]	Zero

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

[21] Overexposures are those that exceed limits as provided by 10 CFR 20.2203(a)(2) and (3). 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.

[22] Medical events are reported under 10 CFR 35.

[23] Releases for which a 24-hour notification is required under 10 CFR 20.2202(b)(2) and 30 day reporting requirement under 10 CFR 20.2203(a)(3).

[24] We recognize that no defined reporting requirements exist for substantiated breakdown determinations. NRC relies on its safeguards inspection findings and licensee notifications.

The following key strategies will be used to achieve the performance goal of maintaining safety and safeguards:

- *We will 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.*

- *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 radiological 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.*

Performance Goal: Increase public confidence.

The following key strategies will be used to achieve the performance goal of increasing public confidence:

- *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 information in the proper context with respect to the risk of the activity.*

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

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

Performance Goal: Make NRC activities and decisions more effective, efficient, and realistic.

The following key strategies will be used to achieve the performance goal of making NRC activities and decisions more effective, efficient, and realistic:

- *We will continue to improve the regulatory framework to increase our effectiveness, efficiency, and realism.*
- *We will identify, prioritize, and modify processes that allow for the most improvement.*
- *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 continue to pursue a more active role in the regulatory process.*

PERFORMANCE GOAL: Reduce unnecessary regulatory burden on stakeholders.

The following key strategies will be used to achieve the performance goal of reducing regulatory burden on stakeholders:

- *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.*

NUCLEAR MATERIALS SAFETY

The following table depicts the relationship of the Nuclear Materials Safety programs to the performance goals identified above. The required resources are developed based on the programs and functions necessary to implement the strategies. Detailed information on the resources, programs, and their associated output measures appear in the Nuclear Materials Safety arena of the FY 2001 budget request.

FY 2001 NUCLEAR MATERIALS SAFETY PROGRAM LINK TO PERFORMANCE GOALS

LINKS TO PERFORMANCE GOALS	PERFORMANCE GOALS			
FY 2001 PROGRAMS ($57,407K, 396 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 ($13,541K, 89 FTE)	X	X	X	X
Nuclear Materials Users Licensing and Inspection ($25,488K, 190 FTE)	X	X	X	X
State Programs ($3,911K, 34 FTE)	X	X	X	X
Materials Safety Research ($4,135K, 12 FTE)	X	X	X	X
Materials Incident Response ($233K, 2 FTE)	X	X	X	
Materials Technical Training ($1,178K, 2 FTE)	X	X	X	
Materials Enforcement Actions ($1,013K, 9 FTE)	X	X	X	X
Materials Investigations ($1,366K, 11 FTE)	X	X	X	X
Materials Legal Advice ($2,468K, 21 FTE)	X	X	X	X
Materials Adjudication ($1,521K, 10 FTE)	X	X	X	
General Fund-Other Federal Agencies ($2,553K, 15 FTE)	X	X	X	X

BUDGET AUTHORITY BY FUNCTION AND BY PROGRAM
FULL-TIME EQUIVALENT EMPLOYMENT BY PROGRAM

(Dollar amounts in tables represent thousands of dollars ($K). In text, whole dollar amounts are used. Staff numbers represent full-time equivalents (FTEs).)

Total FY 2001 Estimate $57,407,000

Summary	FY 1999 Enacted	FY 2000 Estimate	FY 2001 Estimate	
			Request	Change from FY 2000
Budget Authority by Function ($K)				
Salaries and Benefits	38,546	39,864	42,385	2,521
Contract Support	10,959	11,064	12,656	1,592
Travel	2,442	2,383	2,366	-17
Total	51,947	53,311	57,407	4,096
Budget Authority by Program ($K)				
Fuel Facilities Licensing and Inspection	12,528	12,259	13,541	1,282
Nuclear Materials Users Licensing and Inspection	21,513	24,729	25,488	759
State Programs	3,544	3,861	3,911	50
Materials Safety Research	4,448	2,889	4,135	1,246
Materials Incident Response	207	221	233	12
Materials Technical Training	1,127	1,081	1,178	97
Materials Enforcement Actions	898	962	1,013	51
Materials Investigations	1,392	1,301	1,366	65
Materials Legal Advice	1,884	2,235	2,468	233
Materials Adjudication	1,206	1,383	1,521	138
General Fund - Other Federal Agencies	3,200	2,390	2,553	163
Total	51,947	53,311	57,407	4,096

NUCLEAR MATERIALS SAFETY

Summary	FY 1999 Enacted	FY 2000 Estimate	FY 2001 Estimate	
			Request	Change from FY 2000
Full-Time Equivalent Employment by Program				
Fuel Facilities Licensing and Inspection	100	85	89	4
Nuclear Materials Users Licensing and Inspection	181	193	191	-2
State Programs	34	35	34	-1
Materials Safety Research	12	12	12	0
Materials Incident Response	2	2	2	0
Materials Technical Training	2	2	2	0
Materials Enforcement Actions	9	9	9	0
Materials Investigations	12	11	11	0
Materials Legal Advice	18	20	21	1
Materials Adjudication	10	10	10	0
General Fund - Other Federal Agencies	27	15	15	0
Total	407	394	396	2

EXPLANATION OF RESOURCE CHANGES BY PROGRAM

Fuel Facilities Licensing and Inspection. Resources increase in FY 2001 to continue to review the license application for a mixed oxide (MOX) fuel fabrication facility, to support environmental assessments for fuel facility license renewals, and to continue the review of an application for a high-enriched uranium downblending facility for specialized uranium fuels, while decreasing inspection activity at fuel facilities to reflect a more efficient and streamlined inspection process that does not diminish NRC's safety oversight.

Nuclear Materials Users Licensing and Inspection. The net resource increase in FY 2001 is a result of the initiation of the orphan source program to address situations in which non-licensees find themselves in possession of radioactive sources they did not seek to possess and increased personnel costs. These increase is offset by decreases associated with the decreasing number of nuclear materials users licenses as Oklahoma becomes an Agreement State and assumes responsibility for the materials licensees within the State, and to efforts to improve the efficiency of the licensing and inspection process.

State Programs. There are no significant resource changes in FY 2001.

Materials Safety Research. The increase in the Materials Safety Research program in FY 2001 is due to increased research to evaluate criticality data for higher enriched fuel and to enable less conservative licensing actions by allowing for the use of burnup credit for transportation.

Materials Incident Response. There are no significant resource changes in FY 2001.

Materials Technical Training. There are no significant resource changes in FY 2001.

Materials Enforcement Actions. The resource increase in FY 2001 reflects increased personnel costs.

Materials Investigations. The resource increase in FY 2001 reflects increased personnel costs.

Materials Legal Advice. The resource increase in FY 2001 is due to an increase in enforcement and materials licensing reviews and hearings associated with independent spent fuel storage installations and with the MOX fuel fabrication facility.

Materials Adjudication. The resource increase in FY 2001 is primarily based upon an increase in large-scale adjudicatory reviews for independent spent fuel storage installations and for the MOX fuel fabrication facility.

General Fund. The resource increase in FY 2001 is to ensure the timely review of documents to support NRC licensing oversight of the Hanford Tank Waste Remediation System.

JUSTIFICATION OF PROGRAM REQUESTS

Fuel Facilities Licensing and Inspection

OUTPUT MEASURES				
Output/Baseline	FY 1999 Target	FY 1999 Actual	FY 2000 Target	FY 2001 Target
Timeliness of safety and safeguards inspections. (FY 1998: 100 percent completed on time.)	Complete 90 percent of the core safety and safeguards inspections scheduled in the Fuel Cycle Master Inspection Plan on time.	98 percent completed on time.	Complete 90 percent of the core safety and safeguards inspections scheduled in the Fuel Cycle Master Inspection Plan on time.	Complete 90 percent of the core safety and safeguards inspections scheduled in the Fuel Cycle Master Inspection Plan on time.

The NRC licenses and inspects all commercial nuclear fuel facilities involved in the processing and fabrication of uranium ore into reactor fuel (uranium conversion) 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 approximately 25 fuel 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.

The NRC conducts its Fuel Facilities Licensing program in a manner that will continue to improve the effectiveness and efficiency of the licensing process. In addition to completing the review and evaluation of approximately 100 license applications (new licenses, amendments, renewals, and reviews) for nuclear fuel cycle facilities each year during FY 2000–FY 2001, the NRC also expects to receive a major amendment for a high-enriched uranium downblending facility for specialized uranium fuels and an associated oxide conversion facility. To achieve its timeliness goal for safety-related and safeguards-related licensing actions during FY 2000–FY 2001, the NRC plans to complete the review of 50 percent of the safety-related and safeguards-related licensing actions within 180 days.

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. In FY 2000, the NRC will complete its revision of 10 CFR Part 70 to upgrade the fuel cycle facility program.

NUCLEAR MATERIALS SAFETY

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 multi-lateral cooperative international agreements. In addition, the NRC will work with the IAEA, the European Atomic Energy Community (EURATOM), and other countries to track and report on the transfer of nuclear materials.

The NRC conducts routinely scheduled core safety and safeguards inspections of approximately 10 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 also conducts safeguards inspections to ensure that licensees comply with NRC requirements pertaining to the control and accounting of special nuclear materials, the physical protection of special nuclear material to prevent theft or diversion, contingency plans for responding to threat situations, and training of armed response personnel. In addition, the NRC also ensures that safeguards for weapons-usable material are also maintained at a level commensurate with safeguards applied to similar materials by the Department of Energy. In keeping with its goal to conduct timely risk-informed and performance-based core safety and safeguards inspections at these facilities, NRC established completion of 90 percent of the core safety-related and safeguards-related inspections in accordance with the schedules in the Fuel Cycle Master Inspection Plan as the target for FY 2000 and FY 2001.

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.

The NRC conducted the first recertification of the two gaseous diffusion plants in FY 1999, in accordance with the United States Enrichment Corporation Privatization Act which requires that the NRC recertify these plants at least once every 5 years, to ensure that they are in compliance with NRC regulations and that the United States Enrichment Corporation's operation of these plants provides adequate protection of public health and safety, the workers, the environment, and the common defense and security. The NRC will continue to issue reports to Congress at the time of recertification on the status and performance of the plants and indicate whether these plants are

operating in compliance with NRC's standards. 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 core safety and safeguards inspections of 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. In addition, safeguards inspections ensure that licensees comply with NRC requirements pertaining to the control and accounting of special nuclear materials, the physical protection of special nuclear material to detect attempts of theft or diversion, and response procedures for responding to threat situations. The NRC's goal is to conduct timely, risk-informed and performance-based core safety inspections at these facilities. The target for FY 2000 and FY 2001 is to complete 90 percent of the core safety-related and safeguards-related inspections in accordance with the schedules set forth in the Fuel Cycle Master Inspection Plan.

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. In FY 2000, to prepare to review the application for the design, construction, and operation of the MOX fuel fabrication facility, the NRC will develop a standard review plan and supporting guidance documents, and conduct environmental reviews and analyses. In FY 2001, the NRC will initiate review of the license application from the DOE contractor responsible for the design, construction, and operation of the MOX fuel fabrication facility. FY 2001 activities will include communications with the applicant to explain expectations, receipt of an application for construction approval, an acceptance review, notification to the applicant of acceptability/unacceptability, and formulation of a Safety Evaluation Report (by discipline) to support construction.

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.

Nuclear Materials Users Licensing and Inspection

OUTPUT MEASURES				
Output/Baseline	FY 1999 Target	FY 1999 Actual	FY 2000 Target	FY 2001 Target
Timeliness of reviews of applications for new materials licenses, license amendments, license renewals, and sealed source and device designs. (FY 1998: Completed 82 percent of reviews [new applications and amendments] within 90 days. Completed 94 percent of renewals and reviews [sealed source and device] within 180 days.)	Complete 80 percent of the reviews for new applications, and amendments, within 90 days. For license renewals and sealed source and device reviews received after October 1, 1997, complete 80 percent of the reviews for license renewals and sealed source and device reviews within 180 days.	Completed 86 percent of reviews [new applications and amendments] within 90 days. Completed 66 percent of renewals and reviews [sealed source and device] within 180 days. Redirected focus to completion of cases over 180 days old; successfully eliminated these old cases.	Complete 80 percent of the reviews for new applications, and amendments, within 90 days. For license renewals and sealed source and device reviews received after October 1, 1997, complete 80 percent of the reviews for license renewals and sealed source and device reviews within 180 days.	Complete 80 percent of the reviews for new applications, and amendments, within 90 days. For license renewals and sealed source and device reviews received after October 1, 1997, complete 80 percent of the reviews for license renewals and sealed source and device reviews within 180 days.
Timeliness of safety inspections of materials licensees. (FY 1998: Less than 1 percent overdue.)	Complete core inspections with less than 10 percent overdue as defined in Inspection Manual Chapter 2800.	Completed core inspections with less than 1 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.

Currently, the NRC licenses and inspects activities related to approximately 5,300 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. The number of NRC licenses is expected to decrease to about 5,100 by the end of FY 2001 as Oklahoma becomes an Agreement State.

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 3,100 applications for new licenses, license amendments, license renewals, and sealed source and device designs for use of radioactive material in FY 2000, and 3,800 applications in FY 2001. It

is NRC's goal to complete 80 percent of the reviews for new applications, and amendments within 90 days. For renewals and sealed source and device reviews received after October 1, 1997, the goal is to complete 80 percent of the reviews for license renewals and sealed source and device reviews within 180 days. During FY 2000, 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 2000 as a result of guidance consolidation and implementation of the proposed new process for streamlining materials licensing. In FY 2001, additional 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 between 1,500 and 1,600 routine health and safety inspections and closeout inspections of materials licensees in FY 2000, and approximately 1,500 inspections in FY 2001. If conditions are noted that could cause unnecessary exposures or releases, NRC will take prompt and appropriate enforcement actions. As part of its materials inspection program, NRC conducts both core and non-core inspections. Core inspections encompass (1) all initial inspections (the first inspection after a license is issued to a licensee) and (2) all routine inspections of priority 1, 2, or 3 licensees. Non-core inspections include all other types of materials inspections. 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. The NRC's goal is to complete core inspections of materials licensees to ensure that fewer than 10 percent are overdue, as defined in NRC's Inspection Manual Chapter 2800. In FY 2000, the NRC will 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 will expand in FY 2001 to include more followups of non-responding general licensee registrants.

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 risk analysis/performance-based group to implement a risk-informed, performance-based approach for nuclear materials and nuclear waste programs. Each year during FY 2000–FY 2001, the NRC expects to review 6 to 8 petitions for materials rulemaking, develop and complete 12 to 15 rulemaking actions, and develop Office of Management and Budget (OMB) Clearance packages for 5 to 8 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 semi-annual rulemaking 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 2000–FY 2001, the NRC's Regulatory Product Design Center (RPDC), which serves as a testing laboratory for the creation and validation of new systems and new operational methodologies, will continue to support and facilitate analysis, evaluation and redesign of programs and business systems, and will facilitate creating, revising, and consolidating regulatory requirements and guidance documents.

To determine the root causes of certain incidents and events and to identify those safety concerns that may warrant regulatory action and make this information available to licensees and the public, the NRC analyzes and evaluates operational experience from NRC licensees and Agreement States to identify generic issues resulting from incidents and events. This includes operational events, such as overexposure 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.

OUTPUT MEASURES				
Output/Baseline	FY 1999 Target	FY 1999 Actual	FY 2000 Target	FY 2001 Target
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.)	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.	Materials event information entered into NMED within 2 working days greater than 90 percent of the time. Three out of four quarters NMED records were updated within 2 working weeks greater than 90 percent of the time (3rd quarter = 80 percent).	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.	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, and NMED records will be updated within 2 working weeks of the date of receipt 90 percent of the time.

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

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. The term "orphan source" refers to discrete radioactive material that is not under the control of a licensee and that requires removal to protect public health and safety from a radiological threat. The NRC responds to orphan source incidents through reactive inspections and investigations. 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.

State Programs

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 31 Agreement States. This number is expected to grow to 32 by the end of FY 2001.

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). 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. In FY 2001, eight Agreement State and one or two NRC regional IMPEP reviews are scheduled.

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, 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.

Materials Safety Research

OUTPUT MEASURES				
Output/Baseline	FY 1999 Target	FY 1999 Actual	FY 2000 Target	FY 2001 Target
Technical bases for safety and regulatory guidance and decisionmaking.	Issue 6 research products that respond to high and medium priority needs from the Commission and NRC's licensing organizations. Develop, maintain, or improve one engineering code/model for use by RES and licensing organizations for regulatory analyses/decisionmaking.	Completed 6 research products. Maintained 2 codes.	Issue 5 research products that respond to high and medium priority needs from the Commission and NRC's licensing organizations.	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.

NRC's research program addresses materials criticality and radiation protection issues. It also supports development of a technical basis for renewals of licenses and certificates of compliance for dry storage systems for spent nuclear fuel and waste at independent spent fuel storage installation (ISFSI) sites. Research also is being conducted to provide the technical basis to grant credit for fuel burnup in the licensing of spent fuel transportation casks. Materials research was previously comprised of three separate programs: Materials Criticality Safety; Materials Radiation Dosimetry and Health Effects Research; and Dry Cask Research. The structure of the Materials Research

program has been revised to better focus on the outcomes of the research. Consequently, these programs have now been combined into the Materials Safety Research program, which is comprised of three major program areas. These program areas are: Develop the Technical Bases to Address Identified or Potential Safety Issues, Determine the Regulatory Significance of New Technical Information, and Develop the Technical Bases to Allow Reductions to Unnecessary Licensee Burden.

The first program area, "Developing the Technical Bases to Address Identified or Potential Safety Issues," primarily supports the NRC performance goal to maintain safety. To maintain safety at nuclear materials licensees, some technical issues associated with new requirements, operational events, and licensing decisions require new information in order to resolve them. This program will address the following issue:

Long term storage of spent fuel: Licensing renewals of dry storage systems for spent nuclear fuels and high-level radioactive waste would require the development of a technical basis for ensuring continued safe performance under the expected service conditions, 20 to 100 years. Verification of past performance of selected components of these systems will be required as part of developing the technical basis for licensing renewals. During FY 2000–FY 2001, work will continue in the areas of material behavior of spent nuclear fuel and safety-related components. Also, development will continue on appropriate models and analysis methods to evaluate the nuclide inventories and source characteristics of high-burnup fuels, perform destructive and nondestructive examinations on full-length rods from ISFSI and compare results to segments from a controlled environment to determine if there are any differences between the conditions of the two cladding. The results of this research will be used to provide the licensing office with technical reports to serve as the basis for confirming or revising existing licensing issues for ISFSI storage of high-burnup fuel. The outcomes of this research relate to potential safety enhancement through the application of more accurate models for predicting the material behavior of spent fuel in dry cask storage and transportation systems.

The second program area, "Determining the Regulatory Significance of New Technical Information," primarily supports the NRC performance goal to make NRC activities and decisions more effective, efficient, and realistic. New information having potential implications for Nuclear Materials Safety emanates from many sources on a continuing basis, i.e., new technology, new research results, both nationally and internationally, and new operational data. The program will address the following issue:

Realistic risk impacts from radiation exposure: Current regulatory standards are based on risk estimates that assume the effects due to radiation exposure are linear. These estimates are primarily based on assumptions for health effects at low doses, as data on health effects at low doses do not currently exist. Two sources of information are typically used to estimate health effects,

epidemiological studies and molecular/cellular studies. New information continues to accumulate in both areas. This research will be used to re-evaluate the current health effects models to reduce modeling uncertainty in NRC and licensee estimates of adverse health effects due to long-term exposure to low levels of radiation. During FY 2000 and FY 2001, results of these research efforts will support ongoing NRC rulemakings through the revision of existing health effects models.

The third program area, "Developing the Technical Bases to Allow Reductions to Unnecessary Licensee Burden," primarily supports the NRC performance goal to reduce unnecessary regulatory burden. The NRC research program will identify areas in which requirements may be reduced while maintaining acceptable safety levels. The following issues will be addressed by this program area:

Providing burnup credit to reduce regulatory burden: Spent nuclear fuel (SNF) packages must meet several specific criticality safety requirements, one of which is that current criticality calculations assume the fresh unirradiated fuels. This represents a significant conservatism in criticality analysis. In irradiated fuel assemblies the reactivity of the burned fuel is reduced, hence the desire for burnup credit. During FY 2000–FY 2001, the NRC will continue to develop the technical basis for licensing spent fuel transportation packages and to develop burnup credit methodology that will be validated using experimental data and 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 spent fuel transportation packages. The outcomes of this research contribute to licensee burden reduction through the application of more accurate models for criticality safety calculations of spent nuclear fuel casks.

Seismic criteria for independent spent fuel storage installation: During FY 2000–FY 2001, this research will provide data and analytical capabilities to the licensing office to independently confirm and verify seismic stability analyses (tipping and overturning) of spent fuel storage cask systems. Long-term storage of spent fuel and high-level radioactive waste in dry casks and at ISFSI sites will be necessary 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. The results of this program will also provide the technical support to the licensing office in their revision of regulations and regulatory guidance pertaining to ISFSIs. The outcomes of this research support the NRC performance goal to reduce unnecessary regulatory burden by developing criteria specifically tailored to ISFSIs.

Materials Incident Response

OUTPUT MEASURES				
Output/Baseline	FY 1999 Target	FY 1999 Actual	FY 2000 Target	FY 2001 Target
Emergency Response Performance Index.	90 percent.	99.5 percent.	90 percent.	90 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 90 percent, management will determine what is contributing most to the decline and conduct appropriate corrective measures on the basis of this review.				

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.

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 2001, independent reviews will be conducted for actions assigned from previous IITs.

