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

CHAIRMAN

February 15, 1989

MEMORANDUM FOR: Victor Stello, Jr.
Executive Director for Operations

FROM: Lando W. Zech, Jr. Lando W. Zech Jr.

SUBJECT: REVISED PLANNING GUIDANCE

To start this year's planning, programming, and budgeting cycle, the Commission is providing its revised planning guidance for use in updating the agency's Five Year Plan (see attachments). As in the past, the Commission expects the staff to develop a realistic Plan that contains the programs and resources needed to carry out the important regulatory responsibilities of our agency. It must provide a sound basis for defending our budget to the OMB and the Congress.

Attachment 1 contains several requests for information the Commission would like to receive in connection with the update of the Plan. Attachment 2 consists of selected pages from the current Plan that have been annotated to reflect guidance changes desired by the Commission. The Commission also notes that sections of the Plan need to be revised due to the recent reorganization, the enactment of legislation establishing an IG for the NRC, workload forecast changes, and Mission Area structural changes that were incorporated in this year's budget request to the Congress. Attachment 3 identifies several outstanding staff papers requested by the Commission last August when it approved the current Five Year Plan. The Commission anticipates receiving this information in the near future and may be providing additional planning guidance for these particular program areas.

Attachments:
As stated

cc: Commissioner Roberts
Commissioner Carr
Commissioner Rogers
Commissioner Curtiss ✓
OGC
GPA
ACRS
ACNW
OIA
ASLBP
ASLAP

Attachment 1

Action Items Relative to the 1989
Update of the Five Year Plan

1. It is time to start planning and budgeting for resources needed by the NRC to support the high-level waste repository Licensing Support System (LSS). Resources will be needed for the Office of the LSS Administrator and for existing NRC offices as well. The Chairman's Office is drafting a budget for the LSS Administrator's Office, which can hopefully be reviewed by the Administrator and approved by the Commission in time for incorporation into this year's Five Year Plan. Staff should be projecting its needs as well. The Commission requests that the EDO develop, in coordination with Commission staff offices, a special analysis of the resources needed by all offices to support the LSS. The analysis should lay out the planning assumptions, goals, and objectives that form the basis for requesting added resources. The Commission realizes there are still many unknowns in connection with the LSS, but believes that it is time that we incorporate our best estimates into both the Plan and our next budget request to the OMB. (Due date: April 15, 1989)

2. The Commission requests that the Nuclear Safety Research Review Committee conduct an annual review of the Research Philosophy and recommend to the Director of Research any changes that might be appropriate. The Director of Research should then prepare a report to the EDO and the Commission that would address these recommendations and identify the changes that he would recommend be made. This report should be provided in the Fall of each year so that any changes can be approved and become a part of the basis for updating the Research portion of the Plan each Spring. For this Spring's update, the Director of Research should review the existing Philosophy and recommend any changes as an integral part of the staff's review of the planning guidance.

3. The Agency is planning to promulgate a sizeable number of rules and regulatory guides to address high-level waste regulatory, institutional, and technical issues in advance of receiving the license application for the repository. The Commission requests that the EDO carefully examine the resources being planned for this work to be sure that they are adequate.

4. The Commission requests that the Controller's Office conduct an independent analysis of the support staff needs of the ACRS/ACNW. This analysis should address two different sets of FTE requirements. First, for a single support staff in the ACRS that would support both the ACRS and the ACNW and, second, for partially or completely separate support staffs in each of these Offices. This analysis should be conducted in close coordination with the ACRS and the ACNW. (Due date: March 15, 1989)

5. The Commission requests that a copy of the NMSS workload forecast be provided to each Commissioner's Office when the updated Plan is sent to the Commission in May.

REGULATORY ENVIRONMENT

In carrying out its mission, the NRC will be operating in an environment that can be summarized as the end of an era of licensing new reactors; the continuation of a relatively large number of operating reactor and nonreactor licenses, coupled with new nonreactor applications; the continuation of a relatively unchanged safeguards environment; an emphasis on waste management; and the beginning of positioning for future licensing activities associated with a new generation of nuclear power plants. The operational performance of NRC licensees will continue to vary as a result of the diversity in personnel and facility design and licensee emphasis on safety. The public and State and local governments and agencies are likely to become increasingly interested ~~involved~~ in NRC-regulated activities.

RENEWAL and possible extensions of licenses for operating reactors

Although the NRC has not received a new application for a construction permit or operating license and has not allocated any resources for such a review, the Commission is taking steps to ensure that the NRC possesses the capability to review and act upon a new application should it receive one during the planning period. The agency is proceeding to identify any significant revision to its regulations, regulatory guides, standard review plan, or other regulatory documents that would be needed based on new knowledge or recent construction or operating experience (e.g., quality assurance requirements, siting requirements, source term). The NRC is also addressing the availability of technical expertise in disciplines necessary to process an application and the breadth and depth of resource availability should an application be received.

OVERALL PLANNING ASSUMPTIONS

There are certain planning assumptions that are universally applicable to the Five-Year Plan. Those assumptions are delineated below. Other assumptions that have more limited applicability are included in those sections of this plan to which they apply.

1. A balanced budget is likely to continue to be a Government priority. Major changes in the NRC budget are not expected.

2. The organizational elements responsible for completing the activities described in this plan will be fully staffed to the authorized budget levels with the required mix of skills.

3. No significant unbudgeted, priority tasks will be assigned during the planning period.

4. The U.S. Department of Energy (DOE) National Laboratories will continue to be one source of expertise to perform research for the NRC.

This undertaking involves a complex, integrated system of waste handling, transportation, interim and retrievable storage, and ultimate deep geologic disposal of high-level radioactive waste requiring a high certainty of acceptable health and environmental impacts over thousands of years. The High-Level Waste program is designed to ensure the effective and efficient discharge of NRC's responsibilities under Nuclear Waste Policy Act and the Nuclear Waste Policy Amendments Act of 1987. In the absence of unresolved safety concerns, the activities under this program will not delay implementation of the Executive branch's program.

Over the next 5 years, the principal focus of this program will be on DOE's efforts to characterize the Yucca Mountain site and the development of the necessary regulatory tools and guidance to review the high-level waste repository application. This will include the review and evaluation of the statutorily-required site characterization plan and the review and comment on the site characterization plan semiannual reports. The NRC's ongoing program will continue to focus on the development of the License Application Review Plan, technical positions, and rulemakings to provide timely guidance to DOE well in advance of DOE's submittal of a license application for repository construction currently scheduled for early 1995.

The Commission has approved the concept of the NRC acting as administrator for the Licensing Support System, once system development has been completed by the DOE; however, no resources are specifically identified in this plan for the Licensing Support System. The NRC expects to negotiate a Memorandum of Understanding with the DOE to provide for the transfer of resources to the NRC in amounts sufficient for the operation, maintenance, and oversight of the system.

LOW-LEVEL WASTE PROGRAM

This program is conducted to fulfill NRC's responsibilities under the Low-Level Radioactive Waste Policy Amendments Act of 1985, as amended, the Uranium Mill Tailings Radiation Control Act of 1978, portions of the Nuclear Waste Policy Act, and the West Valley Demonstration Project Act.

Over the next 5 years, approximately 12 new, low-level waste disposal facilities will be licensed by the NRC and Agreement States. The NRC will support Agreement States efforts to a limited extent in accordance with joint Office of Nuclear Material Safety and Safeguards and Office of Governmental and Public Affairs' State, Local, and Indian Tribe Programs guidelines, dated March 10, 1988. The NRC has already concurred in the DOE remedial action plans for 7 of the 22 inactive uranium mill tailings sites and is scheduled to complete its review of the remedial action plans for the remaining 15 sites by FY 1993.

Resources for this program are expected to remain level over the next 5 years. The Advisory Committee on Reactor Safeguards will continue to provide advice to the Commission on matters concerning the safe operation of nuclear reactors and the development and implementation of the next generation of standardized nuclear plants. The activities of the Advisory Committee on Nuclear Waste will primarily focus on disposal, but it will also be involved with aspects such as handling, processing, transportation, storage, and safeguarding of nuclear waste.

INDEPENDENT ADJUDICATORY REVIEWS PROGRAM

Under this program, hearings are conducted pursuant to the Administrative Procedure Act, the Atomic Energy Act, and the National Environmental Policy Act and tribunals are provided to review and issue initial and final decisions in statutory licensing matters and other Commission-assigned proceedings. Organizationally, this program is carried out by the Atomic Safety and Licensing Board Panel and the Atomic Safety and Licensing Appeal Panel.

During the next 5 years, the principal work load for the Atomic Safety and Licensing Board Panel and the Atomic Safety and Licensing Appeal Panel will evolve from hearings on reactor operating license applications to hearings arising out of licensed nuclear operations and waste management and storage issues.

EXTERNAL INVESTIGATIONS PROGRAM

Under this program the Office of Investigations conducts agency investigations of allegations of wrongdoing by NRC licensees.

The number of cases involving applicants for operating licenses is decreasing, while the number of cases involving operating facilities and nonreactor licensees is increasing. Over the next 5 years, this shift is expected to continue and the cases meeting the Commission case-opening threshold are projected to remain at 60 to 90 cases per year. ~~These cases are expected to become much more complex and controversial as allegations regarding wrongdoing at operating plants and facilities increase~~. Questionable basis

INTERNAL INVESTIGATIONS AND AUDITS PROGRAM

This program is designed to provide the Commission with an independent review and appraisal of its programs and operations. The organizational responsibility for this program rests with the Office of Inspector and Auditor, which functions as the agency's Inspector General.

No significant changes are planned for this program over the next 5 years.

PROGRAM GOALS

- Ensure that nuclear power plants under construction are designed and constructed properly and ready for safe operation.
- Prepare for future applications for plant life extension by ensuring a clear understanding of the criteria and the process.
- Prepare for future reactor licensing activities in light of standardization initiatives and submitted advanced light water reactor (ALWR) designs.

PROGRAM PLANNING ASSUMPTIONS

- ~~No~~ There could possibly be a new application for a nuclear power reactor license ~~will be received over~~ sometime during the next 5 years.
- There is a large potential for plant life extension applications in early 1991.
- The NRC inspection program will continue to sample selected aspects of plant design and construction, a practice that cannot be relied on to totally preclude all problems associated with quality. The inspection program will employ available probabilistic risk assessment information as one input to prioritize resources and inspection activities.

Should be moved to Program Objs and Guidance Not an assumption

- Some quality assurance (QA) problems can be expected to be identified for plants under construction.
- Uncertainty in forecasting when a plant will be ready for operation is likely to continue; license review schedules are based on the applicants' estimated construction completion dates.
- The designs of the next generation of light water reactors (LWRs) most likely will evolve from existing proven LWR designs rather than be particularly unique designs for which there are no data based on experience.
- No plants currently under active construction will be cancelled or deferred over the next 5 years.
- The useful life of some of the earliest reactors will end by the year 2000.

2. Add insert from next page.

7.3 Ensure that applications for plant life extension can be effectively reviewed to determine if life extension is warranted and to ensure the continued safe operation of plants beyond the present tenure of their operating license.

a. The Office of Nuclear Reactor Regulation (NRR) will comment on the Office of Nuclear Regulatory Research (RES) effort to finalize the plant life extension policy.

b. NRR will assist in the identification and design documentation required to support license extension applications.

c. NRR will monitor RES's aging-related research on degradation of plant components.

d. In the latter part of the planning period, NRR will review licensee submittals for life extension to ensure continued safe operation of plants.

7.4 Reduce the potential for operating events associated with the transition from construction to operation.

a. The NRC will continue to encourage licensees to establish and implement formal programs so that their staffs can make the transition from construction to operation. These programs should ensure training on the practical aspects of operation under the technical specifications and incorporate lessons learned from the experiences of recently licensed plants, which should be made available from industry organizations such as the Institute of Nuclear Power Operations (INPO).

incorporate reference to N lessons learn NUREG-127

b. The NRC will continue to encourage licensees to develop a staged power escalation program during which the operability of primary and secondary system equipment would be demonstrated as a prerequisite for transition to each succeeding tier. The assessment of the correctness and clarity of procedures and the performance capability of the operating staff would be further tested and demonstrated during the period of operational experience.

c. The NRC will ensure that the preoperational test programs fulfill the design and operational requirements in the application. This will include addressing risk significant weaknesses of the plant.

d. The NRC will encourage licensees to adopt initiatives placing more emphasis on integrated system tests during licensee preoperational testing, or to recognize INPO initiatives in lieu of new NRC programs.