During FY 2001, the emergency response program will continue to be updated based on lessons learned. The on-call position of response coordination team member will be continuously staffed to initiate the callout process when the NRC Headquarters Operations Center (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 while maintaining its role in the principal Federal response plans (Federal Response Plan, Federal Radiological Emergency Response Plan, and National Contingency Plan). The 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 way possible.

In FY 2001, the NRC staff will 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 2000.

During FY 2001, 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.

Materials Technical Training

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

Nuclear materials technical training is conducted to ensure that NRC staff possess the requisite knowledge, skills, and abilities and competencies to accomplish the mission 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 (TTC) 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, multi-phase 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 2001, 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.

Materials Enforcement Actions

OUTPUT MEASURES				
Output/Baseline	FY 1999 Target	FY 1999 Actual	FY 2000 Target	FY 2001 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.)	90 percent of materials enforcement cases will average 90 days or less. 100 percent of materials enforcement cases will average 120 days or less.[25]	Enforcement case average of 75.2 days for 90 percent of cases. Enforcement case average of 90.6 days for 100 percent of cases.	90 percent of materials enforcement cases will average 90 days or less. 100 percent of materials enforcement cases will average 120 days or less.[25]	90 percent of materials enforcement cases will average 90 days or less. 100 percent of materials enforcement cases will average 120 days or less.[25]

The NRC's 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 notices of violation, civil monetary penalties, and various enforcement orders. The nature and extent of the enforcement action taken by the NRC reflect the seriousness of the violation involved.

In FY 2001, the number of materials enforcement actions is expected to remain relatively constant. Of the total, approximately 100-150 materials enforcement actions 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 assumption is partially based on historical data reflecting recent experience and ongoing efforts to adopt a more risk-oriented enforcement approach in the materials arena.

The NRC also monitors discrimination actions filed with the U.S. Department of Labor under Section 211 of the Energy Reorganization Act and develops enforcement actions for properly supported findings of discrimination, either from the Office of Investigations or from the Department of Labor adjudications.

[25] The measuring period starts on the latest of the following dates: (1) inspection exit, for non-Office of Investigation (OI) cases, (2) the date of the OI memorandum forwarding the OI investigation to the staff, for OI cases, (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.

Materials Investigations

OUTPUT MEASURES				
Output/Baseline	FY 1999 Target	FY 1999 Actual	FY 2000 Target	FY 2001 Target
Timeliness in completing investigations. (FY 1998: Completed cases, on average, in 6.3 months. 7.8 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 care inventory for more than 12 months, at 9 percent or less.	Completed cases, on average, in 6.3 months. 12.6 percent of cases open for more than 12 months due to circumstances outside of NRC's control (Dept. of Justice involvement).	Complete cases, on average, in 9 months or less. Maintain the average number of cases within the active care 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 care inventory for more than 12 months, at 9 percent or less.

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 the appropriate program office, the regional office, the Office of Enforcement, and the Office of the General Counsel to review the issues involved and to determine 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. In FY 2001, the Office of Investigations anticipates investigating an inventory of approximately 60-90 materials-related cases. In addition to managing its own caseload, the NRC works closely with other investigative agencies and organizations to ensure the timely exchange of information of mutual interest.

Materials Legal Advice

The *Office of the General Counsel* (OGC) provides legal advice and assistance to the Office of Nuclear Materials Safety and Safeguards (NMSS) and the Commission with respect to all matters related to the regulation of nuclear materials and the storage of spent fuel. OGC's legal support will include 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 NMSS or the regional offices including legal review of licenses, amendments, certificates, environmental documents and inspection reports, enforcement, and any contractual matters that may arise in performing these activities. OGC will also provide legal analyses and interpretations of regulations, statutes, and cases relevant to materials and spent fuel storage activities; continue to represent the NRC staff in adjudications arising from proposed licensing and enforcement actions and represent the Commission in lawsuits arising from adjudicatory and rulemaking decisions

relating to materials and spent fuel storage; and provide legal advice and assistance for any rulemaking activities in the materials area.

In FY 2001, legal reviews and hearings are expected to increase to address the licensing of ISFSIs and the MOX fuel fabrication facility.

Advisory Committee on the Medical Uses of Isotopes

The NRC receives independent advice from the *Advisory Committee on the Medical Uses of Isotopes (ACMUI)*. The ACMUI considers medical questions referred to it by the NRC staff and gives expert opinions on the medical uses of radioisotopes. The committee also advises the NRC staff, as required, on matters of policy.

Materials Adjudication

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. ASLBP judges also preside over materials enforcement and decommissioning cases.

Tank Waste Remediation System

During FY 2000–FY 2001, NRC will continue to support the DOE Tank Waste Remediation System (TWRS) at Richland, Washington. DOE initiated this effort in 1996 to demonstrate technologies for solidifying highly radioactive tank waste at the Hanford site through the design of a pilot-scale facility. The NRC is participating in this effort to acquire sufficient knowledge and understanding of the Hanford tank waste and the processes, technology, and hazards to assist DOE in performing technical reviews in a manner consistent with NRC's regulatory approach. To assist in this effort, the NRC onsite representative will continue to interface with DOE and to provide NRC coordination and support. In FY 2001, the NRC staff will continue to support DOE on the TWRS in accordance with the established licensing and oversight goals reached with DOE at that time. DOE has made significant changes to its approach to this project in the past year. These changes have significant implications with respect to the timing and feasibility of any potential NRC licensing of the waste treatment plant.

NUCLEAR WASTE SAFETY

NUCLEAR WASTE SAFETY

STRATEGIC GOAL

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.

MEASURES	FY 1999 PERFORMANCE
No deaths resulting from acute radiation exposures from radioactive waste.	Zero
No events resulting in significant radiation exposures.[26]	Zero
No releases of radioactive waste causing an adverse impact on the environment.[27]	Zero
No losses, thefts, diversions, or radiological sabotages[28] of special nuclear material or radioactive waste.	Zero

DESCRIPTION OF STRATEGIC ARENA

5

The Nuclear Waste Safety strategic arena encompasses the Nuclear Regulatory Commission's (NRC) regulatory activities associated with uranium recovery, decommissioning, storage of spent nuclear fuel, transportation of radioactive materials, and disposal of radioactive wastes. Nuclear waste is a byproduct of the use of radioactive materials. Such waste is produced by nuclear reactors that generate electric power, as well as fuel processing plants, uranium recovery operations, and institutions such as hospitals and research facilities. It also results from decommissioning nuclear facilities that are permanently shut down. The strategy for disposing of these wastes largely depends on the potential hazard and the time period over which this hazard will exist. The objective of such disposal is to isolate the wastes from humans and the environment during the period of greatest hazard, and to ensure that potential releases will not result in adverse impacts to public health and safety and the environment.

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[26] 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.

[27] 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 A criteria 1.B.1 {normally 5,000 times Table 2 (air and water) of Appendix B, Part 20}.

[28] In accordance with Appendix G to 10 CFR 73 and 10 CFR 74.11(a).

High-level radioactive waste results primarily from the fuel used by reactors to produce energy. Low-level radioactive waste results from reactor operations, and from medical, academic, industrial, and other commercial uses, and generally contains relatively limited concentrations of radioactivity. Wastes resulting from the extraction of uranium from ore are also addressed in this strategic arena.

The NRC has regulatory oversight for the transportation and long-term storage and disposal of high-level waste (HLW), including certifying spent fuel storage casks and transportation packages. Our high-level waste 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 high-level waste disposal, with 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. The NWPA also lays out a process for siting and developing long-term storage of high-level radioactive waste and spent fuel in one or more monitored retrievable storage facilities. No site has been selected under this process, and Congress is considering legislation that would amend existing legislation on interim storage.

NRC regulatory and oversight activities also address decommissioning, which involves safely removing a facility from service and reducing residual radioactivity to a level that permits the property to be released. This action is to be taken by a licensee before termination of the license. Some power reactor licensees have recently decided to shut down their facilities prematurely, that is, before the expiration of the current operating licenses (e.g., Haddam Neck, Maine Yankee, Zion). These unexpected shutdowns have resulted in additional staff efforts in the areas of decommissioning inspection and licensing. Staff efforts in the licensing area include processing license amendments and exemptions that reduce regulatory requirements to correspond to the reduced risk posed by the permanently shutdown plants. In some cases, non-licensed facilities may also be required to reduce or stabilize contamination before sites are released. Even though these sites are non-licensees, the same regulatory controls are placed on these sites as licensed sites and are inspected by NRC staff to ensure compliance with existing regulation. This activity comprises NRC's integrated regulation of the decontamination and decommissioning of facilities and sites associated with NRC-licensed activities, including associated research, rulemaking efforts, and the technical interface with the Environmental Protection Agency (EPA) to resolve issues of mutual interest in accordance with the March 1992 General Memorandum of Understanding.

This strategic arena also includes NRC's regulation of uranium recovery and low-level waste management. The Uranium Mill Tailings Radiation Control Act of 1978, as amended, (UMTRCA) directs the NRC to amend its regulations to conform to the EPA standards for uranium mill tailings reclamation and groundwater cleanup, and to regulate the reclamation of tailings and groundwater cleanup from licensed uranium mills. In addition, UMTRCA also directs NRC to review and concur in the reclamation of uranium mill tailings and groundwater cleanup being conducted by the DOE at abandoned mill sites. These activities require detailed health, safety, and environmental reviews; inspections of licensee procedures and facilities to provide reasonable assurance of safe operations; the development of NRC regulations and guidance to implement the applicable standards; and the site-by-site evaluation of licensee and DOE plans for reclamation of mill tailings and cleanup of groundwater. The NRC's low-level radioactive waste activities associated with the disposal of waste are in accordance with the Low-Level Radioactive Waste Policy Act of 1980, amended in 1985.

Activities in this strategic arena are conducted primarily by the Office of Nuclear Material Safety and Safeguards, the Office of Nuclear Reactor Regulation, and the Office of Nuclear Regulatory Research, with the assistance and coordination of the offices of the General Counsel, the Atomic Safety Licensing Board Panel, the Advisory Committee on Nuclear Waste, the Secretariat, and the Chief Information Officer.

The Nuclear Waste Safety strategic arena is comprised of the following eight programs: one funded from the Nuclear Waste Fund — High-Level Waste Regulation; seven fee-based programs — Spent Fuel Storage and Transportation Licensing and Inspection, Regulation of Low-Level Waste, Regulation of Decommissioning, Radionuclide Transport and Decommissioning Research, Uranium Recovery Licensing and Inspection, Non-High-Level Waste Safety Legal Advice; and Assistance to Formerly Licensed Sites. The contract support funds are allocated for work done primarily by the Center for Nuclear Waste Regulatory Analyses (CNWRA), a Federally Funded Research and Development Center; DOE contractors; commercial contractors; small business entities; nonprofit organizations (e.g., universities and foundations); and grantees.

MEASURING RESULTS — PERFORMANCE GOALS

The NRC has established the following performance goal to maintain safety and its measures, metrics, and strategies as well as non-safety performance goals and their strategies that will be used to achieve the performance goals in the FY 2001 Budget Estimates/Performance Plan for measuring results in achieving its Nuclear Waste Safety strategic goal to 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. A fuller set of measures and metrics for the non-safety performance goals will be provided in future performance plans.

Performance Goal: Maintain safety, protection of the environment, and the common defense and security

MEASURES	FY 1999 PERFORMANCE
No events resulting in radiation overexposures[29] from radioactive waste that exceed applicable regulatory limits.	Zero
No breakdowns of physical protection that result in a vulnerability to radiological sabotage, theft, diversion, or loss of special nuclear materials or radioactive waste.[30]	Zero
No releases[31] to the environment from operational activities that exceed the regulatory limits.	Zero
No instances where radioactive waste and materials under NRC's regulatory jurisdiction cannot be handled, transported, stored, or disposed of safely.	Zero
No events that occur during NRC regulated operations that cause impacts on the environment that cannot be mitigated within applicable regulatory limits, using methods that are within available licensee resources and are not cost prohibitive.	Zero

The following key strategies will be used to achieve the performance goal of maintaining safety, protecting the environment, and the common defense and security:

[29] Overexposures are those that exceed limits as provided by 10 CFR 20.2203(a)(2) and (3).

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

[31] In addition to radiological releases, this measure also includes chemical releases from NRC regulated activities under the Uranium Mill Tailings Radiation Control Act. Releases for which a 24 hour notification is required under 10 CFR 20.2202(b)(2) and 30 day reporting requirement under 10 CFR 20.2203(a)(3).

- *We will continue developing a regulatory framework to increase our focus in safety including the incremental use of risk-informed and, where appropriate, less prescriptive performance-based 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 consequences.*

- *We will evaluate potential 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 completing a licensing decision within the statutory time period.*

Performance Goal: Increase public confidence.

The following key strategies will be used to achieve the performance goal of increasing public confidence:

- *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 information in the proper context with respect to the risk of the activity.*

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

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

Performance Goal: Make NRC activities and decisions more effective, efficient, and realistic.

The following key strategies will be used to achieve the performance goal of making NRC activities and decisions more effective, efficient, and realistic:

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

- *We will identify, prioritize, or modify processes that allow for the most improvement.*

- *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 continue to pursue a more active role in the regulatory process.*

Performance Goal: Reduce unnecessary regulatory burden on stakeholders.

The following key strategies will be used to achieve the performance goal of reducing regulatory burden on stakeholders:

- *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.*

The following table depicts the relationship of the nuclear waste safety programs to the performance goals identified above. The required resources are developed based on the programs and functions necessary to implement the strategies. Detailed information on the resources, programs, and their associated output measures appear in the Nuclear Waste Safety arena section of the FY 2001 budget request.

FY 2001 NUCLEAR WASTE SAFETY PROGRAM LINK TO PERFORMANCE GOALS

LINKS TO PERFORMANCE GOALS	PERFORMANCE GOALS			
FY 2001 PROGRAMS ($57,837K, 272 FTE)	Maintain Safety and Safeguards	Increase Public Confidence	Make NRC Activities & Decisions More Effective, Efficient, and Realistic	Reduce Unnecessary Regulatory Burden
Regulation of High-Level Waste ($21,600K, 60 FTE)	X	X	X	X
Spent Fuel Storage and Transportation Licensing and Inspection ($11,307K, 66FTE)	X	X	X	X
Regulation of Low-Level Waste ($887K, 7 FTE)	X	X	X	X
Regulation of Decommissioning ($15,147K, 100 FTE)	X	X	X	X
Radionuclide Transport and Decommissioning Research ($4,132K, 15 FTE)	X	X	X	X
Uranium Recovery Licensing & Inspection ($2,654K, 20 FTE)	X	X	X	X
Non-High-Level Waste Safety Legal Advice ($460K, 4 FTE)	X	X	X	X
Assistance to Formerly Licensed Sites ($1,650K, 0 FTE)	X	X	X	X

BUDGET AUTHORITY BY FUNCTION AND BY PROGRAM
FULL-TIME EQUIVALENT EMPLOYMENT BY PROGRAM

(Dollar amounts in tables represent thousands of dollars ($K). In text, whole dollar amounts are used. Staff numbers represent full-time equivalents (FTEs).)

Total FY 2001 Estimate $57,837,000

Summary	FY 1999 Enacted	FY 2000 Estimate	FY 2001 Estimate	
			Request	Change from FY 2000
Budget Authority by Function ($K)				
Salaries and Benefits	24,853	27,348	29,896	2,548
Contract Support	22,474	24,155	26,977	2,822
Travel, Fee-based	1,041	913	964	51
Total	48,368	52,416	57,837	5,421
Budget Authority by Program ($K)				
Regulation of High-Level Waste	17,000	19,150	21,600	2,450
Spent Fuel Storage and Transportation Licensing and Inspection	10,098	10,558	11,307	749
Regulation of Low-Level Waste	1,017	732	887	155
Regulation of Decommissioning	12,632	14,823	15,147	324
Radionuclide Transport and Decommissioning Research	4,658	4,200	4,132	-68
Uranium Recovery Licensing and Inspection	2,540	2,516	2,654	138
Non-High-Level Waste Safety Legal Advice	423	437	460	23
Assistance to Agreement States for Formerly Licensed Sites	0	0	1,650	1,650
Total	48,368	52,416	57,837	5,421

Summary	FY 1999 Enacted	FY 2000 Estimate	FY 2001 Estimate	
			Request	Change from FY 2000
Full-Time Equivalent Employment by Program				
Regulation of High-Level Waste	50	53	60	7
Spent Fuel Storage and Transportation Licensing and Inspection	64	67	66	-1
Regulation of Low-Level Waste	8	7	7	0
Regulation of Decommissioning	92	100	100	0
Radionuclide Transport and Decommissioning Research	17	14	15	1
Uranium Recovery Licensing and Inspection	23	22	20	-2
Non-High-Level Waste Safety Legal Advice	4	4	4	0
Assistance to Agreement States for Formerly Licensed Sites	0	0	0	0
Total	258	267	272	5

EXPLANATION OF RESOURCE CHANGES BY PROGRAM

High-Level Waste Regulation. The major FY 2001 increase is for oversight and management of the Licensing Support Network (LSN). In addition, resources increase to continue development of the Yucca Mountain Review Plan which will provide guidance to DOE regarding the content of its Yucca Mountain Repository license application, and to the NRC staff for reviewing the license application when it is received. The increase will also enable the NRC to conduct audits of DOE's quality assurance program and to conduct new public outreach activities in an effort to increase stakeholder confidence in NRC's High-Level Waste Program.

Spent Fuel Storage and Transportation Licensing and Inspection. The net resource increase in FY 2001 will enable NRC to begin the safety review of the Owl Creek Energy Project application for a private independent spent fuel storage installation (ISFSI) in Wyoming and to conduct spent fuel licensing reviews. The increase in contract support is offset slightly by a decrease in staffing to reflect an anticipated decrease in the number of requests for non-spent fuel transportation case reviews.

Regulation of Low-Level Waste. Resources increase in FY 2001 to support on-site disposal reviews.

Regulation of Decommissioning. Resources increase in FY 2001 to conduct environmental assessments and environmental impact reviews.

Radionuclide Transport and Decommissioning Research. Resources decrease due to the elimination of work to investigate the contribution of colloidal transport of radionuclides to dose calculations associated with migration of environmental contaminants through soils and rock formations. The decrease is partially offset by an increase to support increased efforts on monitoring strategies and measurement techniques.

Uranium Recovery Licensing and Inspection. Resources increase in FY 2001 for uranium recovery licensing reviews.

Non-High-Level Waste Safety Legal Advice. There are no significant resource changes in FY 2001.

Assistance to Formerly Licensed Sites. Resources increase to initiate a grant or cooperative agreement program to assist the Agreement States for work already completed and for future work associated 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.

JUSTIFICATION OF PROGRAM REQUESTS

High-Level Waste (HLW) Regulation

OUTPUT MEASURES				
Output/Baseline	FY 1999 Target	FY 1999 Actual	FY 2000 Target	FY 2001Target
Resolve key technical issues (KTI) subissues. (FY 1998: No output data available.)	Resolve at least 5 of the KTI subissues targeted at the staff level.	Staff resolved 5 of the KTI subissues targeted.	Resolve at least 5 of the KTI subissues targeted at the staff level.	Continue to resolve the key technical issues at the staff level.
Development of the Yucca Mountain Review Plan (YMRP). (FY 1998: Not applicable.)	Develop an initial Yucca Mountain Review Plan format and content.	Completed on 5/26/99.	Publish a draft YMRP.	Revise YMRP based on public comments.
Establish a site-specific, performance-based regulation applicable to the proposed repository at Yucca Mountain. (FY 1998: Not applicable.)	Publish a proposed site-specific, performance-based regulation applicable to the proposed repository at Yucca Mountain.	The proposed regulation was published on 2/22/99.	Publish a final site-specific, performance-based regulation applicable to the proposed repository at Yucca Mountain.	Conform Part 63 to EPA's site specific environmental protection standard.
Comment on DOE's program. (FY 1998: Not applicable.)	Comment on DOE's Viability Assessment.	FY 1999: Provided comments to DOE on the VA on 6/2/99.	Comment on DOE's draft environmental impact statement.	Provide DOE with preliminary site sufficiency comments.
Stakeholders will have increased confidence in NRC's repository program.	This output measure was not explicitly stated as a measure of performance for FY 1999.	Not applicable.	To be determined.	To be determined.

OUTPUT MEASURES				
Output/Baseline	FY 1999 Target	FY 1999 Actual	FY 2000 Target	FY 2001Target
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.	Not applicable.	Major milestones that are needed to evaluate and determine whether DOE's repository license application 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 repository license application meets NRC's repository performance standard will be met within 90 days of each of their due dates.
The burden for achieving NRC's repository performance standard will be as low as reasonable with minimal delay.	This output measure was not explicitly stated as a measure of performance for FY 1999.	Not applicable.	To be determined.	To be determined.

The NRC's HLW licensing program is conducted in accordance with the NWPA, as amended, and the Energy Policy Act of 1992 (EnPA). 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. 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 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 for a geologic repository at Yucca Mountain, Nevada, complies with the applicable regulatory standards.

The NRC High-Level Waste program was strategically realigned during FY 1996–FY 1997. This realignment focuses all HLW work on a set of 10 key technical issues (KTIs) and their component subissues, that address the technical concerns of greatest potential effect on post-closure repository performance. This program realignment has: (1) significantly improved the

focus of the HLW program, (2) presented opportunities for substantial cost savings to the overall program, and (3) provided opportunities to reduce the schedule risk associated with the licensing process. Additional efficiencies have been achieved by relying on staff expertise and experience where previous regulatory precedent exists (e.g., emergency plans, safeguards and security, and compliance with 10 CFR Part 20 during pre-closure operations of the repository).