Insert for Page III-5

2. Ensure that NRC maintains the capability to thoroughly review a future nuclear power plant license application, either a new application or a request to recommence review of an existing mothballed/deferred plant.

    a. This capability should be drawn largely from existing NRC staff.

    b. A small dedicated group should be established to serve as a focal point for this activity.

e. The NRC will continue the program requiring special NRC regional/headquarters team inspections before licensing to assess the operational readiness of the utility.

4.5 Improve the efficiency of the NRC review process for standard plant designs, minimize complexity and uncertainty in the regulatory process, and enhance the effectiveness of public participation.

a. The NRC will continue efforts to review license applications under the Commission's Standardization Policy.

b. The NRC will encourage licensee efforts to use the reference system design approval and certification process for essentially complete nuclear power plant designs and the licensing reviews of applications referencing these certified designs.

5.6 Reduce future radiation exposures to workers and the general population associated with standardized and advanced design plants.

a. The NRC will continue to require incorporation and adoption of improved designs and techniques for lowering radiation exposures to workers and the general population.

8.7 Develop a regulatory approach to evaluate requests regarding the decommissioning or deferral of reactors and other nuclear facilities.

a. NRR will assist the Office of Nuclear Regulatory Research (RES) and the Office of Nuclear Materials Safety and Safeguards (NMSS) in defining acceptable alternatives, requirements, criteria, and procedures for the decommissioning and deferral of reactors and other nuclear facilities.

b. The NRC will continue specific decommissioning actions for both power and nonpower reactors.

incorporate recent shift in responsibility for decommissioning between NRR & NMSS

7.8 Implement regulatory policies regarding nonpower reactors.

a. The NRC will continue the program to implement 10 CFR 50.64 regarding the conversion from the use of high enriched uranium to the use of low enriched uranium.

b. The NRC will continue reviews of nonpower reactors and Department of Defense (DOD) and Department of Energy (DOE) projects.

c. The NRC will continue efforts to monitor the operating experience of licensed reactor facilities, to promptly assess the safety significance and generic implications of operating events, and to ensure that licensees have taken appropriate corrective actions.

d. The NRC will continue efforts such as regional interaction with licensee management and SALP reviews at 12-18 month intervals or an alternate frequency for plants of regulatory concern. Senior NRC management meetings are to be held periodically to ~~identify plants of regulatory concern and evaluate ways to improve NRC's ability to identify potential plant problem areas that could impact safe operations~~.

e. The NRC will continue to encourage licensees to develop and implement broad effective programs by rewarding plants that demonstrate outstanding safety performance and providing disincentives for those that demonstrate poor safety performance. This effort should include timely and aggressive enforcement actions with significant sanctions when required, distinct levels of regulatory attention based on performance, and enhanced industry self-regulation initiatives in order to ensure encouragement of compliance with NRC regulations and the program objective.

f. The NRC will continue programs to take plant-specific or generic actions, consistent with the Backfit Rule, to ensure compliance with the program goal.

g. The NRC will assess the effectiveness of industry maintenance programs to: (1) ensure that maintenance practices or modifications/changes to operating plants do not reduce existing design safety margins or features, (2) promote increased radiological protection for workers, and (3) ensure that all components, systems, and structures are maintained so that plant equipment will perform its intended safety function when required. The NRC will continue to encourage industry initiatives regarding improved maintenance programs.

h. The NRC will continue programs to perform an efficient and timely review of changes to power plant licenses, designs, procedures, etc., necessary to ensure safe operation.

i. The NRC will continue programs to assess licensee performance using a combination of resident, region-based, headquarters, and team inspections.

evaluate the effectiveness of NRC programs and to identify adjustments to NRC regulatory programs (either increased or decreased regulatory attention) for individual power reactor, fuel facility, and materials licensees that may be appropriate based on licensee safety performance and budgeted NRC resources.

update guidance for this program to capture recent program changes that reflect current NRC emphasis on Human Factors. Same comment applies to Human Factors Research.

HUMAN PERFORMANCE IN REACTOR SAFETY PROGRAM

This program is designed to ensure that trained and qualified operating and technical support personnel interact in such an environment that ensures that their ability to prevent or cope with accidents is not compromised. The program consists of two major elements: Human Performance Evaluation and the Licensing and Examination of Reactor Operators.

The Licensing and Examination of Reactor Operators program element is one of a continuing nature that is required by the regulations in 10 CFR Part 55. History has demonstrated an ever-increasing workload as the population of operating plants and the need for licensed reactor operators has risen. History also has shown that the effort to prepare, administer, and grade content-valid, performance-based, and operationally oriented examinations has more than offset advancements in the technology for preparing the examinations. However, the NRC anticipates that additional efficiencies can be gained as the industry becomes more adept at evaluating its own operators. As confidence is gained with the accreditation process, and as more and more utilities produce plant-specific validated questions based on well-formulated learning objectives, the NRC may begin to consider the shifting of some of the burden of exam preparation and testing to the regulated industry. Some additional efficiencies are also anticipated when the revised examination format is implemented; as a result the NRC resource involvement may be reduced.

The man/machine interface activities of this program will reduce in scope as the number of reviews of Safety Parameter Display Systems (SPDS) and Detailed Control Room Design Reviews (DCRDR) are completed. Some increases are anticipated as a result of the development of new program areas, e.g., operator cultural/organizational climate, plant staff working hours, and measurement and analysis of human factors.

Planned resource expenditures for this program are:

	FY 1988	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993
Program Support	$ 3,617	$ 5,135	$ 4,375	$ 3,450	$ 3,450	$ 3,450
(Staff)	(121)	(117)	(93)	(73)	(71)	(71)

The decline in resources reflects the efficiencies expected in administering reactor operator examinations and the decline in initial examinations as fewer nuclear power plants come on line. The Commission is reviewing its programs to requalify licensed reactor operators. New approaches are being evaluated for administering these examinations. When the Commission has reached a decision on how this program should be implemented in the future, a realignment of agency resources may be necessary.

PROGRAM GOAL

- Ensure that licensees operate nuclear power plants safely and are adequately prepared to respond to accidents by verifying that trained and qualified operating and technical support personnel interact in an environment that ensures that their ability to prevent or respond to accidents is not compromised.

PROGRAM PLANNING ASSUMPTIONS

- Overall, performance at nuclear plants will continue to improve. However, performance among individual plants may vary widely. Nevertheless, performance of individual plants can be improved through vigorous actions by the licensee, the nuclear industry, and the NRC. The number of operating events that occur will depend on various factors, including the number of operating reactors, as well as the number of recently licensed reactors; licensee expertise and the ability to learn from experience; maintenance practices, operator training, and other managerial considerations; and the effects of aging on operating plants.

- Management and human performance will continue to be significant elements in achieving and maintaining safe operations.

- ~~The resources in this plan assume a shifting of the reactor operator requalification examination preparation and testing burden to the regulated industry. The Commission is reviewing its program to requalify licensed reactor operators. New approaches are being evaluated for administering these examinations. When the Commission has reached a decision on how this program should be implemented in the future, a realignment of agency resources may be necessary.~~

replace with insert from next page

PROGRAM OBJECTIVES AND GUIDANCE

1. Ensure that the NRC has an effective regulatory program that focuses on plant safety and that allows all operating plants to achieve a highly trained, motivated, and supported staff of operating and technical support personnel and the timely learning from their own experience and that of others.

INSERT FOR PAGE III-28

The Commission will consider staff recommendations concerning less resource intensive alternatives ~~further improvements~~ to the program to requalify licensed reactor operators but resource allocations and staff planning should be based on meeting the current requirements of 10 CFR 55.57(b)(2)(iv).

a. The NRC will continue the senior reactor and reactor operator examination program to verify reactor operator qualifications and consider new approaches to the requalification examination process. A revised requalification process could allow for the shifting of some of the burden of the testing and certification of licensed operators to the regulated industry. The revised process would ensure that examination quality and examiner credibility are retained.

b. The NRC will continue to train operator licensing examiners to maintain examiner certification, with particular emphasis on onsite examination administration, review and examiner audits, implementation of fundamental examination process, the operator licensing appeal process, and inspection of simulator fidelity.

c. The NRC will continue to monitor the effectiveness of the Institute of Nuclear Power Operations (INPO) Training Accreditation Program, for the development and training of reactor operators and technical support personnel, by performing independent reviews of both the training programs and actual operator staff performance.

d. The NRC will verify, on a plant-specific basis, the adequacy of reactor operator commercial experience at every near-term operating plant. In addition, the NRC will consider the competence and experience of the management and staff before licensing each facility.

e. The NRC will ensure that utility programs place an adequate emphasis on training for severe accident management.

f. Quality leadership and management are essential for safe operations. The NRC role is to assess compliance with its regulations. When there is a lack of compliance, the NRC should try to determine the cause. Quite often the absence of management controls will be a contributor, and the agency should address that issue and require corrective actions.

PROGRAM ELEMENTS AND ACTIVITIES

Human Performance Evaluation (Program Element)

Activities program element are conducted to evaluate whether: (1) nuclear power plant personnel are able to meet job performance requirements; (2) an effective mechanism exists to assess

NRC assessments of licensee corrective actions associated with the Sequoyah and Browns Ferry units.

PROGRAM GOAL

- Ensure that NRC programs focus on safety and perform safety assessments of licensee plant operations to ensure that licensees operate nuclear power plants safely and are adequately prepared to respond to operational events and accidents.

PROGRAM PLANNING ASSUMPTIONS

- Overall, performance at nuclear plants will continue to improve. However, performance among individual plants may vary widely. Nevertheless, performance of individual plants can be improved through vigorous actions by the licensee, the nuclear industry, and the NRC. The number of operating events that occur will depend on various factors, including the number of operating reactors as well as the number of recently licensed reactors; licensee expertise and the ability to learn from experience; maintenance practices, operator training, and other managerial considerations; and the effects of aging on operating plants.

- Industry groups, such as the Institute of Nuclear Power Operations (INPO), the Nuclear Management and Resources Council (NUMARC), and the American Society of Mechanical Engineers (ASME), will continue with operational improvement programs similar to those in place today.

- The NRC inspection program will continue to sample selected aspects of plant operation and maintenance. The inspection program cannot be relied upon solely to preclude all operations, maintenance, and quality problems.

- Additional industry probabilistic risk assessments (PRAs) and the findings from the Individual Plant Examination (IPE) program will continue to provide plant-specific risk insights that should be reflected in the inspection activities at the plants involved.

- The resolution of generic issues and unresolved safety issues will provide additional generic risk insights, and the implementation of the resolutions should serve to reduce risks and provide one basis for determining inspection priorities.

- Newly licensed facilities will continue to experience a learning period of 1 to 2 years, during which operational problems are more likely to occur.

- State and local governments will continue to increase their interest in ~~[illegible]~~ NRC regulatory programs.

d. The NRC will continue programs to evaluate licensee and vendor performance using a combination of resident, region-based, headquarters, and team inspections.

e. The NRC will maintain a confirmatory radiological measurements program in and around each nuclear power plant.

f. The NRC will continue to implement the Commission's policies and procedures for resolving allegations.

g. The NRC will continue programs to monitor radiation and ensure that radiation exposures to offsite populations are maintained "as low as reasonably achievable" (ALARA).

h. The NRC will continue to encourage licensee initiatives to reduce radiation exposures to workers throughout the industry and especially at plants with historically poor records to "as low as reasonably achievable." (ALARA).