During FY 1999, NRC re-evaluated the program again using a contractor-assisted self-assessment process to sharpen the program's goals, measures, targets, and planned accomplishments. As a result, the NRC's HLW program now is focused on three planned accomplishments: HLW Repository Yucca Mountain Specific Regulatory Framework, HLW Repository Pre-Licensing Issue Resolution, and HLW Licensing Application (LA) activities. During FY 2000–FY 2001, major changes will take place in the program as the program progresses from the pre-licensing phase into the LA phase. Details concerning achievement of these planned accomplishments are delineated in subsequent sections. These planned accomplishments have been defined in such a way so as to ensure that the foregoing performance goals of safety and environmental protection, stakeholder confidence in NRC, improving efficiency and effectiveness, and regulatory burden are met.

One of NRC's new performance goals is that stakeholders (i.e., DOE, the Congress, EPA, technical groups, the nuclear industry, Nevada citizens and officials, Indian tribes, and other affected citizens) have increased confidence in NRC's HLW regulatory program. Increased stakeholder confidence means that NRC's regulatory positions will be regarded as clear, timely and implementable; its regulatory framework as adequate to implement the law; and its regulatory process as open, helpful to citizen participants, independent of DOE and other entities, and fair, efficient, and without undue cost or delay. Moreover, increased stakeholder confidence also means NRC will be perceived as satisfactorily addressing repository performance issues and as adding value to the national program.

Progress toward resolution of the KTIs has been the focus of the NRC's HLW program since FY 1996. Beginning in FY 2000, the budget allocated to pre-licensing issue resolution will be gradually decreased as the staff prepares for a review of the DOE in FY 2002. This will complete the first of four interrelated phases of issue resolution — resolution at the staff level, which is achieved when the staff has no further questions regarding how the DOE is addressing a particular subissue. This phase is vitally important in that it is directed toward achieving sufficient resolution of issues to permit effective review of the DOE's LA and preparation of the Safety Evaluation Report (SER) by the NRC staff; however, it does not preclude the issue being raised and considered during the licensing proceeding. During this

phase, Issue Resolution Status Reports (IRSRs) will be used to document progress regarding the technical bases for a licensing decision.

In the second phase of issue resolution, the acceptance criteria and review methods developed in the early versions of the IRSRs will be integrated into the Yucca Mountain Review Plan (YMRP). The YMRP 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, and will be used by the NRC staff in conducting its review of the LA. The YMRP, which will be completed by mid-FY 2002, will be a highly focused, site-specific document.

The third and fourth phases of issue resolution comprise a continuum of activities that begin in the pre-licensing period and continue through performance confirmation. The focus of this work during pre-licensing is: (1) developing the review methods, total-system performance assessment (TSPA) and process-level models, and confirmatory databases needed to review the LA; (2) developing review methods, based on risk-informed integrated safety analysis (ISA) for pre-closure safety; (3) conducting limited, focused studies aimed at developing confidence in the application of review methods to a licensing decision on the proposed Yucca Mountain repository; and (4) monitoring and providing feedback to DOE regarding implementation of acceptable approaches. After the LA has been submitted by DOE, the staff will use the results of the pre-licensing issue resolution and YMRP development process to review the LA and prepare a SER in accordance with NRC regulations.

The final phase of resolution – performance confirmation – is a specific requirement of NRC regulation that recognizes the unique nature of this first-of-a-kind repository. Performance confirmation will be used to ensure that the geological conditions encountered during any construction of a potential repository, the implemented designs, and early time behavior of the repository are consistent with the assumptions and performance estimates presented in the LA. Compliance with any license conditions that may be placed on a potential construction authorization would also be monitored as part of performance confirmation.

In summary, to achieve the performance goal on safety and environmental protection, the NRC HLW program aims to have its risk-based regulatory framework in place by FY 2000 and to conform its regulation to the EPA standard the following year. Pre-licensing issue resolution will be conducted through receipt of the LA in FY 2002, and will then smoothly transition to post-LA performance confirmation. The review methods and acceptance criteria will be integrated into the YMRP in the FY 2000–FY 2001 time frame. To achieve the performance goal of improving efficiency and effectiveness, the NRC HLW program will meet and satisfy

dates for the foregoing major milestones. Further, to achieve the performance goal on regulatory burden, the NRC will use the foregoing activities to focus review on those aspects of the HLW program most important to pre-closure safety and post-closure performance (risk), respectively. Finally, throughout the planning period, to achieve the performance goal on stakeholder confidence, increased emphasis will be placed on communicating with stakeholders and other interested members of the public to improve confidence that the NRC regulatory review will be conducted in an open, independent, fair, and efficient manner.

During FY 2000–FY 2001, the NRC will fulfill its own statutory responsibilities by completing several key programmatic outputs. These include commenting on the DOE Draft Environmental Impact Statement in FY 2000, and providing DOE with the NRC Preliminary Site Sufficiency Comments as well as completing HLW rulemaking activities in FY 2001. Moreover, during the FY 2000–FY 2001 time frame, the staff will document the results of staff-level resolution of the key technical issues most important to repository performance, and will transition issue resolution into the performance confirmation program in the out-years.

The EnPA requires that NRC develop implementing regulations within one year after promulgation of the final EPA standard for Yucca Mountain. To meet that legislative requirement and to ensure that it has provided DOE with adequate guidance to prepare a complete LA, the NRC initiated development of its conforming regulation in FY 1999. The NRC plans to complete work on the development of the final site-specific disposal regulations in FY 2000. In an effort to streamline the licensing process, staff is evaluating the implementability of the proposed regulation using the total-system performance assessment (TSPA) tools developed as part of the pre-licensing issue resolution effort. The staff continues to interact with the EPA regarding the Yucca Mountain standard. After EPA issues an expected final standard in FY 2000, the staff will consider modifications to 10 CFR Part 63, NRC's regulation specific to Yucca Mountain, so that it conforms to the EPA standard, in accordance with the EnPA. This schedule, which has already been deferred more than one year, could be further affected by the EPA schedule for promulgating the standard or by passage of legislation currently before Congress.

The NRC will continue to pursue the first phase of pre-licensing issue resolution with DOE in FY 2000. During FY 2000–FY 2001, the KTIs will be re-evaluated and re-prioritized, as necessary. The bases for possible revision of priorities include: (a) changes or new developments in DOE site characterization and repository and waste package design; (b) results of the staff review of the Viability Assessment (VA) and other pre-licensing documents; and (c) results of DOE and NRC performance assessments (PAs) and integrated safety assessments (ISAs), including sensitivity, uncertainty, and importance analyses, that

identify items most important to repository performance. Beginning in FY 2000 the IRSRs will focus on documenting the evolving technical bases for issue resolution and the status of such resolution.

Having completed its review of the DOE VA in FY 1999, the NRC staff will enter the second phase of issue resolution developing the YMRP. The YMRP is a key program output that serves two important purposes: guidance to the DOE regarding the required content of the LA and guidance to the NRC staff for review of the LA. Beginning in FY 2000, the acceptance criteria and review methods developed in the IRSRs will be integrated into the YMRP.

Additional NRC activities in the HLW program for this period include conducting observation audits of DOE's quality assurance (QA) program to ensure that: (a) DOE's QA program is being implemented effectively; (b) that any QA shortcomings in DOE's site characterization programs are addressed; and (c) that data derived from these programs, included in any potential LA, is of high-quality. Other NRC activities include: (a) obtaining direct and timely feedback regarding DOE site characterization and testing activities through NRC onsite representatives; (b) maintaining the NRC Licensing Support Network, which will be necessary to support the timely and efficient review of a potential DOE LA for Yucca Mountain and associated licensing proceeding; and (c) continuing contract management and administrative support of the Center for Nuclear Waste Regulatory Analyses (CNWRA), in order to ensure that it is managed effectively and efficiently to support achievement of the NRC planned accomplishments. All of these activities foster increased public confidence in NRC's HLW repository program.

Other HLW regulation program activities include the licensing, inspection, and environmental reviews for the safe management, storage, and transportation of nuclear materials, including spent nuclear fuel. During FY 2000, the NRC will continue its reviews of the DOE Topical Reports such as Centralized Interim Storage Facility.

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 HLW repository license application,

including the review of material generated by the NRC and by contacts with persons and entities outside the NRC.

The *Advisory Committee on Nuclear Waste* provides advice on issues concerning the management of HLW including: interim storage of spent nuclear fuel; transportation; the disposal of HLW in geologic repositories, pre-licensing activities such as the environmental impact statement, and site suitability; the license application, as appropriate; standards, regulations, and guidance. This advice will be responsive to Commission needs, expectations, and requests, will be proactive when the need arises and will be issued in a timely manner to support Commission decisionmaking.

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 judges hear and decide petitions for hearing by intervenors and applicants concerning public health, safety, and environmental issues arising out of the 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 2001 resources will be used for the design, implementation, and operation of a Licensing Support Network (LSN) electronic document discovery database for the upcoming licensing proceeding on the 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 high-level waste licensing proceeding.

The NRC will continue the contract management and administrative activities of the 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.

Spent Fuel Storage and Transportation Licensing and Inspection

OUTPUT MEASURES				
Output/Baseline[32]	FY 1999 Target	FY 1999 Actual	FY 2000 Target	FY 2001 Target
Transport container design review completions. (FY 1998: Completed 115; exceeded target of 86 reviews.)	Complete 120 design reviews.	Completed 126 design reviews.	Complete 125 design reviews.	Complete 110[33] design reviews.
Storage container and installation design review completions. (FY 1998: Completed 16; exceeded target of 13 reviews.)	Complete 25 design reviews.	Completed 43 design reviews.	Complete 30 design reviews.	Complete 30 design reviews.

Approximately 3 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 transport container package designs and spent fuel storage cask designs, and licenses and inspects interim storage of spent fuel both at and away from reactor sites to 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 (FEMA). NRC's transportation activities also include reviewing transportation plans, performing route approvals and surveys for shipments of nuclear material, and relaying DOT notifications from licensees and carriers of planned import, export, or domestic shipment of nuclear material.

[32] 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.

[33] The target decreases in FY 2001 because the temporary influx of amendment requests related to a Part 71 rule change is expected to end in FY 2000.

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 technical review guidance documents; beginning process improvements to reduce the storage cask certification rulemaking time frame; starting a lessons learned process for major licensing completions; following other agency actions to ensure licensee consistency in the application of the license change process identified in our regulations (i.e., 10 CFR 50.59 and 10 CFR 72.48); 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 licensee and vendor procedures and facilities to ensure safe operations. Licensed utilities are responsible for the interim storage of their spent fuel until a Federal repository or centralized interim storage facility 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 designs in order to certify new and renew approved container designs, and to resolve safety concerns associated with approved designs. The NRC plans to complete approximately 125 application reviews in FY 2000, and 110 in FY 2001. The decrease in projected completions between FY 2000 and FY 2001 reflects completion of amendments needed to comply with revised 10 CFR Part 71. The NRC also reviews spent fuel storage cask designs, and spent fuel storage facility actions 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 expects to complete 30 licensing actions in FY 2000, and 30 in FY 2001. The number of licensing action completions is expected to increase. These spent fuel-related licensing actions include amendments, topical reports, significant requests for additional information, environmental assessments, and applications for new cask designs and new site-specific facilities. The NRC is currently conducting its technical review to license the Private Fuel Storage, ISFSI facility located on the Skull Valley Band of Goshute Indian Reservation in Toole County, Utah, and expects to complete the review by September 2000, with hearing completion expected around October 2001. In addition, beginning in FY 2001, the NRC expects to conduct the technical and environmental reviews for the Owl Creek Energy Project ISFSI facility to be located in Freemont County,

Wyoming. Centralized spent fuel storage, rather than dispersed storage at reactor sites across the country would allow for more focused inspection and surveillance by NRC and would offer resource efficiencies at permanently shutdown facilities.

In FY 2000, the NRC will complete its review of the DOE Topical Safety Analysis Report (TSAR) on a Dry Transfer System (DTS). The DTS gives a nuclear utility or other spent fuel handling facility the ability to perform cask-to-cask transfers of individual spent fuel bundles without the current requirement of first returning the fuel to a conventional spent fuel pool. This ability is necessary, due to engineering restrictions many utilities have that prevent them from directly utilizing the large-capacity transport and/or storage systems either already licensed or under active review by the NRC. The DOE envisions that the DTS will become a fundamental part of the DOE integrated waste management system. In FY 2001, the NRC will begin the review of the DOE's application for a second independent spent fuel storage installation and associated dry transfer functions at the Idaho National Engineering and Environmental Laboratory. This ISFSI will be located adjacent to the TMI-2 core debris ISFSI, and will store spent fuel from the Peach Bottom and Shippingport reactors, and TRIGA fuel from domestic and foreign research reactors. The NRC's review will continue in FY 2002. These fuels need to be placed in retrievable dry storage pending establishment of final waste package design requirements and the availability of a repository.

The NRC will also continue efforts during FY 2000–FY 2001 to revise transportation (10 CFR Part 71) and storage (10 CFR Part 72) regulations to make them more risk-informed and to reflect resolution of emerging technical, regulatory/licensing, and policy issues. The NRC will continue to issue Interim Staff Guidance memoranda to come to quick decisions about technical and regulatory issues without waiting for the formal update of the four standard review plans (SRPs) for storage and transport.

During FY 2000–FY 2001, the NRC will continue the update of the survey of unclassified radioactive material shipments in the United States. The last survey was based on shipment information from 1981 and 1982, and estimated that 2.79 million packages, containing approximately 8.97 million curies of radioactive material, were shipped annually. The updated shipment survey will provide a current basis for estimating radiation levels within and external to transport vehicles, and the exposure of handling personnel, vehicle operating personnel and the general public in future risk studies. This updated survey, scheduled for completion in FY 2002, will also include spent fuel shipments that were not included in the earlier study. During FY 2000–FY 2001, the NRC will continue the update of the Modal Study, "Shipping Container Response to Severe Highway and Railroad Accident Conditions," a study of spent fuel cask response to severe accident conditions, particularly rail-truck accident parameters.

The updated Modal Study is needed to reflect changes that have occurred since the original study was issued in 1987, including the use of dual-purpose casks, computer modeling advances, and the expected increased emphasis on rail shipments. The updated Modal Study will focus on confirming severe-accident probabilities and effects, and will likely include partial or full-scale package testing. The results will be used to address stakeholder concerns with respect to the safety of spent fuel packages and shipments. The NRC will also continue public outreach activities on the safety of radioactive material transport in FY 2000 and FY 2001. In addition, during FY 2000–FY 2001, the staff will continue efforts to pursue specific data concerning performance of storage cask designs, and will develop methodologies for integrated safety assessments of these designs. In FY 2001, the staff will begin a study of spent fuel storage cask vulnerabilities to terrorism or sabotage. This study will evaluate the potential consequences of cask sabotage in light of modern threats and will be used by NRC staff to address stakeholder concerns regarding terrorism or sabotage against spent fuel storage casks and shipments.

The NRC will continue to maintain awareness of any potential delays in DOE's waste disposal program and will closely monitor the DOE system for inventory and forecast of spent fuel and high-level radioactive waste generation to provide early warning of capacity problems and facilitate timely and adequate waste management regulatory action.

The industry's spent fuel storage activities require inspections of licensee and vendor procedures and facilities to ensure safe operations. In the course of its FY 2000 and FY 2001 regulatory and inspection activities, the NRC will complete approximately 10 safety inspections each year to ensure that safety measures are correctly implemented by licensees, vendors, certificate holders, applicants, designers, and fabricators of NRC-certified spent fuel storage systems and transport packages. These activities also include onsite inspections of the various storage systems at reactor sites. In addition to these activities, the NRC will complete approximately 30 reviews of designers', fabricators', and users' quality assurance programs each year during FY 2000–FY 2001, for the design, fabrication, and use of transportation packages to ensure that the packages are being fabricated according to the approved design. Also during this period, the staff will evaluate both industry performance and NRC inspection findings to determine whether inspection focus, priorities, and scope have been effective, and the staff will revise the inspection program, as necessary.

Regulation of Low-Level Waste (LLW)

OUTPUT MEASURES			
Output/Baseline	FY 1999 Target	FY 2000 Target	FY 2001 Target
Maintenance of the regulatory framework for low-level waste disposal.	There is no FY 1999 target for this measure.	Complete Branch Technical Position on Low-Level Waste Disposal Facility Performance Assessment.	Complete 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.

The classification of nuclear waste depends on its origin, level of radioactivity, and potential hazard. LLW, which results from many commercial, medical, and industrial processes, typically contains a small amount of radioactivity dispersed in a large amount of material and poses little potential hazard. However, because of 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 and several States are proceeding with plans to construct and operate new disposal facilities. However, to date, no new disposal facilities have been opened since passage of the Act, with the exception of the Envirocare facility in Utah. The three operating disposal facilities are located in Agreement States, and the only State with near-term plans to license a new disposal facility is also an Agreement State. Therefore, 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 2000–FY 2001, 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 the Department of Energy's National Low-Level Waste Management Program and other appropriate forums. In support of State efforts and potential future NRC licensing activities, the NRC will continue to review and update its guidance on low-level waste storage and disposal. In FY 2000, the NRC will complete a guidance document on Low-Level Waste Disposal Facility Performance Assessment. In FY 2000–FY 2001, 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. Others 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. In addition, the NRC receives several requests each year for onsite disposal. The NRC will conduct safety and environmental reviews of these requests as received.

Regulation of Decommissioning

OUTPUT MEASURES				
Output/Baseline	FY 1999 Target	FY 1999 Actual	FY 2000 Target	FY 2001 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.)	Remove 3 sites from the SDMP list after satisfactory cleanup.	3 sites were removed from SDMP list.	Remove 3 sites from the SDMP list after satisfactory cleanup.	Remove 3 sites from the SDMP list after satisfactory cleanup.

Decommissioning involves removing radioactive contamination in buildings, equipment, groundwater, and soils to such levels that a facility can be released for either unrestricted or restricted use. With respect to power reactor decommissioning, planned accomplishments fall

into three general areas of rule and regulatory guidance development, licensing and project management, and inspection. These planned accomplishments support all of the reactor outcome goals but the activities in rulemaking and regulatory guidance are most effective in leveraging the outcomes in the areas of reducing unnecessary regulatory burden, increasing effectiveness and efficiency as well as increasing public confidence. Activities in licensing and project management and inspection are most effective in the area of increasing public confidence.

In FY 2000–FY 2001, 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 2000–FY 2001, 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 issues 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.

Materials and fuel facility decommissioning involves safely removing a facility from service and reducing residual radioactivity to a level that permits the property to be released for unrestricted or restricted use.

This action is taken by a licensee before termination of the license. In some cases, non-licensed facilities may also be required to reduce or stabilize contamination before sites are released. Even though these sites are not licensed by the NRC, essentially the same regulatory controls that are placed on licensed sites are sought voluntarily from non-licensed sites. Non-licensed sites are inspected by NRC staff to ensure compliance with existing regulation. In an instance where a non-licensee does not voluntarily cooperate and comply with existing regulation, the NRC has the authority to seek compliance through the issuing of orders. This activity comprises NRC's integrated requirements for the decontamination and decommissioning of facilities and sites associated with NRC-licensed activities, including the technical interface with the Environmental Protection Agency to resolve issues of mutual interest in accordance with the March 1992 General Memorandum of Understanding and research and rulemaking efforts.

In FY 2000–FY 2001, 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 timely cleanup of approximately 26 known materials and fuel facility sites through the implementation of its Site Decommissioning Management Plan (SDMP). 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. 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, NRC terminates several hundred licenses per year for non-complex sites.

The NRC has implemented a graded 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 conjunction with this graded approach, NRC will continue a decommissioning pilot program aimed at streamlining the decommissioning process by identifying new and different approaches and conducting workshops with licensees who are technically and financially capable of pursuing expedited decommissioning of their facilities in accordance with Commission direction on decommissioning at non-reactor facilities.

In FY 1999, the NRC initiated an enhanced participatory rulemaking to establish radiological criteria for the clearance of materials and equipment that have residual radioactivity. In FY 2000–FY 2001, the NRC will consult with EPA and other Federal agencies and the States; complete its initial public involvement activities, including a series of public meetings; and continue the development of the rule's technical basis, generic environmental impact statement (GEIS), regulatory analysis (RA), and implementing guidance.

The NRC will also continue decommissioning oversight activities related to the Department of Energy's West Valley facility in accordance with the West Valley Demonstration Project Act. This is a highly complex site that requires careful consideration. A Commission policy statement on West Valley decommissioning criteria will be prepared during FY 2000–FY 2001.

The NRC will continue to interact with the EPA during FY 2000–FY 2001 to resolve issues of mutual concern related to the regulation of radionuclides in the environment to avoid unnecessary duplication of regulatory requirements. The NRC will focus its activities in this area in supporting 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 2000–FY 2001, 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 2000–FY 2001, the NRC will consolidate the existing environmental review efforts being performed in NMSS into a new program area within the Division of Waste Management. The NRC's efforts in this area will include developing guidance or adopting existing Council on Environmental Quality (CEQ) guidance for conducting environmental analysis, training staff on the agency's environmental goal and legislative obligations, and assuring consistent fulfillment of NRC's environmental obligations. Consistent fulfillment of NRC's environmental obligations will be accomplished by a group of reviewers with expertise in biological sciences, earth sciences, environmental engineering, and environmental law as they relate to NEPA compliance. This effort covers all environmental analyses conducted to support nuclear materials licensing, with the exception of generic Environmental Impact Statements for rulemaking.

The NRC will continue to operate the Computerized Risk Assessment and Data Analysis Lab (formerly the Advanced Computer System) 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.

Radionuclide Transport and Decommissioning Research

OUTPUT MEASURES				
Output/Baseline	FY 1999 Target	FY 1999 Actual	FY 2000 Target	FY 2001 Target
Technical bases for safety and regulatory guidance and decisionmaking.	Issue 3 research products that respond to high- and medium-priority needs from the Commission and NRC's licensing organizations. Develop, maintain, or improve 2 engineering codes/models for use by RES and licensing organizations for regulatory analyses/ decisionmaking.	Completed 5 research products. Maintained 2 codes.	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.				

The Radionuclide Transport and Decommissioning program supports the development of a performance assessment capability to assess the movement of radionuclides in the environment and consequent dose to the public from NRC-licensed facilities. Activities include source term, engineered barriers, flow and transport processes, pathway analysis, and calculation of doses. It also supports the development of rules and regulatory guidance to address decommissioning issues. The structure of the Radionuclide Transport and Decommissioning Research program has been revised to better focus on the outcomes of the Nuclear Waste Safety Arena. As a result, this program is now comprised of two major program areas. These program areas are: Develop the Technical Bases to Address Identified or Potential Safety Issues and Develop the Technical Bases to Allow Reductions to Unnecessary Licensee Burden.

The first program area, "Developing the Technical Bases to Address Identified or Potential Safety Issues," primarily supports the NRC performance goal to maintain safety. To maintain safety for the disposal of nuclear waste, some technical issues require new strategies to resolve them in a realistic manner. In these cases we should use the best available information from

research and operational data. By doing so, safety decisions are both sound and realistic and unnecessary licensee burden is avoided. This program will address the following issue:

Monitoring strategies and measurement techniques: Monitoring strategies and methods are needed to assist NRC and its licensees in detecting potential contamination of soil and ground water. Early detection facilitates timely and cost-effective remediation by licensees. During FY 2000 and FY 2001, results of research on effective monitoring and measurement strategies for soil and ground water contamination will be published for use by NRC licensees, including the selection and placement of detection equipment, sampling frequency, and analytical methods.

The second program area, "Developing the Technical Bases to Allow Reductions to Unnecessary Licensee Burden," primarily supports the NRC performance goal to reduce unnecessary regulatory burden. The NRC research program will identify areas where requirements may be reduced while maintaining acceptable safety levels. This program will address the following issue:

Realistic models for assessing radiation exposure: 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, and it is essential that realistic models for such assessments be available on a timely basis. Uncertainties in existing models must be properly estimated to minimize burden to NRC licensees, and more realistic models must be integrated into analytical computer codes as they become available. During FY 2000–FY 2001, research will be conducted to evaluate existing models used to estimate dose due to residual radioactivity, to remove any unnecessary conservatisms in the models to ensure that the doses modeled are as realistic as possible, and to develop new models where appropriate. The results will be published for scientific peer review.

These activities will result in more realistic assessments of potential exposures from radioactive materials released to the environment and reduction of uncertainty in dose calculations through systematic selection of process models and input parameters for specific applications.

Uranium Recovery Licensing and Inspection

OUTPUT MEASURES				
Output/Baseline	FY 1999 Target	FY 1999 Actual	FY 2000 Target	FY 2001 Target
Licensing Actions. (FY 1998: The number of reviews met the budget estimate.)	Conduct reviews such that the number of application reviews completed meets or exceeds the budget estimates.	Number of application reviews did not meet or exceed budget estimates. 93 of the target 94 reviews were completed in FY 1999 (99 percent). Redirection of staff effort to higher priority workload.	Conduct reviews such that the number of application reviews completed meets or exceeds the budget estimates.	Conduct reviews such that the number of application reviews completed meets or exceeds the budget estimates.
Safety inspections of uranium recovery facilities. (FY 1998: Completed 43, exceeded target of 40 inspections. Completed 108 percent of inspections planned)	Complete 80 percent of the inspections planned annually.	22 of the target 25 inspections were completed in FY 1999 (88 percent).	Complete 80 percent of the inspections planned annually.	Complete 80 percent of the inspections planned annually.

NRC efforts for uranium recovery are governed by the Atomic Energy Act (AEA) of 1954, (AEA) as amended and the Uranium Mill Tailings Radiation Control Act (UMTRCA) 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. UMTRCA establishes two programs to protect health and the environment: Title I and Title II. The Title I program established 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 Department of Energy's (DOE's) designs and concur that DOE's actions meet standards set by the Environmental Protection Agency. 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.

For licensed uranium mills, the NRC's performance goal is to prevent exposures or releases of radioactive materials likely to occur now or in the future that will have significant adverse impact on public health and safety and the environment. To achieve this goal, NRC will complete the review of five uranium recovery site reclamation plans in FY 2000. The NRC will also complete the review of five applications for alternate concentration limits or Corrective Action Plan reviews for groundwater cleanup at license sites in FY 2000–FY 2001. This effort will include the preparation of safety evaluations and environmental assessments. In FY 2000, the NRC is considering 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. If a decision is made to pursue a new rulemaking effort, the rule could be promulgated by early FY 2001.

The NRC will complete the review of approximately 80 license amendments each year in FY 2000–FY 2001, plus one new license application each year in FY 2000 and FY 2001. The NRC will also conduct the review of approximately two construction completion reports each year in FY 2000–FY 2001, which must be approved before termination of site-specific licenses. Besides ensuring that the reviewed actions comply with the applicable requirements, the NRC's goal is to meet or exceed the budget projections for completed actions.

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 2000–FY 2001 is to conduct 80 percent of inspections planned annually through its regional office, as supported by Headquarters staff. Besides supporting field related inspections, the NRC will also provide event followup activities. This includes the identification, evaluation, and closure of violations identified through normal licensing actions, preparation of generic correspondence to all licensees to ensure an industry-wide knowledge of problems and operational issues; and revisions to inspection procedures and guidance documents to reflect lessons learned from inspections.

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. This will be

accomplished by the NRC terminating the specific license of Title II reclaimed uranium mill tailings impoundments after the licensee's 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 2000 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.

Non-High-Level Waste Safety Legal Advice

The *Office of the General Counsel* (OGC) will provide legal advice and assistance to the Commission and NRC staff on low-level waste and transportation of radioactive materials and waste, and in the decommissioning of reactor and materials facilities. The OGC will represent the agency in related administrative and judicial proceedings.

Assistance to Agreement States for 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 closeout 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.

INTERNATIONAL NUCLEAR SAFETY SUPPORT

INTERNATIONAL NUCLEAR SAFETY SUPPORT

STRATEGIC GOAL

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

MEASURES	FY 1999 PERFORMANCE
Fulfills at least (TBD percent) of the significant obligations over which NRC has regulatory authority arising from statutes, treaties, conventions, and Agreements for Cooperation.	Metrics for this measure are under development.
No significant proliferation incidents attributable to some failure of the NRC.	Data for this measure will be reviewed and reported on in FY 2000.
No significant safety or safeguards events that result from NRC's failure to implement its international commitments.	Data for this measure will be reviewed and reported on in FY 2000.
Outcomes in international forums are consistent with U.S. Government objectives identified as pertinent to and actively supported by the NRC at least (TBD percent) of the time.	Data for this measure will be reviewed and reported on in FY 2000.

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DESCRIPTION OF STRATEGIC ARENA

The NRC maintains a program of international cooperation to help ensure the safe, secure, and environmentally acceptable uses of nuclear energy. 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, radiation protection, nuclear materials safety and safeguards,[34] waste management, and decommissioning of nuclear facilities.

The International Nuclear Safety Support strategic arena encompasses international nuclear policy formulation, export-import licensing for nuclear materials and equipment, treaty

[34] Safeguards include physical protection as well as material control and accounting.

implementation, international information exchange, international safety and safeguards assistance, and deterring nuclear proliferation. NRC international activities support broad U.S. national interests, as well as the NRC's domestic mission. The primary foundation 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, executive orders, and treaties and conventions.

The public and NRC's licensees derive both tangible and intangible benefits from our international activities. The public's perception of, and confidence in, nuclear safety within the United States is greatly influenced by how safely plants are operated and how secure they are worldwide. The United States, as a major supplier of nuclear fuel, equipment, and technical services depends on an orderly and predictable export licensing regime to enhance product marketability. In addition, our safety assistance program allows U.S. companies to expand their business interests. Cooperation with foreign countries in nuclear safety research provides a larger experience base than exists in the U.S. alone. Additionally, such cooperative efforts also add the important benefit of significantly leveraging agency funding so that both the U.S. and foreign countries spend less individually to develop needed data and other research products. Together, the international community can identify and resolve safety issues in an economical manner. Our assistance also aids in the prevention or mitigation of problems in countries with weak or embryonic nuclear safety cultures. Finally, the NRC's participation in international safeguards and nonproliferation assists the U.S. with potential threat assessment activities.

Domestic safeguards activities are conducted primarily by the Office of Nuclear Material Safety and Safeguards (NMSS). The Office of International Programs takes the lead in the international arena with the support of other NRC offices: Nuclear Materials Safety and Safeguards, Nuclear Reactor Regulation, Nuclear Regulatory Research, Administration, and the General Counsel.

The International Nuclear Safety Support strategic arena encompasses the program, Participation in International Activities. The contract support funds are allocated for work done by Department of Energy (DOE) contractors, commercial contractors, small business entities, nonprofit organizations (e.g., universities and foundations), and grantees.

STRATEGIES

- *We will continue to take a proactive role in strengthening safety, safeguards, and nonproliferation worldwide.*

INTERNATIONAL NUCLEAR SAFETY SUPPORT

- *We will focus appropriate agency activities and resources on significant international obligations and U.S. and NRC international priorities.*

- *We will enhance integration of international activities in NRC.*

MEASURING RESULTS — PERFORMANCE GOALS

Unlike the other strategic arenas, the International Safety Support strategic arena only identifies measures, metrics and strategies for a single strategic goal. The unique nature of this arena resulted in the use of a single strategic goal in lieu of multiple performance goals.

BUDGET AUTHORITY BY FUNCTION AND BY PROGRAM
FULL-TIME EQUIVALENT EMPLOYMENT BY PROGRAM

(Dollar amounts in tables represent thousands of dollars ($K). In text, whole dollar amounts are used. Staff numbers represent full-time equivalents (FTEs).)

Total FY 2001 Estimate $4,802,000

Summary	FY 1999 Enacted	FY 2000 Estimate	FY 2001 Estimate	
			Request	Change from FY 2000
Budget Authority by Function ($K)				
Salaries and Benefits	3,402	3,974	4,176	202
Contract Support	124	283	145	-138
Travel	511	481	481	0
Total	4,037	4,738	4,802	64
Budget Authority by Program ($K)				
Participation in International Activities	4,037	4,125	4,155	30
General Fund - International	0	613	647	34
Total	4,037	4,738	4,802	64
Full-Time Equivalent Employment by Program				
Participation in International Activities, Fee Base	35	33	33	0
General Fund- International	0	6	6	0
Total	35	39	39	0

EXPLANATION OF RESOURCE CHANGES BY PROGRAM

Participation in International Activities. The contract support decrease in FY 2001 is due to the completion of an International Atomic Energy Agency (IAEA) Operational Safety Assessment Review Team visit to a U.S. nuclear power plant in FY 2000. In FY 2001, NRC will continue to include the Agency for International Development (AID)-related work for the former Soviet Union (FSU) and Central and Eastern Europe (CEE) countries within the General Fund portion of the requested appropriation.

JUSTIFICATION OF PROGRAM REQUESTS

Participation in International Activities

The NRC participates in a wide range of mutually beneficial programs involving information exchange with counterparts in the international community. It also provides for support for strengthening of the IAEA safeguards and technical reviews associated with export licensing.

OUTPUT MEASURES				
Output/Baseline	FY 1999 Target	FY 1999 Actual	FY 2000 Target	FY 2001 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.)	Negotiate/renew 5 arrangements.	Completed 4 arrangements with the fifth arrangement awaiting the appointment of a new executive official in South Africa.	Negotiate/renew 5 arrangements.	Negotiate/renew 5 arrangements.

OUTPUT MEASURES				
Output/Baseline	FY 1999 Target	FY 1999 Actual	FY 2000 Target	FY 2001 Target
Issuance of NRC licenses. (FY 1998: Completed 90 staff reviews. 100 percent were completed within 60 days.)	Complete reviews for and issue as appropriate, approximately 75-100 NRC import/ export authorization (NRC licenses or amendments). Staff reviews, including the drafting of required Commission decision papers, will be completed for 90 percent of the cases within 60 days of the receipt of all necessary documentation, including Executive Branch views and recipient country assurances, and when applicable, State and LLW and Compact acceptance letters, and public intervention petitions and associated filings.	Completed 103 staff reviews. 100 percent were completed within 60 days.	Complete reviews for and issue as appropriate, approximately 75-100 NRC import/ export authorization (NRC licenses or amendments). Staff reviews, including the drafting of required Commission decision papers, will be completed for 90 percent of the cases within 60 days of the receipt of all necessary documentation, including Executive Branch views and recipient country assurances, and when applicable, State and LLW and Compact acceptance letters, and public intervention petitions and associated filings.	Complete reviews for and issue as appropriate, approximately 75-100 NRC import/export authorization (NRC licenses or amendments). Staff reviews, including the drafting of required Commission decision papers, will be completed for 90 percent of the cases within 60 days of the receipt of all necessary documentation, including Executive Branch views and recipient country assurances, and when applicable, State and LLW and Compact acceptance letters, and public intervention petitions and associated filings.

OUTPUT MEASURES				
Output/Baseline	FY 1999 Target	FY 1999 Actual	FY 2000 Target	FY 2001 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.)	Complete staff reviews within 60 days.	Completed 23 staff reviews. 100 percent were completed within 60 days.	Complete staff reviews within 60 days.	Complete staff reviews within 60 days.

Under the Atomic Energy Act of 1954, as amended, the NRC is responsible for licensing the export and import of nuclear materials and equipment to ensure these items are used for peaceful purposes. This authority extends to nuclear reactors and other fuel cycle facilities and equipment, to source and special nuclear material, to byproduct materials, and to certain other commodities, including heavy water, nuclear-grade graphite and radioactive waste. The NRC obtains the views and recommendations of other governmental agencies and departments in its prelicensing reviews, and, in turn, provides its views and recommendations to Department of State (DOS), DOE, and the Department of Commerce (DOC) on nuclear-related export authorizations under Executive Branch jurisdiction.

Approximately 75–100 NRC licensing cases for the export of nuclear materials will be completed in FY 2001, following required reviews and determinations, including safeguards, legal, policy, and physical protection evaluations by the NRC staff.

The NRC maintains a leadership role in the standing committees and senior advisory groups of the IAEA and the Nuclear Energy Agency (NEA) and participates in exchange of views in other high-level meetings focused on international nuclear regulatory policy formulation. The NRC participates with the international community in developing approaches for the safe and secure use of nuclear material for peaceful purposes, and continues to participate in the International Nuclear Regulators Association (INRA). The INRA was established to enable its members to influence and enhance nuclear safety worldwide from a regulatory perspective and to facilitate international cooperation in nuclear regulation.

INTERNATIONAL NUCLEAR SAFETY SUPPORT

The NRC participates in a wide range of mutually beneficial programs involving information exchange with counterparts in the international community and also provides a carefully selected range of safety and safeguards assistance to develop and strengthen foreign nuclear regulatory authorities, especially those in the New Independent States of the FSU and countries of CEE. The NRC currently maintains 34 information exchange arrangements. These arrangements provide communications channels that ensure the prompt reciprocal notification of power reactor safety problems that could affect both U.S. and foreign plants. They are the foundation for bilateral cooperation with other nations in nuclear safety, physical security, materials control and accounting, waste management, environmental protection, and other areas to which the parties agree. The NRC participation in bilateral information exchanges with the regulatory authorities of foreign countries that have established nuclear power programs helps to gain safety insights and information useful to the regulatory mission of the NRC. Priority is given to those countries where most relevant information may be gained, such as Japan, France, United Kingdom, Spain, Sweden, and Switzerland. In addition to its extensive program of bilateral cooperation with other countries, the NRC also works closely in the area of nuclear safety with international organizations such as IAEA in Vienna, and NEA of the Organization for Economic Cooperation and Development (OECD) in Paris. In FY 2000, the NRC is sponsoring an IAEA operational safety assessment review team visit to a volunteer U.S. nuclear power plant to evaluate elements of operational safety over and above compliance and performance measures normally required by NRC; this will enhance the plant's self-assessment and independent assessment processes. Among NRC assistance efforts are helping countries strengthen their regulatory organizations, training foreign inspectors, and working together in the areas of operational safety and risk reduction. In providing this assistance, the NRC works closely with the DOS, the DOE, the Department of Defense (DoD), and the AID. Presently, funding for the assistance to the New Independent States of the FSU and countries of CEE is provided by AID, DOE, and DoD.

In addition, the NRC financial management policy is that the NRC will pursue reimbursement from Federal agencies and other outside organizations for the full costs of activities that are not a part of its statutory mission and for which the NRC has not received appropriations. In FY 2000, NRC is pursuing a reimbursable agreement with DOE to obtain full recovery of NRC's costs for providing material protection control and accounting support to the regulatory agencies of Russia, Ukraine, and Kazakstan. Continuing in FY 2001, NRC is requesting 6 FTE from the General Fund to support the AID-related work in the FSU and CEE.

The NRC participation in U.S. initiatives at presidential summits and vice-presidential commissions (e.g., U.S.-Russian Joint Commission on Economic and Technological Cooperation, U.S.-South African Binational Commission, and other vice-presidential/prime minister-level commissions as they arise) could result in additional requests for safety

assistance to the New Independent States of the FSU, CEE, South Africa, China, and other countries. International nuclear safety assistance and cooperation are expected to expand in the Pacific Rim countries with rapid growth in their economies and electric energy sectors. These activities will require a continued and focused commitment of staff resources.

The International Convention on Nuclear Safety (CNS) came into force on October 24, 1996. The CNS has a Review Meeting of Contracting Parties every 3 years, with national reports due six months before the meeting takes place. In FY 2001, as a full Contracting Party, the U.S. will participate in all aspects of the CNS review cycle. NRC will lead the effort to update its National Report and its review by Executive Branch agencies, in addition to responding to other countries' questions about the U.S. report; participate in the review of national reports of other contracting parties; and participate in preparatory and organizational meetings, as well as in the U.S. delegation to the spring 2002 review meeting. Two additional international conventions on waste management and liability have been negotiated and the NRC may be required to implement several of their major elements, including participation in the preparation of national reports, and participation in review meetings. The Executive Branch is currently reviewing both conventions and preparing transmittal packages to forward them to the Senate for its advice and consent to ratification.

The NRC will also continue to participate as a member of interagency U.S. physical protection review teams to exchange technical information with representatives of foreign governments on physical protection procedures and practices and to host reciprocal visits to the United States. The NRC will continue to support IAEA-sponsored international safeguards activities deterring nuclear proliferation. It will facilitate IAEA information gathering and inspection activities at selected U.S. nuclear facilities, as required. It will continue to participate in the management and direction of interagency groups supporting the strengthening and implementation of IAEA safeguards. The NRC will also continue to assist the regulators in Russia, Ukraine, and Kazakhstan in developing and implementing national systems for accounting and control of nuclear materials and for physical protection. The objective of this program is to develop systems of material control and accounting and physical protection that will include a body of regulations, guides, technical review criteria, implementation standards and procedures, and a licensing and inspection program.

MANAGEMENT AND SUPPORT

MANAGEMENT AND SUPPORT

To help accomplish our strategic and performance goals, we have established corporate management strategies focused on:

- Employing innovative and sound business practices.
- Sustaining a high-performing, diverse workforce.
- Providing proactive information management and information technology services.
- Communicating strategic change.

These corporate management strategies help us work better together, both within and across strategic arenas and help support services better meet the needs of their customers and leverage success for the agency. Our strategic and performance goals focus on the mission or business of the NRC. Our corporate management strategies describe the means by which NRC will conduct its business to ensure success in implementation of the strategic plan and the accomplishment of the agency's mission.

Employing innovative and sound business practices.

We are ultimately accountable to the taxpayer for our performance. Implicit in this responsibility is the obligation to foster innovative and sound business practices, ensure integrity, and accomplish our mission in an effective and efficient manner. Improving processes and exercising good business judgement is critical for improving effectiveness and efficiency for the agency as a whole, for both support services and program activities, which in turn leverages the achievement of the agency's strategic and performance goals in each strategic arena.

We will employ the following strategies to foster innovative and sound business practices:

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- We will build and strengthen partnerships among offices and between support and program areas.
- We will build and improve on 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 support 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 prioritize our work, then plan and schedule activities accordingly to achieve desired outcomes.

- 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.

Sustaining a high-performing, diverse workforce.

A high-performance organization demands a dynamic, results-oriented workforce with the knowledge, skills, abilities, and competencies to achieve its mission and goals. Because mission requirements, stakeholder demands, technologies, and other environmental influences are constantly changing, a performance-based organization must continually assess its capacity to achieve its strategic and performance goals. At the NRC, workforce planning, deployment, and development strategies can produce the right mix of skills and abilities in the appropriate organizations to contribute to maintaining safety and protecting the environment; increasing public confidence; working effectively, efficiently, and realistically; and improving programs and processes that reduce unnecessary regulatory burden. An NRC workforce that is accountable to its stakeholders increases public confidence. If every employee at NRC understands the mission and how his or her job contributes to accomplishing that mission, we will be better positioned to achieve our strategic and performance goals.