2. Ensure that the NRC inspection program is focused to maximize its safety impact on a national basis. This should be achieved through a system that distributes inspection effort within each region, based, in part, on licensee-demonstrated performance.

   a. Information from probabilistic risk assessments (PRAs) and individual plant ~~evaluations~~ examinations (IPEs) should be analyzed and provided to inspectors in a readily useable form.

   b. Risk insights should be applied to team inspections. Training should be provided to regional and headquarters staff involved in team inspections.

   c. Resources will be allocated to gradually phase in the "N+1" principle of resident assignments. Thus, the total number of residents at ~~multi-unit~~ each reactor sites should equal the number of reactor units plus one.

d. (see insert on next page)

3. The NRC inspection program, consisting of headquarters based, resident/region-based, and specialized/team inspections must be well coordinated and integrated. An important aspect of such a program is that licensees recognize and use Regional Offices as the central points of focus in the agency for inspection matters and enforcement actions. Duplicate inspections are to be minimized, if not eliminated, so that the agency and licensee resources are used most efficiently.

4. The Commission believes that the agency can benefit by having more people with operational experience. For this reason

INSERT FOR PAGE III-38

2. d. NRC inspection programs and resources should be adjusted for each plant based on SALP results and budgeted NRC resources. The resident inspection program should represent the minimum NRC inspection presence for reactor sites with the best safety performance, to be supplemented as appropriate by region-based specialist inspections and/or headquarters-based and team inspections for those plants with less than the best SALP scores.

OPERATING REACTOR LICENSE MAINTENANCE AND REGULATORY IMPROVEMENTS PROGRAM

This program is designed to ensure that operating facilities maintain adequate levels of protection of public health and safety. This is accomplished by identifying any inadequacies in plant design and operation (from probabilistic risk assessments, evaluation of operating experience and unanticipated events, resolution of safety issues, inspection findings, licensee proposals, and safety research). Once these issues are identified, this program completes the regulatory actions necessary to correct plant design and operation inadequacies. This program consists of three major elements: Project Management, Safety Evaluations of Licensing Actions, and Regulatory Improvements.

The Project Management program element includes resources for the overall management/review of safety and environmental modifications of operating plants and includes Project Managers, who are the principal point of contact with licensees for licensing matters. The Safety Evaluations of Licensing Actions program element includes resources for detailed engineering and system technical reviews of safety-significant licensing actions. The Regulatory Improvements program element includes resources for activities associated with technical specifications, implementation of the Severe Accident and Safety Goal Policies, inspection/licensing integration, and research and standards coordination.

Incorporate expected increase in licensing actions due to Tech Spec Improvements and IPE submittals.

Over the next 5 years, resource expenditures for this program will increase and responsibilities will evolve for a variety of reasons: a number of plants under construction will be completed, thus increasing the number of operating reactors; an increased number of generic issues are expected to be resolved and implemented in FY 1989, increasing the number of licensing actions; and Project Managers (PMs) will expand their functions to include oversight responsibility for more operational concerns, as well as increased contact and coordination with the Regions. To strengthen overall NRC project management, Project Engineers (PEs) will be used to help the PMs keep abreast of PMs' inspection activities and better evaluate licensee performance. A number of efficiencies are being implemented in activities related to operating reactors licensing actions. First, Project Managers have been assigned technical review responsibility for most license amendment applications that are classified as containing "No Significant Hazards" considerations. It is anticipated that this effort will decrease the amount of time required to complete the reviews and will also allow the technical staff to concentrate on more safety significant areas; however, this effort will increase the work load of the Project Managers. In addition, a new effort is directed toward reducing the resources required to complete new multi-plant action items by investing in up-front reviews and in the development of licensing criteria

- The way utilities are owned and operated will probably not change, although some consideration may be given to the formation of companies that would own generating facilities and sell electricity to transmission and distribution companies.

- There are a number of facilities which will run out of available spent fuel storage space in their spent fuel pool in the 1990's, based on current storage capacity assumptions. Any delays in completing the Monitored Retrievable Storage (MRS) facility may result in the need to store more spent fuel at the commercial nuclear power facilities. Additional spent fuel storage capacity at reactor sites can be achieved through several techniques including installation of high density storage racks, construction of on-site dry storage facilities, or by spent fuel rod consolidation. Licensee requests to increase spent fuel storage capacity are expected in the early 1990's. The NRC will be prepared to complete reviews of these requests in a timely manner.

- The projected number of operating reactors for FY 1989-1993:

	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993
NRR	108	108	108	108	108
OSP	6	7	8	8	9
Total	114	114	116	116	117

PROGRAM OBJECTIVES AND GUIDANCE

1. Ensure that the NRC has effective project management, engineering/safety assessment, and regulatory improvement activities that focus on plant safety and that allow all operating plants to achieve a low frequency of challenges to plant safety systems, a high availability of plant equipment, the timely learning from their own experience and that of others, a low sensitivity of design to safety system challenges, and a high degree of protection for both the workers and the public.

   a. The NRC must discharge its responsibilities efficiently in order to provide for the timely review and implementation of changes to power plant licenses, designs, procedures, etc., necessary to ensure safe operation (e.g., license amendments, technical specification changes, and approved new requirements) and to provide timely responses to the public under 10 CFR 2.206.

make reference to NRC lessons learned - NUREG-1275

aspects of reactor safeguards operations and should incorporate lessons learned from the experiences of recently licensed plants, which should be made available from industry organizations such as the Institute of Nuclear Power Operations (INPO).

b. Before NRC authorizes power operation, licensees should demonstrate the operability of all essential safeguards systems and their capability to perform intended functions reliably.

4. Ensure that all operating power reactor licensees implement Fitness-for-Duty programs to provide reasonable assurance that safety-related activities in nuclear power plant operations are conducted in an environment free of the affects of unauthorized substances.

Update based on status of final rule and include changes as indicated

a. The NRC will continue Fitness-for-Duty rulemaking activity until a final effective rule has been promulgated which establishes requirements for power reactor licensees.

b.

c. The NRC will develop implementation of and implement procedures for inspecting licensee Fitness-for-Duty programs and ensuring that they satisfy NRC regulatory requirements.

d. The NRC will propose changes to its regulatory requirements as appropriate based upon technological developments and lessons learned from licensee Fitness-for-Duty program experiences.