The strategies listed below describe how we will sustain a high-performing, diverse workforce.

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

- We will foster a work environment that provides opportunities for 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, including recruiting and retaining both entry level and experienced staff.

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

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

- We will push decisionmaking to the lowest practical level consistent with the regulatory framework.

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

Providing proactive information technology and information management services.

Information Technology (IT) and Information Management (IM) services can be significant enablers for achieving agency performance goals. The ability of NRC staff and stakeholders to prepare, access, communicate, disseminate, and use information is essential to achieving NRC's performance goals. Our staff needs information concerning our regulatory framework and licensee performance to ensure the continued safety of nuclear power and the safe use of nuclear materials and disposal of nuclear waste. Licensees need information about our regulatory requirements and emerging safety issues to carry out their responsibilities to protect public health and safety. The public and other stakeholders need NRC information to participate effectively in the regulatory process. Moreover, access to information about NRC's activities and performance is critical for maintaining public confidence.

Information technology is a key enabler for the effective use and communication of information through agency networks, the World Wide Web, workstations, and software applications. It is also an important tool for improving effectiveness and efficiency by enabling us to streamline agency processes. The public, including many NRC licensees and other stakeholders, increasingly expects to do business with the government electronically. In partnership with our customers, we will employ the strategies set forth below to enable the staff to more effectively use information and information technology to achieve agency performance goals:

- We will work jointly with internal customers to integrate IT initiatives into their business planning processes.

- We will make it easier for the staff to 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 IT infrastructure that is driven by agency business needs.
- We will work jointly with stakeholders to strengthen IT/IM service delivery.
- We will improve NRC's ability to do business electronically with external entities.
- We will provide public 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.

Communicating strategic change.

Effective communication with our employees and external stakeholders is a fundamental and necessary aspect of agency business. This ensures that our mission and goals are understood and that actions are implemented to achieve the goals and objectives. Goals are communicated throughout the agency through a process in which each NRC office develops a multi-year operating plan with clear linkages to the agency's strategic and performance goals and measures. The offices link the goals and performance measures for each organizational level to successive levels and ultimately to the NRC's strategic goals.

Effective communication with employees is essential to achieve the agency's mission and its goals which cut across all NRC regulatory and support activities. Communications are instrumental in building and maintaining an environment within the NRC characterized by a focus on safety, technical excellence, effective and efficient decision making, teamwork, innovation and creativity, and improved performance. Fostering such an environment will help the agency build public confidence and successfully respond to the changing environment by implementing timely changes to regulatory programs and procedures. Because of this environment of change, both internal and external, the NRC will have to continue to manage change. The success of change management will be determined by our ability to effectively communicate with all of our stakeholders.

Effective communication with external stakeholders is essential to inspire public confidence by providing the public, those we regulate, and other stakeholders in the national and international community with clear, accurate, and timely information about our regulatory activities. The legislation which created the NRC states that the agency is to be independent

of the regulated industry and is not to promote the use of nuclear technology. This presents communications challenges for both the NRC and the public, including the regulated industry. These challenges are compounded by changing expectations of the public and the regulated industry. In order to inspire public confidence in the NRC's activities, we must understand the expectations of the public and provide opportunities for public interaction which are meaningful and effective, but which do not promote the use of nuclear technology.

The strategies listed below describe how we will establish, evaluate, and sustain effective methods of communication with our stakeholders.

- We will review and assess the effectiveness of communication channels/methods within the NRC to ensure that they support the needs of a changing environment.
- Based on this assessment, we will develop and implement a communications plan which supports strategic change and fosters the desired work environment.
- We will assess the effectiveness of communications by evaluating the effectiveness of communications channels/methods used to provide information to the public.
- 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 likely to generate substantial public interest at an early stage and initiate actions to inform and involve the public.

DESCRIPTION

Management and Support comprises the following five programs: Management Services, Information Technology and Information Management, Financial Management, Policy Support, and Permanent Change of Station. These programs encompass a wide variety of activities including: administrative and logistical support, human resources management, training and development, matters involving small and disadvantaged businesses and civil rights, information resources management, planning and budget analysis, accounting and finance, central policy direction, analysis of long-term policy issues, administrative proceedings review and advice, liaison with outside constituents and other Government agencies, legal advice for

the Commission, and all executive management services for the Commission. Contract support funds are allocated for services and products obtained from commercial contractors and other Federal agencies, such as the General Services Administration and the Office of Personnel Management.

BUDGET AUTHORITY BY FUNCTION AND BY PROGRAM
FULL-TIME EQUIVALENT EMPLOYMENT BY PROGRAM

(Dollar amounts in tables represent thousands of dollars ($K). In text, whole dollar amounts are used. Staff numbers represent full-time equivalents (FTEs).)

Total FY 2001 Estimate $144,724,000

Summary	FY 1999 Enacted	FY 2000 Estimate	FY 2001 Estimate	
			Request	Change from FY 2000
Budget Authority by Function ($K)				
Salaries and Benefits	56,697	59,864	61,758	1,894
Contract Support	91,295	83,012	82,065	-947
Travel	1,081	910	901	-9
Total	149,073	143,786	144,724	938
Budget Authority by Program ($K)				
Management Services	51,737	54,035	54,011	-24
Information Technology and Information Management	55,185	47,476	48,816	1,340
Financial Management	16,278	15,069	14,656	-413
Policy Support	21,483	21,411	21,741	330
Permanent Change of Station	4,390	5,795	5,500	-295
Total	149,073	143,786	144,724	938
Full-Time Equivalent Employment by Program				
Management Services	181	178	176	-2
Information Technology and Information Management	175	171	169	-2
Financial Management	108	108	104	-4
Policy Support	181	175	169	-6
Permanent Change of Station	0	0	0	0
Total	645	632	618	-14

EXPLANATION OF RESOURCE CHANGES BY PROGRAM

Management Services. Resources decrease in FY 2001 due to a one-time cost of acquiring the PeopleSoft software and the associated conversion costs in FY 2000. This software is a component of the agencywide integrated financial and resource management system (STARFIRE). The decrease also reflects a savings associated with personnel security investigations and a decrease in mail messenger activities.

Information Technology and Information Management. Resources increase in FY 2001 as a result of the replacement of local area network (LAN) printers, the purchase and installation of the next release of the NT Workstation Operating System, and increased costs associated with the Comprehensive Information Systems Support Consolidation (CISSCO) program. The increase has been partially offset by a savings associated with the transition from FTS 2000 to FTS 2001 long-distance service, decreased copy machine operator services, and efficiencies resulting from the implementation of ADAMS.

Financial Management. Resources decrease in FY 2001 with further implementation of the outcome-based approach to the Planning, Budgeting, and Performance Management (PBPM) process, and as efficiencies are gained in the accounting and financial area.

Policy Support. Resources increase in FY 2001 primarily from increased personnel costs. The increase is partially offset by decreases as a result of efficiencies achieved in the administrative functions and the implementation of ADAMS.

Permanent Change of Station. Resources decrease slightly in FY 2001 as the number of employee moves declines.

Management Services

Summary	FY 1999 Enacted	FY 2000 Estimate	FY 2001Estimate	
			Request	Change from FY 2000
Budget Authority by Function ($K)				
Salaries and Benefits	14,190	15,106	15,747	641
Contract Support	37,402	38,812	38,141	-671
Travel	145	117	123	6
Total	51,737	54,035	54,011	-24
Budget Authority by Activity ($K)				
Administration	41,006	41,787	41,872	85
Human Resources	9,643	11,157	10,936	-221
Small Business and Civil Rights	1,088	1,091	1,203	112
Total	51,737	54,035	54,011	-24
Full-Time Equivalent Employment by Activity				
Administration	115	112	110	-2
Human Resources	59	59	59	0
Small Business and Civil Rights	7	7	7	0
Total	181	178	176	-2

Administration

The Administration activity includes responsibility for rent and facility management, security, administrative services, and acquisition of goods and services. These functions are in direct support of the staff in carrying out the mission of the agency.

Rent and Facility Management--In FY 2001, the headquarters rent payments to the General Services Administration (GSA) will total approximately $18.5 million, which represents approximately 75 percent of the Office of Administration's budget. Rent payments to GSA are for the two-building White Flint North complex, the warehouse, and other ancillary space. The day-to-day oversight of office and support space at the headquarters is conducted within the rent and facility management planned accomplishment. This includes establishing policies, standards, and procedures for NRC-wide space and building acquisition and utilization,

administering the terms of the GSA delegation program applicable to the White Flint complex, operating and maintaining buildings and grounds at White Flint, and managing the agency's conservation program.

OUTPUT MEASURES				
Output/Baseline	FY 1999 Target	FY 1999 Actual	FY 2000 Target	FY 2001 Target
Conduct program assessments with representatives from program offices and the Office of Human Resources to evaluate the effectiveness in various areas based upon criteria used by GSA. Satisfactory rating will be evidence that the White Flint complex is operated and maintained in conformance with GSA delegation and NRC standards; and that office space alterations maximize space utilization consistent with agency FTE reductions and streamlining initiatives, and provide a safe and healthy work environment for NRC employees.	A score of 90 or higher on the GSA-supplied criteria.	Program assessment resulted in an average score of 91.	A score of 90 or higher on the GSA-supplied criteria.	A score of 90 or higher on the GSA-supplied criteria.
One White Flint North (OWFN) Restack Project milestones. After ten years of occupancy, the purpose of the OWFN Restack Project is to upgrade communications cabling, replace/repaint floor and wall coverings, and restack and reconfigure offices due to agency downsizing.	Complete floors 15, 14, 13, and 8 in the OWFN restack project commensurate with the following schedule: Floor 8: January 1999 Floor 14: April 1999 Floor 15: July 1999 Floor 13: September 1999	Completed floors 15, 14, 13, and 8 on schedule.	Complete the restack project in June 2000.	This measure completed in FY 2000.

Security—Safeguarding the NRC's personnel, property, and information requires a comprehensive security program. The safeguarding of restricted data and national security

information at contractor, licensee, and certificate holder facilities is conducted within this planned accomplishment. Also included are the requesting and adjudicating of security investigations/reinvestigations, operation of the NRC secure communications center, administering the NRC drug testing program for employees and applicants, and administering the NRC intelligence support program.

Administrative Support Services—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; (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.

OUTPUT MEASURES				
Output/Baseline	FY 1999 Target	FY 1999 Actual	FY 2000 Target	FY 2001 Target
Complete review of draft rules without need for substantive changes and within schedules established by the Office of the Federal Register and NRC.	Complete reviews within schedule 98 percent of the time.	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.

Acquisition of Goods and Services—This planned accomplishment encompasses all aspects of contract management 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. NRC/DOE work orders are monitored to ensure that these sound business practices are applied and that assistance is provided to agency program offices in the negotiation and administration of these agreements. This planned accomplishment also ensures that agency personal property is accounted for, including property held by contractors and DOE laboratories.

Human Resources

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 2001, additional focus will be directed toward managing anticipated workforce reductions, which will challenge human resources management agencywide.

Training and Development—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 resources 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. Project management and oversight of contractors ensures contracted courses are implemented in accordance with contract requirements. This planned accomplishment contributes toward NRC's need to recruit, develop, and maintain a highly skilled, competent, and responsive workforce capable of meeting today's needs and ensuring that development dollars are directed toward the highest priority needs in the organization—those that relate closest to accomplishing the agency's mission and performance goals. Included under this activity are contracted instructor-led courses, external training and self-study courses in the areas of information technology, management and supervision, equal employment opportunity, regulatory skills, communication skills, acquisition, financial management, and a variety of other special disciplines including management development programs sponsored by external organizations. 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 multi-phase program that includes training needs analysis, training program design and development, implementation of training, and program evaluation.

Recruitment and Staffing—NRC's recruitment and staffing planned accomplishment supports the creation 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. These planned accomplishments support cultural diversity in recruitment, staffing, and placement activities throughout NRC. Additional efforts will be devoted to managing workforce reductions in light of anticipated reductions in agency resources. This effort will be conducted in concert with changes in organizational culture and agency mission.

OUTPUT MEASURES				
Output/Baseline	FY 1999 Target	FY 1999 Actual	FY 2000 Target	FY 2001 Target
Develop and maintain a high quality, culturally diverse workforce and applicant pool.	Manage staffing strategies to achieve targeted workforce reductions.	Full-time equivalent staff-year and supervisory ratio reduction targets were met, positioning the agency to meet FY 2000 targets.	Manage staffing strategies to achieve targeted workforce reductions.	Manage staffing strategies to achieve targeted workforce reductions.
	Maintain a high quality, culturally diverse workforce that is no more than 25 percent under-represented (based on Oak Ridge Institutes of Science and Education availability data).	No group was more than 25 percent under-represented in occupations relevant to NRC.	Maintain a high quality, culturally diverse workforce that is no more than 25 percent under-represented (based on Oak Ridge Institutes of Science and Education availability data).	Maintain a high quality, culturally diverse workforce that is no more than 25 percent under-represented (based on Oak Ridge Institutes of Science and Education availability data).

Workforce Effectiveness and Utilization—The workforce effectiveness and utilization planned accomplishment provides the infrastructure, policy, support, information, and analysis necessary for NRC managers and employees to carry out their responsibilities. The task areas in this planned accomplishment 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.

Small Business and Civil Rights

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 implementing a managing diversity process; (2) Civil Rights; (3) Historically Black Colleges and Universities (HBCU); and (4) Small Business. The programs' mission is to: (1) facilitate equal employment opportunity for all NRC employees and applicants for employment through an ongoing affirmative employment process; (2) provide for prompt, fair, and impartial processing of discrimination complaints filed under applicable civil rights statutes; (3) administer grants to HBCU faculty and graduate and undergraduate students, which affords these individuals opportunities to participate in NRC's scientific, engineering, and research activities; and (4) ensure that small 8(a), disadvantaged, and women-owned businesses have full and fair opportunity to participate in NRC procurement activities.

These activities include developing the agency's Equal Employment Opportunity Program, and conducting the semiannual briefing to the Commission on the status and progress of the Agency's Affirmative Employment Plan. SBCR implements a managing diversity process to maintain a work environment that supports valuing and utilizing all employees regardless of differences.

Information Technology and Information Management

Summary	FY 1999 Enacted	FY 2000 Estimate	FY 2001 Estimate	
			Request	Change from FY 2000
Budget Authority by Function ($K)				
Salaries and Benefits	14,352	15,641	16,353	712
Contract Support	40,760	31,748	32,373	625
Travel	73	87	90	3
Total	55,185	47,476	48,816	1,340
Budget Authority by Activity ($K)				
Planning and Resource Management	2,643	2,872	2,952	80
Information Technology Infrastructure	26,620	23,008	23,614	606
Application Development	6,744	5,407	5,964	557
Information Management	19,178	16,189	16,286	97
Total	55,185	47,476	48,816	1,340
Full-Time Equivalent Employment by Activity				
Planning and Resource Management	25	24	24	0
Information Technology Infrastructure	35	33	33	0
Application Development	30	30	30	0
Information Management	85	84	82	-2
Total	175	171	169	-2

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 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.

Planning and Resource Management

OUTPUT MEASURES				
Output	FY 1999 Target	FY 1999 Actual	FY 2000 Target	FY 2001 Target
Percent of agency executives and managers who have received IT training.	All NRC senior executives and managers.	All NRC senior executives and managers received training.	All executives and managers within 12 months of hire.	All executives and managers within 12 months of hire.
Percent of OCIO employees who completed training.	70 percent of training course slots identified in OCIO employee training plans have been completed.	Greater than 90 percent.	70 percent of training course slots identified in OCIO employee training plans have been completed.	70 percent of training course slots identified in OCIO employee training plans have been completed.
Percent of high-level data entities in the agency's primary applications systems that are shared. FY 1998: Baseline established as 28 percent.[35]	35 percent of data entities.	22 percent of data entities. Major database system development postponed.	22 percent of data entities.	22 percent of data entities.

This activity encompasses the direction and coordination of agencywide information resources planning, including development of IT and 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. Under the Clinger-Cohen Act, the CIO has responsibility for developing, maintaining, and facilitating the implementation of a sound and integrated IT architecture (ITA). The ITA is composed of the enterprise architecture, technical reference model, and applicable standards profiles. The performance measure for data sharing measures the progress in implementing the enterprise architecture. Also included are coordination of IT and IM program evaluation, development of agency IT and IM policy, and coordination of agency IT training. This activity also covers OCIO general

[35] Entities reflect those identified by formal data modeling. As additional modeling work is done, the list of entities may change. Entities are scored "low, medium or high" in terms of the portion of systems in the business area that share the data. The percentage shared is the portion of all entities modeled that score medium or high.

administrative and resource management functions, including budget, financial management, personnel, and acquisition support.

This activity also includes the NRC's computer security program, which implements administrative, technical, and physical security measures for the protection of NRC's information, automated information systems, and information technology. The computer security program encompasses special safeguards to protect classified information, unclassified safeguards information, and sensitive unclassified information that is processed, stored, or produced in all automated information systems.

Information Technology Infrastructure

OUTPUT MEASURES				
Output/Baseline	FY 1999 Target	FY 1999 Actual	FY 2000 Target	FY 2001 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.)	The availability of Infrastructure services will increase by 10 percent per year until infrastructure services are available 99.5 percent.	Improved availability by 10 percent with infrastructure services available 99.5 percent.	The availability of Infrastructure services will increase by 10 percent per year until infrastructure services are available 99.5 percent.	The availability of Infrastructure services will increase by 10 percent per year until infrastructure services are available 99.5 percent.

OUTPUT MEASURES				
Output/Baseline	FY 1999 Target	FY 1999 Actual	FY 2000 Target	FY 2001 Target
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.)	The availability of network servers will increase by 10 percent per year until infrastructure services are available 99.5 percent.	Improved availability by 10 percent with agency network servers available 99.75 percent.	The availability of network servers will increase by 10 percent per year until infrastructure services are available 99.5 percent.	The availability of network servers will increase by 10 percent per year until infrastructure services are available 99.5 percent.
Agency employees have workstation configurations that will support ADAMS and other planned agencywide applications.	Complete replacement of all 486-based desktop PC workstations.	Completed replacement.	Replace workstations as required to support new agency applications.	Replace workstations as required to support new agency applications.

This activity provides for the ongoing development, integration, implementation, management, and support of the agency's IT infrastructure and provides information management services to support the mission and program activities of the NRC. The activity manages and operates the Customer Support Center, which functions as a single point of contact for service questions, service requests, problem reporting, and request status. It provides desktop support, which includes the replacement/upgrade of desktop microcomputers to meet agency program and business requirements and maintaining basic desktop workstations and peripheral equipment in operational condition. The telecommunications services and support area of this program provides agency long-distance and headquarters local telecommunications services to meet current business needs and the 16 related services necessary to implement and maintain these services. It provides operations and administrative support for agency communications systems, including operation of the NRC message center, videoconferencing services, voice mail system, local and long-distance voice and data telecommunications services, personal communications equipment (pagers, faxes, modems, cellular phones), and

support for the NRC Operations Center. This activity provides for development, integration, implementation, maintenance, and support of all agency network, telecommunications, and desktop resources. This activity provides for the operation and systems programming support of agencywide application systems and timesharing services. It provides technical support for design of the agency's information technology architecture pertaining to IT infrastructure development, standards, and practices. This activity provides technical guidance and direct assistance as needed to headquarters and regional offices concerning implementation of agencywide application systems and IT infrastructure issues and practices. It provides personnel to serve as a liaison with application development teams to coordinate program office infrastructure development, operations, and support requirements.

Applications Development

OUTPUT MEASURES				
Output/Baseline	FY 1999 Target	FY 1999 Actual	FY 2000 Target	FY 2001 Target
Level of staff satisfaction with information in NRC's primary applications systems. (FY 1998: Baseline established as 3.52.[36])	This measure changed from annual to biennial to minimize burden on staff.	Not applicable.	Improve staff satisfaction level to 3.75.	This measure changed from annual to biennial to minimize burden on staff.
Renovation and installation of corrected mission-critical and business-essential systems to handle dates from January 1, 2000, and beyond. (FY 1998: Not applicable)	By March 31, 1999, the Year 2000 renovation, validation, and implementation of all maintained mission-critical and business-essential application systems will be completed.	Completed Feb 15, 1999.	Zero adverse affects on the public, NRC licensees, and other stakeholders.	This measure completed in FY 2000.

This activity encompasses the development and maintenance of a comprehensive IT applications management program to support the mission and program activities of the NRC, and involves the coordination of all agency IT applications development and support activities to ensure applications are efficiently developed and operationally sound on an agencywide basis. It includes the formulation of approaches to provide appropriate information technology solutions to information management problems confronting the agency. Also included are the development and maintenance of methodologies to guide all agency activities throughout the entire applications life cycle, and the development of components of the agency's information technology architecture pertaining to software engineering and development tools, database management systems, and document management systems.

[36] The basis question asks for overall satisfaction with reliability, accuracy, and accessibility of information in selected systems.

Information Management

OUTPUT MEASURES				
Output/Baseline	FY 1999 Target	FY 1999 Actual	FY 2000 Target	FY 2001 Target
ADAMS will develop demonstrable returns on investment to the agency.	No significant deviations (as defined by Clinger-Cohen Act of 1996).	No significant deviations.	No significant deviations (as defined by Clinger-Cohen Act of 1996).	This measure is superseded by the following two measures in FY 2001.
Level of satisfaction with the new agency document management system based on customer survey. FY 1998 baseline for the existing document management system (NUDOCS) is 3.42 on a scale of 1 to 5.	This measure does not have an FY 1999 target.	Not applicable.	This measure does not have an FY 2000 target.	Improve satisfaction level with the new document management system (ADAMS) to 3.75.
Percent of newly created and received unclassified documents routinely made available to the public via the Internet with a standard Web browser and downloading of appropriate software.	This measure does not have an FY 1999 target.	Not applicable.	This measure does not have an FY 2000 target.	95 percent of newly created and received unclassified documents will be made available.