PROGRAM ELEMENTS AND ACTIVITIES

Safeguards Licensing and Inspection (Program Element)

This program element consists of activities associated with licensing and inspection program development, region-based inspections, regulatory effectiveness reviews, and reviews of licensee safeguards plans and amendments. The NRC will continue to utilize its region-based specialists to conduct safeguards inspections at reactor sites. Over the next several years, safeguards inspections will increasingly emphasize the review of licensee programs related to personnel reliability. Approximately 300 safeguards inspections will be conducted each year at operating reactors. About 25 percent of this effort will focus on licensee Fitness-for-Duty programs which ensure that all operating power reactor licensees implement a program to provide reasonable assurance that nuclear power plant personnel are not under the influence of any substance, legal or illegal, or mentally or physically impaired from any cause, which in any way adversely affects their ability to safely and competently perform their duties.

The NRC will develop fitness for duty program review criteria and perform fitness for duty program review for acceptability based on the Commission's final Fitness For Duty rule.

NUCLEAR SAFETY RESEARCH MISSION AREA

(Constant FY 1988 dollars in thousands; staff in full time equivalents.)

	FY 1988	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993
Program Support	$ 89,125	$ 95,735	$120,600	$120,400	$120,150	$120,150
Travel	705	610	610	610	610	610
(Staff)	(246)	(239)	(239)	(238)	(238)	(239)

The NRC's Office of Nuclear Regulatory Research provides independent expertise and information for making timely regulatory judgments, anticipates problems of potential safety significance for which new or expanded knowledge can assist the NRC in pursuing its mission, and develops the regulations and guides necessary to implement Commission policy or technical requirements.

To guide the conduct of regulatory research, the Commission has adopted the following philosophy:

Nuclear Regulatory Research Philosophy

The NRC mission is to ensure the safe design, construction, and operation of the nuclear facilities and activities it regulates. The technologies employed are relatively new and highly complex, and it is often necessary to make regulatory judgments on matters related to safety that are well beyond normal experience-based engineering practice. NRC requires a high confidence level in order to avoid undue risk to the health and safety of the public, especially when these matters involve high-consequence accidents or disposal of radioactive waste. Thus, it is essential to conduct research and develop knowledge to confirm these judgments and provide the technical basis for writing safety regulations and evaluating licensee performance. Furthermore, unforeseen safety problems continue to arise from operating experience. The NRC must have readily available sources of expertise in order to solve these problems

~~Note:~~ Prior to publication of the FY 1989-1993 Five-Year Plan in February 1989, a full-time equivalent position will be transferred from the Nuclear Safety Research mission area to the Special and Independent Reviews, Investigations, and Enforcement mission area for FY 1989-1993, as discussed in the September 12, 1988, memorandum from Eric Beckjord to Paul Bird and Ronald Scroggins.

Priorities: Risk assessment is an important tool for setting priorities. Needs for new knowledge associated with higher risk, taking into account uncertainties, should receive high priority. Deterministic analysis (e.g., fluid flow, heat transfer, or fracture mechanics calculations) and expert opinion are the principal means of examining the uncertainties in NRC estimates of risk.

Program Implementation: To implement the planned research, NRC must consider how to do the work, how to measure the value of the knowledge, and when to close a research project.

Doing the Work: The following are guidelines on how best to obtain the knowledge that research should provide: (1) the research must be relevant to the regulatory issue as demonstrated by preceeding exploratory work or by analyses of the stated issue; (2) the expected value of the knowledge should justify the cost of the research; (3) the best people and organizations should perform the research; (4) to the extent practicable, there should be alternative proposals from which to select the future path of a new research project; (5) near-term research should be timely, considering the need for which it was undertaken; (6) research for the purpose of identifying or resolving unanticipated problems should be done to enable rapid response capability when and if, new situations arise; and (7) peer review of work should be performed to establish technical acceptability and the reviewed work should be widely disseminated to inform the public.

Value: The NRC can measure the value of knowledge gained from research by its end use. The question to be answered is: How much of the knowledge and information produced by research have we put to regulatory use? Regulatory use includes licensing judgments, regulations, and policy documents. The use can be in the form of confirmation of decisions already made or input for decisions to be made. Knowledge and information from research is valuable when it helps to define risk. It is especially valuable when it makes possible cost-effective safety improvements that significantly reduce the risk to the health and safety of the public.

Closure: Closure of NRC research is indicated when the knowledge derived satisfies the needs or when the value of incremental knowledge from further research has tapered off. Then it is time to consider actions to close an issue; to summarize what is known; to provide a readily available compendium of knowledge for use in regulatory functions (i.e., guides, standards, rules, and assessment of safety margins); and, finally, to provide an orderly transfer of research findings to other potential users such as industry or DOE.

Great care appropriate to the risk involved is required in arriving at this judgment.

a. The NRC will complete the reassessment of radioactive source terms and, where appropriate, implement refined source term criteria and modify corresponding regulations and guidance to industry and the staff.

b. The NRC will better characterize the risk importance of radioactive source terms by a systematic analysis of accident sequences, containment performance, and the release and transport of radioactivity. The remaining uncertainties in the knowledge of source terms should be identified and minimized.

c. The NRC will refine the use of probabilistic risk assessment techniques to implement the Commission's Safety Goal Policy in other regulatory applications especially amenable to risk assessment. Whenever probabilistic risk assessment is used in the decision-making process, there must be clear statements of the scope and depth of the assessment, a clear identification of the most significant assumptions, a systematic evaluation of the uncertainties, and a clear description of the treatment of uncertainties.