This activity provides for the organizational and electronic integration of agency IM functions and for providing agencywide IM services. It 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. Additionally, it includes 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. This activity also provides 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.

Financial Management

Summary	FY 1999 Enacted	FY 2000 Estimate	FY 2001 Estimate	
			Request	Change from FY 2000
Budget Authority by Function ($K)				
Salaries and Benefits	8,475	9,276	9,415	139
Contract Support	7,745	5,775	5,223	-552
Travel	58	18	18	0
Total	16,278	15,069	14,656	-413
Budget Authority by Activity ($K)				
Planning, Budget and Analysis	3,582	3,553	3,962	409
Accounting and Finance	12,696	11,516	10,694	-822
Total	16,278	15,069	14,656	-413
Full-Time Equivalent Employment	108	108	104	-4

The Office of the Chief Financial Officer (OCFO) has the lead for the implementation of the Government Performance and Results Act of 1993, including the development of NRC's Strategic Plan, which was published in September 1997, and development of the NRC Planning, Budgeting, and Performance Management (PBPM) process. This process is a disciplined, integrated method for planning, budgeting, and assessing performance that will enable the agency to meet the demands of the new results-driven Federal environment. In addition to the leadership role in financial management and planning, the OCFO continues to direct the agency's traditional budgeting and accounting functions, as described below.

Budget and Analysis

This activity provides for the required functions of budget planning, development, and oversight of budget execution. This includes managing the agency planning process, including updating the agency's strategic plan and developing the annual performance plan and annual performance report, as required by the Government Performance and Results Act of 1993. The NRC plans to provide the FY 2001 Performance Plan to Congress and the public by early February 2000 and the FY 2002 Plan to OMB in mid-September 2000. The first annual performance report for FY 1999 is due to the President and the Congress in March 2000. FY 1999 actual performance data (that is available) is included in the FY 2001 Performance

Plan. The official FY 1999 Performance Report will be integrated with the FY 1999 Accountability Report to be published in FY 2000. This activity also includes administering the NRC's authorization and appropriation legislation, managing the administrative control of appropriated and nonappropriated funds, and approving and issuing allowances and financial plans to users of agency funds.

Accounting and Finance

OUTPUT MEASURES				
Output/Baseline	FY 1999 Target	FY 1999 Actual	FY 2000 Target	FY 2001 Target
Timeliness and quality of NRC's Annual Financial Statement. (FY 1998: Published the FY 1997 Statement in March 1998; received an unqualified opinion.)	Publish the FY 1998 Statement by March 1999 and receive an unqualified opinion.	Published the FY 1998 Statement in March 1999 and received an unqualified opinion.	Publish the FY 1999 Statement by March 2000 and receive an unqualified opinion.	Publish the FY 2000 Statement by March 2001 and receive an unqualified opinion.
Collect amounts due NRC. (FY 1998: Actual collections were within 0.9 percent of projected collections; receivables at $2.3 million.)	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.	Achieved 99 percent. Maintained past due accounts at less than $3 million.	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.	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.
Pay Bills (FY 1998: 85 percent of bills by EFT; 95 percent of payments on time.)	Pay 98[37] percent of bills by electronic funds transfer and achieve 94 percent of payments on time.	Paid 98 percent of bills by electronic funds transfer; Achieved 95 percent of payments on time.	Pay 98 percent of bills by electronic funds transfer and achieve 94 percent of payments on time.	Pay 98 percent of bills by electronic funds transfer and achieve 94 percent of payments on time.

[37] The 100 percent target level reflected in the FY 2000 Budget Estimates/Performance Plan was incorrectly stated. The agency's operating plan, which measures and reports on output measures quarterly, reflects the correct FY 1999 target level of 98 percent.

OUTPUT MEASURES				
Output/Baseline	FY 1999 Target	FY 1999 Actual	FY 2000 Target	FY 2001 Target
Fee Rule (FY 1998: Issued proposed rule in March 1998 and final rule in June 1998.	Issue proposed rule by March. Issue final rule by June.	Issued proposed rule in March 1999. Published final rule in June 1999.	Issue proposed rule by March. Issue final rule by June.	Issue proposed rule by March. Issue final rule by June.
Major systems subject to the CPIC process (STARFIRE) will develop demonstrable returns on investment to the agency. (FY 1998: No significant deviations.)	No significant deviations (as defined by Clinger-Cohen Act of 1996).	No significant deviations.	No significant deviations (as defined by Clinger-Cohen Act of 1996).	No significant deviations (as defined by Clinger-Cohen Act of 1996).

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 2000, the NRC will implement the Human Resources, Time and Labor, Cost Accounting, and Payroll 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. Activities necessary to meet this requirement 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 6,100 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.

Policy Support

Summary	FY 1999 Enacted	FY 2000 Estimate	FY 2001 Estimate	
			Request	Change from FY 2000
Budget Authority by Function ($K)				
Salaries and Benefits	19,680	19,841	20,243	402
Contract Support	998	882	828	-54
Travel	805	688	670	-18
Total	21,483	21,411	21,741	330
Budget Authority by Activity ($K)				
Commission	5,421	5,571	5,620	49
Commission Appellate Adjudication	467	481	507	26
Congressional Affairs	1,036	1,066	1,124	58
General Counsel	4,505	4,078	4,175	97
Public Affairs	1,603	1,665	1,756	91
Secretariat	2,046	2,098	2,109	11
Executive Director for Operations	3,019	2,991	3,071	80
Advisory Committees for Reactor Safeguards/Nuclear Waste	3,386	3,461	3,379	-82
Total	21,483	21,411	21,741	330
Full-Time Equivalent Employment by Activity				
Commission	45	45	43	-2
Commission Appellate Adjudication	4	4	4	0
Congressional Affairs	9	9	9	0
General Counsel	38	34	33	-1
Public Affairs	14	14	14	0
Secretariat	17	17	16	-1
Executive Director for Operations	25	24	24	0
Advisory Committees for Reactor Safeguards/Nuclear Waste	29	28	26	-2
Total	181	175	169	-6

The *Commission* (COMM) is the governing body of the Nuclear Regulatory Commission. It is responsible for determining the 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 (CAA) 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.

Congressional Affairs (OCA) is responsible for ensuring 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; OCA coordinates appearances and testimony of NRC officials at hearings and briefings, and schedules and coordinates courtesy visits as needed. The office serves as the primary point of contact for all NRC 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* (OGC) 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 General Counsel 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, and represents the NRC in public rulemaking and administrative hearings involving procurement, personnel, personnel security, labor relations, and equal employment opportunity matters. 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.

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 Web 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* (SECY) 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. EDO plans and directs the programs necessary to regulate civilian use of nuclear reactors and nuclear materials, and supports activities, such as research, performance evaluation and analysis, enforcement, investigations, and policy development and implementation that combined ensure the regulatory mission of the NRC is met. Additionally, the EDO manages the operating plan as part of the Planning, Budgeting, and Performance Management process.

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, including risk-informed and performance-based regulatory approaches, proposed revisions to the Safety Goal Policy Statement, proposed Phase 1 American Society of Mechanical Engineers (ASME) Standard for PRA Quality, National Fire Protection Association (NFPA) Performance Standard for Fire

Protection for Light Water Reactor Electric Generating Plants, technical aspects associated with the revised reactor oversight process, risk-based performance indicators, proposed risk-informed revisions to 10 CFR Part 50, thermal-hydraulic code upgrade program, steam generator and reactor pressure vessel integrity issues, development of a revised pressurized thermal shock screening criterion, technical issues related to the defense-in-depth philosophy of regulations, spent fuel fire risk during decommissioning, high-burnup fuel issues, proposed resolution of Generic Safety Issues, and applications for license renewal. 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. Upon request from the Department of Energy (DOE), the ACRS reviews and provides reports on U.S. Naval reactor designs, and also advises DOE with regard to the hazards of DOE nuclear activities and facilities. In addition, upon request, the ACRS provides technical advice to the DOE Defense Nuclear Facilities Safety Board.

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 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 (LLW) disposal, and other applicable regulations and legislative mandates. The scope of this advice encompasses reviewing and commenting on all issues that affect nuclear waste management disposal facilities, including disposal of LLW in near-surface facilities; transportation; storage; nuclear materials safety; decommissioning; uranium mill tailings; research; application of risk-informed and performance-based regulation; the risks of low-level ionizing radiation; and the evaluation of licensing documents, rules, and regulatory guidance. The Committee interacts with representatives of NRC, ACRS, other Federal, State, and local agencies, Indian tribes, and private, international, and other organizations, as appropriate, to fulfill its responsibilities.

Permanent Change of Station

	FY 1999 Enacted	FY 2000 Estimate	FY 2001 Estimate	
			Request	Change from FY 2000
Budget Authority by Function ($K)				
Salaries and Benefits	0	0	0	0
Contract Support	4,390	5,795	5,500	-295
Travel	0	0	0	0
Total	4,390	5,795	5,500	-295
Budget Authority by Activity ($K)				
Permanent Change of Station	4,390	5,795	5,500	-295
Full-Time Equivalent Employment	0	0	0	0

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

INSPECTOR GENERAL

OFFICE OF THE INSPECTOR GENERAL

FY 2001 PERFORMANCE PLAN

OVERVIEW

The American people expect excellence and accountability from their government. Toward that end, the U.S. 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.

In 1993, Congress passed the Government Performance and Results Act (GPRA) due to continued concerns of waste and inefficiency in Government management. GPRA forces a shift in the focus of Federal agencies away from the traditional concerns such as staffing and activities, and more toward a single overriding issue: results. Congress was not seeking simple measures, it was seeking broad measures that would reflect the affects of agency activities on society. GPRA sought to create a management tool useful in improving the operation of Government agencies. It sought to link performance goals to planning for budget purposes, and integrate them with reasonable indicators of progress. GPRA enlists agency managers and inspectors general in fighting waste, and improving accountability for financial and general management.

Accordingly, the NRC's OIG is committed to ensuring the integrity and efficiency of NRC programs and operations, including within its own office, as it carries out the mandates of the Inspector General Act of 1978, as amended. To this end, and with the support of Arthur Anderson and Co. in 1995, OIG adopted its own performance goals and measures in conformance with the intent of GPRA. Since 1995, these performance goals have been periodically modified, as appropriate, to address the contemporary issues of OIG and agency program managers.

STRATEGIC PLAN

This section summarizes the key elements of the OIG's strategic plan as a prelude to discussion of the OIG's FY 2001 performance goals. The performance outputs that support these goals are discussed in the OIG's FY 2001 budget request.

Our Mission

The Inspector General Act of 1978, established the legislative framework for the mission of Inspectors General.

The NRC-OIG mission is to (1) independently and objectively conduct and supervise audits and investigations relating to 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.

Our Vision

We are the agents of positive change striving for continuous improvement in NRC's management and program operations and in the OIG's office.

Our Strategic Goals

The OIG strategic plan includes four general goals and a number of supporting objectives. In addition, the goals in OIG's Annual Plan identify specific audits and evaluations that will be conducted during the year to achieve the strategic plan's goals and objectives.

OIG will carry out its mission by working to achieve the following strategic goals:

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

- 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.

- The OIG will make value-added policy, legislative, and regulatory recommendations relating to NRC's programs and operations.

- The 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 its office.

The OIG's performance goals and associated measures are directly related to these strategic general goals and objectives, and are linked to OIG's FY 2001 budget request.

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 goal.

CROSS-CUTTING FUNCTIONS WITH OTHER GOVERNMENT AGENCIES

The NRC's OIG has a cross-cutting function relating to its investigatory case referrals to the Department of Justice (DOJ). Some performance outputs are dependent upon the expediency of DOJ's case processing.

OPERATIONAL PROCESSES/ORGANIZATIONAL ELEMENTS

The principal operational processes are criminal and civil investigations of fraud and abuse, financial and management audits, program evaluations and event inquiries, legislative reviews, and management support. The OIG employs auditors, management analysts, criminal investigators, investigative analysts, an attorney, and various support personnel. The OIG also uses private-sector contractors for the conduct of its Chief Financial Officers (CFO) Act audit work, contract audit work, special projects, and quality assurance reviews of its investigative program. Audit quality assurance is accomplished through applying internal policy and procedures to its audit work and through peer reviews by IGs from other Government offices.

Historically, OIG's audit and investigative staff applied approximately 45 percent of its resources to NRC's reactor program, 50 percent to management and support programs, and 5 percent to nuclear materials, and nuclear waste programs. Absent any significant changes

in NRC's program mix, OIG expects to continue with this approximate resource allocation if the necessary funding is provided. The OIG was authorized 44 Full Time Equivalent (FTE) employees for FY 2000.

Funding and Staffing

To carry out mandated OIG activities in FY 2001, additional funding is required. In FY 1996, OIG experienced significant staff attrition, which resulted in an increase in available carryover funds. In response, OIG reduced its budget request for FY 1998, using prior year money to fund necessary activities to include the CFO audit. The OIG sought to restore its budget starting in FY 1999 but was unsuccessful. In FY 2001, OIG carryover funds will be insufficient to supplement OIG base-funding to a level so that the OIG can carry out its essential programs.

Without the requested increase in the FY 2001 budget, OIG will not be able to procure private-sector contractors for audit services to perform, with OIG oversight, the CFO Act prescribed annual audit of NRC's financial statements; acquire the specialized skills of private-sector experts to address audit and investigative technical requirements; secure the services of other Government agencies to conduct contract audits in support of fulfilling NRC's Federal Acquisition Regulations (FAR) requirements; and continue to assume the cost responsibility for OIG-specific IT requirements. If OIG's funding is held to the FY 2000 budget of $5 million, OIG will have insufficient funds to support these program activities. We are not requesting an increase in staff levels for FY 2001.

Human Resources Management

All the direct mission staff of the OIG are specialists. These specialists are hired with the qualifications needed to carry out these complex operational processes. In addition, continuing education is an integral part of OIG staff career development, and essential to fulfilling their professional requirements.

Information Technology

The NRC made many changes in the way it manages its Information Technology (IT) as a result of the Clinger-Cohen Act. To ensure that agency information resource investments are cost effective and well managed, the agency has implemented an IT capital planning and investment control process. In addition, NRC is moving toward cost center budgeting and shifted additional IT financial and technical responsibilities to the OIG in FY 1999.

Prior to FY 1992, the OIG appropriation supported its own IT requirements. To facilitate the agency's budgeting and accounting processes, OIG agreed to transfer its funds to the agency's Salaries and Expenses appropriation in exchange for the agency's support of OIG's IT requirements. As a result of the aforementioned NRC action, the OIG starting in FY 1999, reestablished funding for its office-specific IT requirements. During the past two years, OIG used carryover funds to support this shift in financial responsibility from the agency to the OIG. The FY 2001 budget request includes the cost responsibility for OIG-specific IT requirements.

Request for Waivers of Administrative Requirements to Provide Managerial Flexibility

The OIG has not identified any waivers of administrative procedures which are required to achieve its stated FY 2000 performance goals. Certain performance indicators require the use of surveys which may require OMB clearance in accordance with existing procedures.

FY 2001 INSPECTOR GENERAL PROGRAM LINK TO PERFORMANCE GOALS

The following table depicts the relationship of the Inspector General program to performance goals. Detailed information on the resources, programs, and their associated input, output and outcome measures are included in the Inspector General section of the FY 2001 budget request.

Links to Performance Goals	Performance Goals			
	Add Value to NRC Programs	Enhance Communication	Value-Added Policy and Regulatory Recommendations	Improve Effectiveness
FY 2001 Programs ($6,200K, 44 FTE)				
Audits ($2,563K, 18 FTE)	X	X		X
Investigations ($2,218K, 18 FTE)	X	X		X
Management, and Operational Support ($1,419K, 8 FTE)		X	X	X

BUDGET AUTHORITY BY FUNCTION AND BY PROGRAM
FULL-TIME EQUIVALENT EMPLOYMENT BY PROGRAM

(Dollar amounts in tables represent thousands of dollars ($K). In text, whole dollar amounts are used. Staff numbers represent full-time equivalents (FTEs).)

Total FY 2001 Estimate $6,200,000

	FY 1999 Enacted	FY 2000 Estimate	FY 2001 Estimate	
			Request	Change from FY 2000
Budget Authority by Function ($K)				
Salaries and Benefits	4,400	4,800	4,970	170
Contract Support	160	0	990[38]	990
Travel	240	200	240	40
Total	4,800	5,000	6,200	1,200
Budget Authority by Program ($K)				
Audits	1,887	1,999	2,563	564
Investigations	2,002	2,104	2,218	114
Management and Operational Support	911	897	1,419	522
Total	4,800	5,000	6,200	1,200
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	44	44	44	0

[38] CFO audit $410,000; DCAA/HHS contract audits $175,000; information technology $175,000; technical audit and investigative support $88,000; and $142,000 for other mission-related activities.

EXPLANATION OF RESOURCE CHANGES

Inspector General

FY 2001 Change from FY 2000 ..... $1,200,000

The resource increase in FY 2001 stems from a recognition that after FY 2000, OIG carryover funds will be insufficient to reinstate OIG base-funding to a level at which the OIG can carry out its essential programs. Funding for contract support requirements in prior years was from OIG carryover funds. The requested funding included in the Inspector General arena supports the procurement of private-sector contractors for audit services to perform, with OIG oversight, the CFO Act mandated annual audit of NRC's financial statements; provides for the specialized skills of private experts to address audit and investigative technical requirements; and secures the services of other Government agencies to conduct contract audits in support of fulfilling NRC's FAR requirements. Funding is also requested to address increased personnel costs (pay raises, within-grade increases, and benefits costs increases). Prior to FY 1999, the NRC Salaries and Expenses appropriation funded OIG's information technology (IT). The FY 2001 budget request provides the necessary funding for OIG to fund its office-specific IT requirements.

Audits

FY 2001 Change from FY 2000 ..... $564,000

The audit program provides assurance that NRC programs and operations are working efficiently and effectively. To accomplish this mission, the OIG audit staff conducts performance audits that focus on NRC's administrative and program operations, and financial audits that focus on transaction processing and NRC's internal control and financial systems. The resource increase for the audit program in FY 2001 includes acquiring the services of a private-sector audit firm to perform, with OIG oversight, the annual audit of NRC's financial statements as mandated by the CFO Act, increased personnel costs (pay raises, within-grade increases, and benefits costs increases) and funding to acquire the specialized skills of private-sector experts to address audit technical requirements.

Investigations

FY 2001 Change from FY 2000 ..... $114,000

The mission of the investigation program is to perform investigative activities related to the integrity of NRC's program and operations. The majority of these activities focus on violations of laws and misconduct by NRC employees and contractors, and allegations of irregularities or abuse in NRC programs and operations. The resource increase for the investigative program in FY 2001 includes the procuring of specialized law-enforcement equipment and the payment of fees associated with access to indoor and outdoor firearm ranges to implement the Deputation provisions of the Memorandum of Understanding (MOU) with DOJ. Funding is also associated with increased personnel costs (pay raises, within-grade increases, and benefits costs increases).

Management and Operational Support

FY 2001 Change from FY 2000 ..... $522,000

Management and operational support consists of senior managers, administrative support, and legal counsel. The OIG senior managers lead and provide policy direction and guidance in the conduct and supervision of audits and investigations. The OIG administrative staff principally formulates and executes the OIG budget, operates an independent personnel program, and manages the OIG's contract audit and information technology programs. The OIG Counsel provides independent legal advice on issues that include criminal law and procedures, financial management statutes and regulations, procurement, personnel, labor law, and Privacy Act and Freedom of Information Act issues.

The resource increase for this arena in FY 2001 includes publishing the semiannual report to Congress and fulfilling individual and office-wide training requirements. Funding is also associated with increased personnel costs (pay raises, within-grade increases, and benefits costs increases) and funding for procuring the services of other Governmental audit agencies (DCAA and HHS) to conduct contract audits in support of fulfilling NRC's FAR requirements. For FY 2001, OIG's budget request includes the funding necessary to address OIG-specific IT requirements.

JUSTIFICATION OF PROGRAM REQUESTS

Inspector General

The NRC's Office of the Inspector General (OIG) was established in April 1989 to independently evaluate the agency's programs and operations to ensure their efficiency and effectiveness, and to investigate allegations of fraud, waste, and abuse. The OIG accomplishes

its mission by performing audits, investigations, event inquiries, assessments, and other reviews. In addition, OIG reviews the agency's policies and procedures to ensure they meet specific legislative mandates.

The NRC and the OIG each has complimentary unique responsibilities in support of the agency's mission. The NRC's mission is to regulate the Nation's civilian use of byproduct, source, and special nuclear materials to ensure adequate protection for public health and safety, to promote the common defense and security, and to protect the environment. The OIG, therefore, plays a critical role by assessing and reporting on the efforts of the NRC to ensure that its safety-related programs are operating effectively.

Similarly, the NRC is responsible for ensuring that individuals who identify nuclear safety concerns regarding the use of nuclear materials do not suffer adverse job actions resulting from such activities. The OIG continually assesses the NRC's efforts to combat this type of unlawful discrimination.

Audits

Performance Measure

Improved Program Management

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 and financial audits. Performance audits focus on NRC's administrative and program operations. Financial audits focus on NRC's internal control systems, transaction processing, and financial systems.