Update to reflect: a) current status b) role of research in integrated closure plan.

d. Severe accident research will provide timely information in the form of advanced data and models to the Commission's decisionmaking process on severe accidents. This research should address reducing the uncertainties displayed in the draft Reactor Risk Reference Document (NUREG-1150) and described in the Source Term Reassessment (NUREG-0956), resolving comments on the documents and advising the Commission of the regulatory impact of the results presented in these reports. The staff will develop a plan for closure on severe accident phenomena.

e. The NRC will develop proposed modifications to the regulations and other guidance based on new accident behavior and risk data when a sound scientific basis exists.

f. The Commission intends to shift its regulatory emphasis away from detailed, prescriptive requirements toward more general, performance-based requirements. The Severe Accident Policy and the Safety Goal Policy are intended to further this objective using state-of-knowledge data and models from the research program.

g. The NRC will develop and use a hierarchical structure for implementing the Commission's Safety Goal Policy with the objective of ensuring that new regulatory requirements are established within a framework that relies on "top-down" logic provided by the Safety Goal Policy.

storage (MRS) of spent fuel prior to disposal, and for assuring safe disposal of LLW, whether regulated directly by the NRC, or by a state or state compact through the Agreement State Program.

PROGRAM PLANNING ASSUMPTIONS

- The overall high-level waste repository program will proceed according to the basic process established by the Nuclear Waste Policy Act, as amended, in which DOE issues a site characterization plan (SCP) and progress report for NRC and State review in an iterative process leading to a decision to proceed with repository development.
- ~~DOE will issue a formal SCP for the Yucca Mountain site in FY 1989 for NRC review~~.
- A monitored retrievable storage (MRS) facility application is not likely to be submitted to NRC before FY 1994.
- The Center for Nuclear Waste Regulatory Analysis (CNWRA), a federally funded research and development center, will continue to provide limited technical assistance to the NRC in FY 1989 and will be fully operational in FY 1990.
- There will continue to be a wide span of jurisdictions and interest in the nation's high-level waste ~~and low-level waste management~~ program.
- The State of Nevada ~~will become increasingly interactive with~~ NRC's high-level waste program.
- The Environmental Protection Agency (EPA) will reissue a proposed high-level waste standard by FY 1990, and the NRC will undertake a conforming rulemaking.
- The regulation of low-level waste disposal will continue to be a shared responsibility of the NRC and Agreement States. States will continue their efforts to develop regional low-level waste disposal facilities, and states and compacts will generally try to meet the LLRWPAA. However, the ability of all states and compacts to meet these ~~time tables~~ prescribed deadlines is uncertain.
- The LLRWPAA will remain in effect and unchanged during the five-year period.
- The Environmental Protection Agency will promulgate low-level waste standards by FY 1990, and the NRC may be required to undertake a conforming rulemaking. This plan includes resources for this effort.

PROGRAM FOR RESOLVING SAFETY ISSUES AND DEVELOPING REGULATIONS

This program is directed toward the development of the technical basis and related regulatory requirements needed to protect the health and safety of the public from the risk due to generation of electricity by nuclear power plants and the manufacture, use, transportation and storage of nuclear fuel and other radioactive materials. This program supports efforts to ensure that proposed Commission regulations are adequate and that they are developed in an efficient and timely manner.

This program consists of four major program elements: Generic and Unresolved Safety Issues; Standardized and Advanced Reactors; Fuel Cycle, Materials, Transportation and Safeguards; and Developing and Improving Regulations.

This program is basically stable from FY 1989 through FY 1993. Most of the current backlog of generic and unresolved safety issues is expected to be resolved by FY 1990. However, continuing efforts during FY 1991-1993 are required to resolve the few remaining current issues and to resolve new issues expected in the future. Rulemaking activities are also expected to continue at a relatively constant level over the five-year period due to generic issue resolution, implementation of Severe Accident Policy, work toward standardization for future designs, a new rule for license renewal for operating reactors, and the systematic review of current regulations~~for their marginal importance to safety~~.

Planned resource expenditures for this program are:

	FY 1988	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993
Program Support	$ 8,866	$10,900	$12,700	$13,358	$13,788	$13,455
(Staff)	(87)	(84)	(82)	(85)	(85)	(84)

The increase in program support in FY 1989 and FY 1990 is for accelerating work in the areas of regulation development and modification, and educational grants, and for initiating work on a rule for license extension.

PROGRAM GOALS

- Ensure that research provides the technical bases for timely and sound rulemaking and regulatory decisions in support of NRC licensing and inspection activities, including license extension for operating nuclear power plants beyond the 40-year expiration date and in particular, control of rulemaking and cost-benefit analyses that support rulemaking and other generic requirements.

- Proposals for large food irradiation facilities can be anticipated by 1991. New technologies in medical use of nuclear materials may involve new public health and safety issues.

- State and local governments and Indian tribes will become increasingly interactive with NRC in the regulation and oversight of NRC-related activities such as transportation of nuclear materials.

- Optimization of regulatory activities requires definition of levels of radiation risk below which government regulation is unwarranted.

PROGRAM OBJECTIVES AND GUIDANCE

1. Identify, prioritize and resolve on a timely basis generic safety issues ~~that could result in cost-effective requirements,~~ consistent with existing Commission guidance.

   a. The NRC will continue to prioritize potential generic and unresolved safety issues on the basis of the ratio of safety benefit to cost. The NRC will resolve first the high and then the medium priority issues and implement those that meet NRC backfit requirements.

   b. The NRC will integrate the resolution of related generic and unresolved safety issues to achieve the greatest safety improvement ~~at the least cost~~.

   c. The NRC will, to the extent practicable, resolve issues that affect numerous licensees either by rule or generic reviews, rather than by case-by-case reviews so that differences among plants are not unnecessarily increased by NRC actions. The NRC should be prepared to deal with the resolution of severe accident issues at operating reactors.

   d. The NRC will, to the extent practicable, issue for public comment draft technical resolutions for all currently identified unresolved safety issues by the end of FY 1988.

   e. The Office of Nuclear Regulatory Research has developed a systematic approach for prioritizing research programs and activities for determining the appropriate allocation of resources on the basis of potential health and safety benefits for society. This prioritization scheme will be revised to be consistent with the approach adopted by the NRC for prioritizing the five-year plan.

Update based on current status

2. Achieve the safety benefits and economies associated with standard industry approaches to the detailed design of the entire plant, as well as construction, quality assurance, preoperational testing, training, and operations for future nuclear plants.