FY 2001 resources will allow the OIG to conduct 16 to 18 audits. The audits planned for this period are based on a comprehensive annual audit plan that includes input from various elements of the NRC, Congress, the General Accounting Office (GAO), the Office of Management and Budget (OMB), the Department of Energy (DOE), and the nuclear industry, as well as from the OIG staff. The plan identifies key, high-risk, high-cost programs for audit, including the NRC's inspection, research, waste management, international activities, and information technology programs.

In the financial management area, the audit plan includes several audits to meet legislative and OMB requirements. FY 2001 contract support resources of $485,000 will allow the OIG to procure private-sector contractors for the annual audit of the NRC's financial statements as mandated by the Chief Financial Officers Act and for technical audit assistance. The staff plans to complete the FY 2000 Financial Statements Audit Report by March 2001.

The OIG has adopted a two-tiered approach to reviewing NRC's Government Performance and Results Act performance information. 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 conducted under the auspices of the Issue Area Monitor program. Reviews conducted under each tier will examine the data systems used, and determine the accuracy and reliability of the data supporting outcome goals and output measures.

Additionally, in FY 2001, OIG will assess and report on NRC's response to recommendations made by OIG and other audit entities, such as GAO, concerning NRC programs.

Investigations

Performance Measures

- Department of Justice referrals
- Agency actions taken in response to reports generated by OIG

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 performs root cause analysis and implements other preventive initiatives such as integrity awareness training.

FY 2001 resources will allow the OIG to conduct 80-100 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. We have concentrated our efforts and resources on investigations of health and safety-related issues. These investigations include alleged misconduct by high-ranking NRC officials and other NRC officials, such as managers and inspectors, whose positions directly affect public health and safety. The investigative unit will also undertake a number of proactive project initiatives where resources allow.

The investigative caseload is primarily determined by the number of allegations received and the complexity of issues raised. The investigative workload has increased in complexity since the inception of the OIG in April 1989. The OIG opened 46 investigations and event inquiries, and closed 77 in FY 1999. It is anticipated that an increased number of cases will be opened and closed during FY 2000 and FY 2001. In addition, investigators will participate in projects or task forces that strengthen agency operations.

Management and Operational Support

The Inspector General's management and operational support staff consists of senior managers, administrative support and legal counsel.

Management

FY 2001 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. To effectively supervise audits and investigations, OIG managers will provide leadership, policy direction, and coordination of OIG programs. Further, OIG managers will promote economy and efficiency and combat fraud and abuse in NRC programs and operations.

Operational Support

Performance Measures

- Provide relevant and timely support services to the NRC/OIG staff.
- Properly safeguard the use of OIG appropriated funds.

FY 2001 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; manage the OIG contract audit 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. In addition, FY 2001 contract support resources of $175,000 will allow the OIG to contract for the services of other Government agencies (DCAA and HHS) to conduct contract audits in support of fulfilling NRC's FAR requirements. The OIG will subsequently analyze and report on 25 to 35 contract audit reports issued by these agencies for questioned costs and funds put to better use. Moreover, FY 2001 contract support resources of $175,000 will allow the OIG to satisfy OIG office-specific IT requirements.

Legal Counsel

Performance Measure

Provide objective, relevant, timely recommendation(s) on legislation, regulations, and policy affecting economy, efficiency and fraud and abuse prevention.

FY 2001 resources will allow the OIG 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 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 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 Counsel also reviews and comments on existing and proposed legislation, regulations, directives, and policy issues that affect NRC programs and operations.

STRATEGIC PLAN/PERFORMANCE PLAN LINKAGE

Role of the OIG

The existence of the OIG relieves agency program managers and executives from being solely responsible for gathering objective data and evidence in circumstances in which wrongdoing is suspected and intense scrutiny and controversy exist. In this capacity, an OIG is the focal point for the responsibility for conducting audits and investigations relating to the programs and operations of the agency.

In order to accomplish this broad mandate, Inspectors General (IGs) have substantial independence and authority. Within this broad purview, the IGs are authorized to conduct audits and investigations of agency programs; have direct access to agency records and materials; issue subpoenas for all necessary information, data, reports, and other documentary evidence; hire their own staffs; and, request assistance from other Federal, State, and local Government agencies. The IG structure allows them to act as independent fact gatherers, often undertaking initiatives at the request of the agency head, and provide assessments in such areas as financial management systems and internal controls. In such instances, the IGs and agency management pursue the same ultimate goal–efficient and effective program operation and delivery of services.

Audits

The OIG audit staff conducts performance and financial audits as well as special evaluations. Audits are conducted 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 Chief Financial Officers Act and other financial-related audits. These audits include such items as internal control systems, transaction processing, financial systems, and contracts. As a complement to the audit function, OIG auditors perform a limited number of special evaluations. These evaluations examine the implications of NRC programs that affect national issues, such as high-level radioactive waste disposal, nuclear power plant decommissioning, or the use of radiation by the medical community in treating disease. 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 conducted in accordance with the Quality Standards for Investigations of the President's Council on Integrity and Efficiency (PCIE), 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 that have traits common to both audits and investigations. Institutional weaknesses that led to or allowed a problem to occur are addressed during these in depth inquiries, which may serve as precursors for more extensive activity by the OIG's audit and/or investigative staff.

Legal Counsel

The OIG counsel reviews proposed legislation, regulations, directives, and policy initiatives that affect NRC's programs and offices. Significant concerns are documented in regulatory commentaries and given to the agency for consideration. These commentaries provide OIG's objective analysis of vulnerabilities created by proposed or existing statutes, regulations, or policies. Commentaries cite the IG Act as authority for the review; state the specific law, regulation or policy examined; the pertinent background information considered; and identify OIG concerns, observations, and suggestions. Significant observations regarding NRC action or inaction in response to OIG commentaries are reported in the Semiannual Report to Congress.

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 1998--FY 2003 STRATEGIC PLAN AND THE FY 2001 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 1998 - FY 2003 Strategic Plan and the FY 2001 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 goals (outcomes) for measuring results, performance indicators, FY 2000/FY 2001 targets and FY 1997, FY 1998, and FY 1999 performance levels.

General Goal 1 (Strategic Goal)

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 (Strategies)
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 2001 Activities	Objectives			
	1	2	3	4
OIG will conduct between 16-18 audits and special evaluations. Audit resources will be applied between 40-50 percent to NRC's reactor program, between 40-50 percent to NRC's management and support programs and between 5-10 percent to nuclear materials and nuclear waste programs. The allocation of audit resources applied in the different NRC program areas may be subject to change based on current NRC reorganizations and budget initiatives.	x	x	x	x
OIG will conduct between 80-100 investigations and event inquiries. Investigative resources will be applied between 40-50 percent to NRC's reactor program, between 40-50 percent to NRC's management and support programs and between 5-10 percent to nuclear materials and nuclear waste programs.	x	x	x	x

Measuring Results - Performance Goals (Outcomes)

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

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

Performance Indicators for Audits	FY 2000/FY 2001 Targets
Keep average cost per audit to 1 FTE or less.	.95 FTE applied per audit. (I)
Complete audits in 6 months or less, on average.	Complete audits in 5.2 months on average. (O)
Obtain satisfactory peer review.	Achieve 100% compliance with audit standards per peer review. (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 80% of audit recommendations.	Obtain agreement by the agency on 80-90% of audit recommendations. (O)

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

FY 1998 Performance: .53 FTE applied per audit.
4.65 months per audit on average.
100% compliance with audit standards per peer review.
100% feedback obtained on issued audit reports.
100% agreement by the agency on audit recommendations.

FY 1997 Performance: .95 FTE applied per audit.
5.2 months per audit on average.
100% compliance with audit standards per peer review.
100% feedback obtained on issued audit reports.
100% agreement by the agency on audit recommendations.

Key to Performance Indicators

Input = I
Output = O
Outcome = O

Performance Indicators for Investigations	FY 2000/FY 2001 Targets
Complete investigations in an average time frame of 8 months.	Complete investigations in 8 months on average. (O)
Apply an average of 185 hours or less on completed investigations.	Apply 185 hours or less on completed investigations. (O)
Achieve a minimum rate of 25% of investigations being referred to DOJ.	Achieve 25% rate for cases referred to DOJ. (O)
Achieve a minimum success rate of 90% for actions taken by NRC management in response to reports issued by OIG (e.g. additional training, program reviews and modifications).	Achieve 90% success rate for management actions in response to OIG 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 80% of issues raised in customer surveys.	90% of survey issues addressed. (O)
Address all issues identified in quality control reviews.	100% of quality control issues addressed. (O)

FY 1999 Performance:
7.96 months per investigation on average
230 hours per completed investigation on average
Convictions/pleas - N/A
96.8% success rate for management referrals
100% success rate for PFCRA referrals
100% of survey has been addressed.
100% of quality control issues have been addressed.

FY 1998 Performance: 6.8 months per investigation on average
160 hours per completed investigation on average
Convictions/pleas - N/A
100% success rate for management referrals
100% success rate for PFCRA referrals
90% of survey has been addressed
100% of quality control issues have been addressed

FY 1997 Performance: 5.3 months per investigation on average
205 hours per completed investigation on average
100% success rate for convictions/pleas
100% 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 2000/FY 2001 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, 1999 for FY 2000 and October 1, 2000 for FY 2001. (I)

FY 2000 Performance: Plan completed by milestone date.

FY 1999 Performance: Plan completed in December 1998.

FY 1998 Performance: Plan completed by milestone date.

FY 1997 Performance: Plan completed by milestone date.

Performance Indicators for Investigations	FY 2000/FY 2001 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, 1999 for FY 2000 and October 1, 2000 for FY 2001. (I)

FY 2000 Performance: Plan completed by milestone date.

FY 1999 Performance: Plan completed in May 1999.

FY 1998 Performance: Plan completed in November 1997.

FY 1997 Performance: Plan completed in November 1996.

1.3. Advise the NRC in areas of OIG expertise.

Performance Indicators for Audits and Investigations	FY 2000/FY 2001 Targets
Participation, by auditors and/or investigators, on one or more targeted management projects or task forces.	Participation on at least one project or task force by OIG auditors and/or investigators. (O)
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 2000 and FY 2001. (O)

FY 1999 Performance: Participation on two intergovernmental task forces by OIG investigators

Completed 18 reports

FY 1998 Performance: Participation on three intergovernmental task forces by OIG investigators

Completed 20 reports

FY 1997 Performance: Participation on one intergovernmental task force by an OIG investigator

Completed 17 reports

1.4. Enhance programs for prevention and awareness of fraud, waste and abuse.

Performance Indicators for Audits and Investigations	FY 2000/FY 2001 Targets
Completion of annual training for NRC employees and others, in areas most at risk for fraud, waste, and abuse	Conduct training at major Headquarters components and/or NRC regional offices. Training will be provided by senior members of the OIG staff. (O)
	Develop a course to train NRC contract specialist 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 specialist (FY 2000) and other identified employees (FY 2001). (O)

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 22 page brochure on "Fraud Awareness."

FY 1998 Performance: Training was completed at Headquarters components and an updated version of "The IG at NRC" was distributed to NRC employees.

FY 1997 Performance: Training was completed at regional offices.

General Goal 2 (Strategic Goal)	
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.	
Objectives (Strategies) **1. Develop and maintain liaison activities with OIG customers.**	
FY 2001 Activities	**Objective 1**
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.	x

Measuring Results - Performance Goals (Outcomes)

OIG has established the following performance goals 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 2000/FY 2001 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 will brief the NRC Chairman and the NRC Commissioners periodically on important OIG matters.	The IG/Deputy IG 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)

Performance Indicators for the Office	FY 2000/FY 2001 Targets
OIG will make publicly releasable documents available on the Internet.	All audit reports and investigative event inquiries will be on the Internet within four weeks of issuance. (O)
OIG investigators will be assigned liaison responsibilities for designated Government agencies and NRC Regional Offices and meet with representatives of these entities on a periodic basis.	Investigators will meet quarterly with designated Government agencies and NRC Regional Offices 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 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.

Investigators met with approximately 14 designated agencies on a quarterly basis.

FY 1998 Performance:	Met 4 times with the EDO, CFO and CIO, and 3 times with the 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.
	Two investigative event inquiries were available on the Internet within four weeks of issuance.
	Investigators met with approximately 12 designated agencies on a quarterly basis.
FY 1997 Performance:	Met once with the EDO and twice with the CFO.
	Chairman received monthly briefings; Commissioners were briefed either semiannually or annually.
	Quarterly reports were not requested or provided to oversight committees.
	Semiannual reports were issued within one month after close of reporting period.
	Audit/Investigative reports were not available on the Internet.

General Goal 3 (Strategic Goal)	
OIG will make value-added policy, legislative, and regulatory recommendations relating to NRC's programs and operations.	
Objectives (Strategies) **1. Review existing and proposed legislation and regulations.**	
FY 2001 Activities	**Objective 1**
OIG Counsel 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.	x

Measuring Results - Performance Goals (Outcomes)

OIG has established the following performance goals for measuring its results in achieving General Goal 3.

3.1. Review existing and proposed legislation and regulations.

Performance Indicators for OIG Counsel	FY 2000/FY 2001 Targets
Responses to requests from the agency for comment/input will be made within the due date(s).	90 percent of requests will be reviewed within the due date. (O)
The agency will consider input from OIG Counsel in its decisionmaking process in the majority of matters reviewed.	OIG Counsel input will be considered in 60 percent of the matters reviewed. (O)

FY 1999 Performance: Targets were met.

FY 1998 Performance: Targets were met.

FY 1997 Performance: N/A

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 (Strategies)
1. Maximize organizational efficiency and effectiveness.
2. Evaluate the sufficiency of the current Issue Area Monitoring Program (IAM).
3. Develop a specialized training program and increase the organizational knowledge of the OIG staff.

FY 2001 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

Measuring Results - Performance Goals (Outcomes)

OIG has established the following performance goals for measuring its results in achieving General Goal 4.

4.1. Maximize organizational efficiency and effectiveness.

Performance Indicators for the Office	FY 2000/FY 2001 Targets
OIG, as part of its planning efforts, will periodically evaluate the OIG process for producing reports.	OIG will review the OIG report production process on an annual basis. (O)
OIG will conduct an assessment to address ease of retrieving information relevant to operation, barriers to access and communication, and benefits associated with the introduction of a paperless environment.	OIG will conduct follow up reviews in FY 2000 and FY 2001 addressing the information retrieval issue. (O)

Performance Indicators for the Office	FY 2000/FY 2001 Targets
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 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.

FY 1998 Performance: Report production process reviewed in investigations resulting in streamlining of reports.

FY 1997 Performance: N/A

4.2. Evaluate the sufficiency of the current Issue Area Monitor (IAM) program.

Performance Indicator for the Office	FY 2000/FY 2001 Targets
OIG will use a team approach to review the IAM process.	A review will be complete, with a summary report, no later than the first quarter of FY 2000. A follow up review will be conducted in FY 2001. (O)

FY 1999 Performance: The Issue Area Monitor program was reviewed in November 1999.

FY 1998 Performance: N/A

FY 1997 Performance: N/A

4.3. Develop a specialized training program and increase the organizational knowledge of the OIG staff.

Performance Indicators for Audits	FY 2000/FY 2001 Targets
Auditors will attend 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)
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. (O)

FY 1999 Performance: Auditors met training requirements.

FY 1998 Performance: Auditors met training requirements.

FY 1997 Performance: Auditors met training requirements.

Performance Indicators for Investigations	FY 2000/FY 2001 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)

FY 1999 Performance: Investigators met training requirements.

FY 1998 Performance: Investigators met training requirements.

FY 1997 Performance: Investigators met training requirements.

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FY 2001 PERFORMANCE PLAN

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VERIFICATION AND VALIDATION OF MEASURED VALUES OF PERFORMANCE

Most of the data used to measure the strategic goal and the performance goal to maintain 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 has a high degree of confidence about the reliability of these data 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 systems that support these data 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 (REIRS).

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) NRC licensee reports, (2) NRC inspection reports, (3) Agreement State reports, (4) NRC consultant/contractor reports, and (5) 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 AO criteria are verified and concurred by all applicable NRC headquarters program offices, regional offices, and Agency management prior to submission to Congress.

Data security is ensured 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 all types of automated information systems.

Descriptions of the primary data sources and the abnormal occurrence criteria follow.

Reactor Operational Data

The primary source of information about an operational event is the licensee event report (LER) submitted to NRC in accordance with 10 CFR 50.73. Other data NRC uses include immediate notifications to the NRC Operations Center in compliance with 10 CFR 50.72; monthly operating reports submitted to NRC in accordance with plant technical specifications; the database of component failures in systems managed by the Institute of Nuclear Power Operations (INPO); reports of defects and noncompliance in accordance with 10 CFR Part 21; NRC inspection reports, and allegations. Reactor licensee event reports (LER) are stored in the Sequence Coding and Search System (SCSS) database.

The Accident Sequence Precursor (ASP) program provides a structured and systematic means of qualitatively evaluating operational events or conditions that have occurred at licensed U.S. civilian nuclear power reactors. The program uses probabilistic risk assessment techniques to evaluate the conditional core damage probabilities of nuclear power plant events and equipment unavailabilities, and categorizes precursors that could lead to accident sequences with a potential to cause severe damage to a reactor's core. Results of the ASP analyses are considered indications of the level of risk associated with operating nuclear power plants based on the direct assessment of actual operational experience. The ASP program uses the information gained to provide an ongoing assessment of nuclear power plant operation and helps to identify how well plant designs and capabilities can cope with actual operational events or conditions. The ASP program results are published annually in the NUREG/CR-4674 series.

Nuclear Materials Operational Data

Event Data

Nuclear materials licensees are required by Title 10 of the *Code of Federal Regulations*, comparable Agreement State regulations, or license conditions to submit reports of events that meet established criteria. Reportable nuclear materials events include medical misadministrations of radiation or

radiopharmaceuticals to patients, radiation overexposures, loss of control of licensed material, problems with equipment that uses licensed material or is otherwise associated with the use of licensed material, releases of material or contamination, leaking radioactive sources, problems during the transportation of licensed material, problems in fuel cycle facilities, and problems in power reactors. The NRC collects, reviews, and codes nuclear materials event information reported to the NRC and the Agreement States. The NRC maintains this information in the Nuclear Material Events Database (NMED).

Radiation Exposure Data

All NRC licensees are required to monitor employee exposure to radiation and radioactive materials at levels sufficient to demonstrate compliance with the occupational dose limits specified in 10 CFR Part 20. Licensees of power reactors, and those involved in industrial radiography, the manufacture and distribution of radioactive materials, fuel fabrications and processing, low-level radioactive waste disposal, and independent spent fuel storage, are required by 10 CFR 20.2206 to provide to the NRC annual reports of exposure data for individuals for whom personnel monitoring is required. NRC maintains this information in the Radiation Exposure Information Report System (REIRS).

Abnormal Occurrence Criteria[1]

The Energy Reorganization Act of 1974 requires the Nuclear Regulatory Commission to submit abnormal occurrence reports to Congress. The Act defines an abnormal occurrence as an unscheduled incident or event that the Commission has determined to be significant from the standpoint of public health and safety. For each occurrence, the report must contain the date and place, the nature and probable consequence, the cause or causes, and any action taken to prevent recurrence.

Criteria by types of events used to determine which events will be considered for reporting as AOs are as follows:

[1] Appendix A to NRC's Abnormal Occurrence General Statement of Policy (From the Federal Register dated 04/17/97, Pages 18820-18824)

I. For All Licensees.

A. Human Exposure to Radiation from Licensed Material.

1. Any unintended radiation exposure to an adult (any individual 18 years of age or older) resulting in an annual total effective dose equivalent (TEDE) of 250 millisievert (mSv) (25 rem) or more; or an annual sum of the deep dose equivalent (external dose) and committed dose equivalent (intake of radioactive material) to any individual organ or tissue other than the lens of the eye, bone marrow, and the gonads, of 2500 mSv (250 rem) or more; or an annual dose equivalent to the lens of the eye, of 1 Sv (100 rem) or more; or an annual sum of the deep dose equivalent and committed dose equivalent to the bone marrow, and the gonads, of 1 Sv (100 rem) or more; or an annual shallow-dose equivalent to the skin or extremities of 2500 mSv (250 rem) or more.

2. Any unintended radiation exposure to any minor (an individual less than 18 years of age) resulting in an annual TEDE of 50 mSv (5 rem) or more, or to an embryo/fetus resulting in a dose equivalent of 50 mSv (5 rem) or more.

3. Any radiation exposure that has resulted in unintended permanent functional damage to an organ or a physiological system as determined by a physician.

B. Discharge or Dispersal of Radioactive Material from its Intended Place of Confinement.

1. The release of radioactive material to an unrestricted area in concentrations which, if averaged over a period of 24 hours, exceeds 5000 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).

2. Radiation levels in excess of the design values for a package, or the loss of confinement of radioactive material resulting in one or more of the following: (a) a radiation dose rate of 10 mSv (1 rem) per hour or more at 1 meter (3.28 feet) from the accessible external surface of a package containing radioactive material; (b) a radiation dose rate of 50 mSv (5 rem) per hour or more on the accessible external surface of a package containing radioactive material and that meet the requirements for "exclusive use" as defined in 10 CFR 71.47; or (c) release of radioactive material from a package in amounts greater than the regulatory limits in 10 CFR 71.51(a)(2).

C. Theft, Diversion, or Loss of Licensed Material, or Sabotage or Security Breach.[2]

1. Any lost, stolen, or abandoned sources that exceed 0.01 times the A_1 values, as listed in 10 CFR Part 71, Appendix A, Table A-1, for special form (sealed/nondispersible) sources, or the smaller of the A_2 or 0.01 times the A_1 values, as listed in Table A-1, for normal form (unsealed/dispersible) sources or for sources for which the form is not known. Excluded from reporting under this criterion are those events involving sources that are lost, stolen, or abandoned under the following conditions: sources abandoned in accordance with the requirements of 10 CFR 39.77(c); sealed sources contained in labeled, rugged source housings; recovered sources with sufficient indication that doses in excess of the reporting thresholds specified in AO criteria I.A.1 and I.A.2 did not occur during the time the source was missing; and unrecoverable sources lost under such conditions that doses in excess of the reporting thresholds specified in AO criteria I.A.1 and I.A.2 were not known to have occurred.

2. A substantiated case of actual or attempted theft or diversion of licensed material or sabotage of a facility.

3. Any substantiated loss of special nuclear material or any substantiated inventory discrepancy that is judged to be significant relative to normally expected performance, and that is judged to be caused by theft or diversion or by substantial breakdown of the accountability system.

4. Any substantial breakdown of physical security or material control (i.e., access control containment or accountability systems) that significantly weakened the protection against theft, diversion, or sabotage.

D. Other Events (i.e., Those Concerning Design, Analysis, Construction, Testing, Operation, Use, or Disposal of Licensed Facilities or Regulated Materials)

1. An accidental criticality [10 CFR 70.52(a)].

2. A major deficiency in design, construction, control, or operation having significant safety implications requiring immediate remedial action.

[2] Information pertaining to certain incidents may be either classified or under consideration for classification because of national security implications. Classified information will be withheld when formally reporting these incidents in accordance with Section 208 of the Energy Reorganization Act of 1974, as amended. Any classified details regarding these incidents would be available to the Congress, upon request, under appropriate security arrangements.

3. A serious deficiency in management or procedural controls in major areas.

4. Series of events (where individual events are not of major importance), recurring incidents, and incidents with implications for similar facilities (generic incidents) that create a major safety concern.

II. For Commercial Nuclear Power Plant Licensees.

A. Malfunction of Facility, Structures, or Equipment

1. Exceeding a safety limit of license technical specification (TS) [§ 50.36(c)].

2. Serious degradation of fuel integrity, primary coolant pressure boundary, or primary containment boundary.

3. Loss of plant capability to perform essential safety functions so that a release of radioactive materials, which could result in exceeding the dose limits of 10 CFR Part 100 or 5 times the dose limits of 10 CFR Part 50, Appendix A, General Design Criterion (GDC) 19, could occur from a postulated transient or accident (e.g., loss of emergency core cooling system, loss of control rod system).

B. Design or Safety Analysis Deficiency, Personnel Error, or Procedural or Administrative Inadequacy.

1. Discovery of a major condition not specifically considered in the safety analysis report (SAR) or TS that requires immediate remedial action.

2. Personnel error or procedural deficiencies that result in loss of plant capability to perform essential safety functions so that a release of radioactive materials, which could result in exceeding the dose limits of 10 CFR Part 100 or 5 times the dose limits of 10 CFR Part 50, Appendix A, GDC 19, could occur from a postulated transient or accident (e.g., loss of emergency core cooling system, loss of control rod system).

III. For Fuel Cycle Facilities

A. A shutdown of the plant or portion of the plant resulting from a significant event and/or violation of a law, regulation, or a license/certificate condition.

B. A major condition or significant event not considered in the license/certificate that requires immediate remedial action.

C. A major condition or significant event that seriously compromises the ability of a safety system to perform its designated function that requires immediate remedial action to prevent a criticality, radiological, or chemical process hazard.

IV. For Medical Licensees.

A medical misadministration that:

A. Results in a dose that is (1) equal to or greater than 1 gray (Gy) (100 rads) to a major portion of the bone marrow, to the lens of the eye, or the gonads, *or* (2) equal to or greater than 10 Gy (1000 rads) to any other organ; and

B. Represents either (1) a dose or dosage that is at least 50 percent greater than that prescribed in a written directive *or* (2) a prescribed dose or dosage that (i) is the wrong radiopharmaceutical,[3] or (ii) is delivered by the wrong route of administration, or (iii) is delivered to the wrong treatment site, or (iv) is delivered by the wrong treatment mode, or (v) is from a leaking source(s).

Guidelines for "Other Events of Interest"

The Commission may determine that events other than AOs may be of interest to Congress and the public and should be included in an Appendix to the AO report as "Other Events of Interest." Guidelines for events to be included in the AO report for this purpose may include, but not necessarily be limited to, events that do not meet the AO criteria but that have been perceived by Congress or the public to be of high health and safety significance, have received significant media coverage, or have caused the NRC to increase its attention to or oversight of a program area, or a group of similar events that have resulted in licensed materials entering the public domain in an uncontrolled manner.

[3] "The wrong radiopharmaceutical" as used in the AO criterion for medical misadministrations refers to any radiopharmaceutical other than the one listed in the written directive or in the clinical procedures manual.

CROSS-CUTTING FUNCTIONS WITH OTHER GOVERNMENT AGENCIES

Detailed information concerning the NRC's cross-cutting functions and overlap in mission with other agencies is provided in the strategic plan currently under development. Because of the potential impact to our programs and the Agency's ability to accomplish its mission, that information is provided in total in this performance plan.

Several Government agencies have missions that are related to the NRC. The NRC identified no inconsistent or duplicative areas in its respective strategic plans, but the Agency continues to be alert to potential inconsistencies or duplication in implementation of cooperative activities. A table of the major cross-cutting functions with other agencies and their relationship to NRC programs is provided below. These interaction and coordination efforts are important in accomplishing the Agency's mission. In most instances, the NRC has, or is developing, memoranda of understanding (MOU) 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 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. Descriptions of the specific NRC areas of mutual interest with other agencies follows the table. Additional discussion of these areas of mutual interest and coordination efforts with other Government agencies is provided in the FY 2001 budget request, as appropriate.

Agency	Areas of Mutual Interest	NRC Program/(Strategic Arena)
Department of Energy (DOE)	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	Uranium Recovery Licensing and Inspection (Nuclear Waste Safety)
	Low-Level Waste	Regulation of Low-Level Waste (Nuclear Waste Safety)
	Excess Plutonium Disposition Mixed Oxide Fuel Fabrication DOE Tank Waste Remediation System (TWRS) Regulatory Oversight at Gaseous Diffusion Plants	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 (DOE) Federal Bureau of Investigation (FBI) U.S. Customs Service Defense Intelligence Agency (DIA) Central Intelligence Agency (CIA) Department of State (DOS)	Threat Assessment	Reactor Incident Response (Nuclear Reactor Safety) Fuel Facilities Licensing and Inspection (Nuclear Materials Safety)
Environmental Protection Agency (EPA)	Protection of Public Health and Safety and the Environment	(Nuclear Materials Safety) (Nuclear Waste Safety)
	High-level Waste Site-specific Standards	High-Level Waste Regulation (Nuclear Waste Safety)
Federal Bureau of Investigation (FBI)	Response to Suspected Terrorist or Criminal Initiated Threat or Incident Involving Licensed Reactor, Material or Fuel Facilities	Reactor Incident Response (Nuclear Reactor Safety) (Nuclear Materials Safety)
Federal Emergency Management Agency (FEMA)	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 (Nuclear Materials Safety)
	National Dam Safety Program	Uranium Recovery Licensing & Inspection (Nuclear Waste Safety)

Agency	Areas of Mutual Interest	NRC Program/(Strategic Arena)
FEMA - Cont'd	Potassium Iodide (DI) Supplement Program	Reactor Incident Response (Nuclear Reactor Safety)
Federal Energy Regulatory Commission (FERC)	Utility Economic Deregulation, Antitrust and Market Power Issues	Reactor Licensing (Nuclear Reactor Safety)
Department of Transportation (DOT)	Transportation of Radioactive and Fissile Materials	Spent Fuel Storage and Transportation Licensing and Inspection (Nuclear Waste Safety)
Food & Drug Administration (FDA)	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 (OSHA)	Worker Health and Safety	Fuel Facilities Licensing & Inspection (Nuclear Materials Safety)
Department of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry (HHS/PHS/ATSDR)	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 Programs (Nuclear Materials Safety) High-Level Waste Regulation (Nuclear Waste Safety)
Department of Interior (DOI)	Protection of the Environment	Reactor Licensing (Nuclear Reactor Safety) Uranium Recovery Licensing and Inspection (Nuclear Waste Safety)
Department of Labor (DOL) Department of Justice (DOJ)	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 (STATE)) Department of Defense (DoD) Agency for International Development (AID) Department of Energy (DOE)	Nuclear Safety Assistance to Other Countries	Participation in International Activities (International Nuclear Safety Support)
Department of State (STATE) Department of Defense (DoD) Department of Energy (DOE) Department of Commerce (DOC)	Export of Nuclear and Nuclear Related Materials, Equipment, and Technology	Participation in International Activities (International Nuclear Safety Support)

Agency	Areas of Mutual Interest	NRC Program/(Strategic Arena)
National Security Council (NSC) Department of State (DOS) Department of Energy (DOE)	Nuclear Safeguards Assistance to Other Countries	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 (NWPA), 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.

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 have signed a cost-reimbursable interagency agreement whereby NRC provides DOE-NR with review of a spent fuel dry storage facility for navy fuel.

The NRC and DOE have a joint responsibility in carrying out the Uranium Mill Tailings Radiation Control Act (UMTRCA) 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 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 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 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 will continue to support the DOE Tank Waste Remediation System (TWRS) at Richland, Washington. DOE initiated this effort in 1996 to demonstrate technologies for solidifying highly radioactive tank waste at the Hanford site through the design of a pilot-scale facility. NRC and DOE developed an MOU in 1997 and is updating it to reflect the current status and required objectives for the TWRS program.

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 while DOE has the regulatory oversight for the remainder of the sites. 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 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 the U.S. Enrichment Corporation (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.

DOE, FBI, CIA, Customs, DIA, Department of State-- 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 Memorandums 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.

As specified in the Energy Policy Act of 1992 (EnPA), 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; and may impact the requirements, complexity, and costs of licensing the repository.

One area in which the NRC and EPA have been unsuccessful is in 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 Clean-up 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 (FBI)--The NRC and the Federal Bureau of Investigation (FBI) share responsibility (along with FEMA) 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 crisis management during a threat or incident and the NRC retains the responsibility for radiological matters. The NRC and FBI have a memorandum of understanding (MOU) to minimize or eliminate unnecessary duplication of effort between the two agencies.

Federal Emergency Management Agency (FEMA)--FEMA has 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 a member actively involved 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, USDA, HHS, and NOAA. 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 (FRP) for emergencies of all kinds, including responses under the National Contingency Plan (NCP) for emergencies involving chemical and radiological hazards 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 a memorandum of understanding (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 safety hazard reduction. The NRC has regulatory authority over only uranium mill tailings dams and those dams integral to the operation of licensed facilities, or the possession and use of licensed material, that pose a radiologically safety-related hazard if these dams should fail.

Federal Energy Regulatory Commission (FERC)--The NRC and the Federal Energy Regulatory Commission (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 Department of Transportation (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.

Food and Drug Administration (FDA)--The NRC and the Food and Drug Administration (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 present 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 (DOI), Fish and Wildlife Service--Under the Endangered Species Act, the NRC has responsibility to assure that its actions are protective of endangered species. NRC consults with the Fish and Wildlife Service (FWS) in evaluating effects on endangered species of proposed NRC actions. If a proposed NRC action has the potential of affecting 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.

Department of Labor (DOL)/Department of Justice (DOJ)--The NRC monitors discrimination actions filed with the Department of Labor (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 Department of Justice (DOJ). Coordination with DOJ occurs prior to initiating any civil enforcement action for matters under DOJ consideration for criminal prosecution.

Department of State (State), Department of Defense (DoD), Agency for International Development (AID), Department of Energy (DOE), Department of Commerce (DOC)--The NRC shares responsibility with the Department of State (State), DOE, DoD and the Agency for International Development (AID) in providing nuclear safety and safeguards assistance to other countries. State 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 State 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, State, DoD, and the Department of Commerce (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; State for munitions made with depleted uranium; and Commerce 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.

DOE and NRC are in the process of establishing a 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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APPENDIX II
LEGISLATIVE PROGRAM PROJECTIONS

APPENDIX II: LEGISLATIVE PROGRAM PROJECTIONS

U. S. NUCLEAR REGULATORY COMMISSION LEGISLATIVE PROGRAM PROJECTIONS (Dollars are in millions.)				
	SALARIES AND EXPENSES APPROPRIATION		INSPECTOR GENERAL APPROPRIATION	
	Budget Authority[1]	Budget Outlays[2]	Budget Authority[1]	Budget Outlays[2]
FY 2000 Enacted	464.9	464.7	5.0	5.0
FY 2001 Estimate	481.9	477.7	6.2	6.0
FY 2002 Estimate	481.9	481.9	6.2	6.2
FY 2003 Estimate	481.9	481.9	6.2	6.2
FY 2004 Estimate	481.9	481.9	6.2	6.2
FY 2005 Estimate	481.9	481.9	6.2	6.2

[1] Budget Authority for FY 2002 - FY 2005, is straightlined based on the FY 2001 appropriation.

[2] Budget outlays for the Salaries and Expenses Appropriation are calculated based on the formula of 25 percent from prior year appropriations and 75 percent from current year appropriations.

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APPENDIX III
REPORT TO CONGRESS 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, followup, 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 1,600 NRC employees, including the 5 members of the Commission, occupy testing-designated positions and are subject to random testing. Potential selectees interviewed for positions in these categories are subject to applicant testing.

Approximately 947 tests of all types were conducted between October 1, 1998, and September 30, 1999. 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.

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APPENDIX IV
SUMMARY OF
REIMBURSABLE WORK AGREEMENTS

U.S. NUCLEAR REGULATORY COMMISSION SUMMARY OF REIMBURSABLE WORK AGREEMENTS (New Budget Authority)			
	FY 1999	FY 2000 (Estimate)	FY 2001 (Estimate)
INTERNATIONAL ASSISTANCE TO FOREIGN GOVERNMENTS AND ORGANIZATIONS			
Core Conversion Project	$200,000	$200,000	$200,000
International Invitational Travel	$86,992	$60,000	$60,000
Material Protection, Control, and Accounting Support	$0	$670,000	$670,000
Nuclear Safety Initiatives for Central and Eastern Europe	$528,000	$150,000	$0
Nuclear Safety Initiatives for the New Independent States	$4,000,000	$5,000,000	$5,000,000
ADMINISTRATIVE AGREEMENTS			
Agreement States Training	$120,351	$120,000	$120,000
Characterization of Fuel Stored in Dry Casks	$0	$412,000	$206,000
Criminal History Program	$688,244	$650,000	$650,000
Department of State Employee Detail	$0	$11,000	$0
Federal Railroad Administration	$150,000	$150,000	$150,000
Information Access Authorization Program	$8,200	$6,000	$5,000
Material Access Authorization Program	$86,112	$250,000	$250,000
University of Illinois Employee Detail	$105,087	$50,832	$0
Westinghouse Electric Company Participation in the Second USNRC International Steam Generator Tube Integrity Research Program	$100,000	$50,000	$50,000
OTHER AGREEMENTS			
Aluminum-Based Research Reactor Spent Nuclear Fuel	$0	$0	$0
Closure of High-Level Waste Tanks at Savannah River	$75,000	$0	$0
Expert Witness Service	$94,000	$0	$0
Fissile Materials Disposition	$0	$11,000	$0
Foreign Cooperative Research Agreements	$1,456,743	$2,500,000	$2,500,000
Foreign Research Reactor Spent Nuclear Fuel	$500,000	$0	$300,000

APPENDIX IV: Reimbursable Work Agreements

	FY 1999	FY 2000 (Estimate)	FY 2001 (Estimate)
Naval Nuclear Propulsion Program-Spent Fuel Dry Storage Facility Review	$12,500	$772,500	$94,500
Navy Porting Reviews	$12,000	$15,000	$12,000
VIRGINIA Class Submarine Propulsion Plant Review	$12,500	$77,600	$211,500
West Valley Demonstration Project Fuel Shipments Review	$0	$575,000	$0
TOTAL	$8,235,729	$11,730,932	$10,479,000

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 approximately 1 FTE in FY 2000 and in FY 2001.

Justification for NRC Involvement: DoD has the lead in a US-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) - As of December 30, 1999, NRC does not have a reimbursable agreement for this activity. It is anticipated that the DOE will establish a reimbursable agreement with NRC sometime in early CY 2000.

Description of Work: Under the agreement, technical support would be provided to the regulatory agencies in Russia, Ukraine, and Kazakhstan in their development of material protection, control, and accounting (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 approximately 2 FTE in FY 2000 and FY 2001.

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 Department of Energy 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 will be entered into pursuant to the authority of the Economy Act, 31 U.S.C. 1535 and 1536.

4. Nuclear Safety Initiatives for Central and Eastern Europe

Source: U.S. 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 are funded from the General Fund portion of NRC's Salaries and Expenses appropriation. The FY 2001 budget also includes funding for these costs under the General Fund appropriation.

5. Nuclear Safety Initiatives for the New Independent States (NIS)

Source: U.S. Agency for International Development (AID)

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 salaries and benefits costs for AID-related work are funded from the General Fund portion of NRC's Salaries and Expenses appropriation. The FY 2001 budget also includes funding for these costs under the General Fund appropriation.

6. 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.

7. Characterization of Fuel Stored in Dry Casks

Source: Electric Power Research Institute

Description of Work: The NRC and the Electric Power Research Institute (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 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 (NMSS/SFPO), 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 (ISFSI) 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 INEEL and ANL projects according to the agreement and costs against these funds are incurred on a monthly basis.

8. 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 2000 and FY 2001.

Justification for NRC Involvement: Title 10 of the *Code of Federal Regulations*, Part 73, 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 fingerprint checks. Payments are made to the FBI via the Department of Treasury's on-line payment and collection system.

9. Department of State Employee Detail

Source: U.S. Department of State (DOS)

Description of Work: The NRC detailed an employee to assist the Department of State 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 (IAEA).

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.

10. Federal Railroad Administration

Source: U.S. Department of Transportation, Federal Railroad Administration (FRA)

Description of Work: The purpose of this research program is to develop a risk management tool set to assess a safety critical process in railroad companies, railroad industry suppliers, and the FRA. The development of the tool set is expected to assist in nationwide efforts in diverse applications and industries to apply microprocessors to safety-critical control functions.

Justification for NRC Involvement: The NRC will ensure that the University of Virginia Center for Semicustom Integrated Systems develops and provides a research proposal which meets FRA's needs, along with a mutually agreeable approach, identification of deliverables, costs, and schedules. This railroad-specific work will serve as a case study for the generic techniques being developed by UVA.

Reimbursement Procedures: FRA provided budget authority in advance for NRC's contractual support. FRA is being billed through 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 (IAAP)

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 Atomic Energy Act (AEA) and Executive Order 12968 to determine their eligibility for access to classified information.

Justification for NRC Involvement: Title 10 of the *Code of Federal Regulations*, 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: Title 10 of the *Code of Federal Regulations*, Part 11, issued under the authority of the Atomic Energy Act 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 0.5 FTE in FY 2000. The agreement will not be renewed in FY 2001.

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 (IPA).

14. Westinghouse Electric Company Participation in the Second USNRC 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 Title 10 of the Code of Federal Regulations, Part 73, issued under authority of the Atomic Energy Act 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 (DOE)

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 each year in FY 2000 and 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 (DOE-SR) 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 (DOE)

Description of Work: The NRC is reviewing the methodology established by DOE-Savannah River for closure of high-level waste (HLW) tanks and will consider DOE-Savannah River's proposed approach for classification of residual waste in the tanks as "incidental" waste. NRC will advise DOE-Savannah River of the results of the review. This work is currently expected to be completed by September 30, 2000.

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. Consistent with Section 202 of the Energy Reorganization Act of 1974, which gives NRC licensing and related regulatory authority over DOE HLW disposal facilities, closure of HLW tanks without the need for licensing by the NRC is predicated on the classification of the residual waste in the tanks as "incidental" waste. DOE-Savannah River seeks NRC technical assistance in reviewing DOE-Savannah River's methodology for classification of the residual waste in the tanks, 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

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 Internal Revenue Service (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.

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 (OPAC) 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 (DOE)

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. The reimbursable FTE requirement for this agreement is approximately 1 FTE in FY 2000.

DOE plans to add a task to the existing agreement to include NRC assistance to DOE regarding the Russian mixed oxide (MOX) fuel program, including NRC participation on the Special Working Group on Regulatory Matters, an advisory group to the Joint US-Russian Steering Committee.

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 (MOX) 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.

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 (FCRAs)

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 Department of Energy (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 U.S. 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 3 FTE in FY 2000 and 2 FTE in FY 2001.

Justification for NRC Involvement: The NRC is assisting DOE by providing expedited transport package reviews to support Department of Transportation 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 (DOE)-Naval Reactors

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 Idaho National Engineering and Environmental Laboratory. 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 approximately 2 FTE in FY 2000 and 1 FTE 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 (USN)

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 2000 and FY 2001.

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 0.1 FTE in FY 2000 and 1.0 FTE in FY 2001. 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 (DOE)

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 Idaho National Engineering and Environmental Laboratory (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 2 FTE in FY 2000 and no FTE 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.

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10. SUPPLEMENTARY NOTES

11. ABSTRACT *(200 words or less)*

This report contains the fiscal year budget justification to Congress and the performance plan. The budget provides estimates for salaries and expenses and for the Office of the Inspector General for Fiscal Year 2001.

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