Update to reflect current status and final rule

a. The NRC will explore the means to provide incentives that will encourage standardization and submit for Commission consideration proposed NRC actions that will encourage industry to proceed with standardization.

b. The NRC will determine the elements of a successful standardization program, by studying the best programs in the United States and in other countries.

c. The NRC will continue with its efforts to cooperate with other Federal agencies (Department of Energy, Federal Energy Regulatory Commission, Department of Labor, and Department of Commerce) to establish the licensing feasibility of DOE-sponsored standard designs.

d. The NRC will issue timely requirements and guidance for implementing the Commission's standardization policies.

e. The NRC will continue to give appropriate priority to reviewing standard design applications and other design applications and other standard design-related documents whose purpose is to further standardization.

f. The NRC will continue to pursue enactment of regulatory reform legislation.

Update to reflect decision on legislative package

g. In concert with the goals on standardization and advanced reactor designs, and based upon the experience gained with the siting of power reactors over the past 25 years, the NRC will review its requirements for new sites and modify the requirements, if necessary, to assure continued compatibility with the health and safety mission of the agency, with environmental impact considerations, and with applicable provisions of regulatory reform legislation.

3. Minimize the complexity and uncertainty of the licensing environment for advanced reactor designs.

a. The NRC will encourage the earliest possible interaction among applicants, vendors, and government agencies for the design of advanced reactors.

b. The NRC will inform industry of NRC's desired characteristics for advanced reactor designs consistent

with the Commission's Advanced Reactor Policy including those relevant objectives specified by the Commission's Standardization, Safety Goal, and Severe Accident Policies.

c. The NRC will issue timely comments on the safety implication and the impact on the regulatory process of advanced reactor designs.

d. The NRC will develop licensing criteria for advanced reactor designs based on existing regulations that are determined to be applicable to advanced reactor designs. The NRC will also develop new criteria for design characteristics that are unique to advanced reactors.

e. The NRC will require, as a minimum, the same degree of protection of the public and the environment for advanced reactor designs, that is required for the current generation of reactors. Advanced reactors are expected to provide enhanced margins of safety as a result of simplified, inherent, passive, or other innovative means to accomplish their safety functions.

f. The NRC will maintain the technical capability (including models and data base) to review innovative and advanced reactor designs that might be presented to the Commission for licensing.

4. Develop a regulatory approach to evaluate requests to decommission reactors and other nuclear facilities and to extend operating licenses.

a. The NRC will continue to define acceptable alternatives, requirements, and criteria for decommissioning before receiving a request for decommissioning.

b. The NRC will continue, in conjunction with DOE, industry and the public, to determine the technical and policy issues associated with the extension of nuclear power plant operating licenses, ~~resolution of licensing issues; and~~ definition of the criteria and process for review of requests to extend these licenses. The NRC will also maintain a program of international cooperation relative to plant life extension.

appropriate licensing and regulatory

and resolution of such licensing issues

5. Establish level of radiological risk sufficiently low that NRC regulatory actions are not needed for further risk or hazard reduction.

a. Following Commission action on alternatives for a proposed policy, the NRC will hold an international workshop to exchange views with other countries regarding

already stated in low level waste section of the Plan

the next 5 years. ~~In particular, States that are likely to site low-level waste disposal facilities may request limited Agreement State status~~.

Not meaningful to outside reader - revise to indicate trends in major workloads.

- The actual licensing work load receipts for the next 5-year period will not deviate significantly from the annual "Office of Nuclear Material Safety and Safeguards Licensing Work Load Forecast."
- Proposals for large food irradiation facilities can be anticipated by 1991.
- New technologies in medical use of nuclear materials may involve new public health and safety issues.
- Commission interest will remain high in the regulatory oversight of materials licensees.
- Although regulatory responsibility for nonradiological risks associated with the use of nuclear and radioactive materials will continue to be divided among several Federal and State agencies, NRC will continue to take an active leadership role, as appropriate.

INSERT →

- No efforts will be made by industry or the government to initiate fuel reprocessing.
- The NRC has referred the issue of the need for Federal regulation of ~~regulating~~ naturally-occurring and accelerator-produced radioactive material to the Committee on Interagency Radiation Research and Policy Coordination for its recommendations. The NRC does not anticipate that it will regulate naturally-occurring and accelerator-produced radioactive material during the period covered by the Five-Year Plan.
- NRC will not license individual radiographers.

PROGRAM OBJECTIVES AND GUIDANCE

1. Ensure that the NRC's regulatory approach provides for licensees maintaining releases of radioactive materials from their place of use and exposures to workers and members of the public below regulatory limits and as low as reasonably achievable, carefully selecting and training personnel and providing appropriate equipment and facilities, and learning from operational experience.

   a. The NRC will perform timely reviews of license applications to support the goal for turnaround time of 75 calendar days for new applications and license amendments for byproduct materials licenses. Byproduct materials renewals will be excluded from the average,

- There could possibly be an application for a new fuel facility license sometime during the next five years.

but will be processed on a first-in, first-out basis. The effort necessary to process the licensing work load or to conduct routine inspections may be affected by findings from the operational safety team assessments and requirements imposed by new regulations, such as the basic quality assurance requirements in medical use or the general requirements for decommissioning nuclear facilities. When the extent of these changes is clear, the impact on resource requirements will be assessed.

→ INSERT

c. The NRC will issue inspection reports in a timely manner to enable the Office of Enforcement to take timely and aggressive enforcement action that includes significant sanctions to improve compliance and safety.

d. The NRC will continue to audit licensee performance, increase the frequency of independent audits/inspections for selected categories of material licensees and for licensees that demonstrate poor performance, expand enhanced operational safety assessments, and evaluate licensee uses of radioactive material on a continuing basis.

e. The NRC will continue regulatory efforts to minimize medical misadministrations. A performance-based rule for quality assurance procedures in medical use will be completed by the Office of Nuclear Regulatory Research in FY 1989 and implemented by the Office of Nuclear Material Safety and Safeguards during the planning period. Consideration will also be given to the development of a rulemaking for a more comprehensive quality assurance program for medical use licensees. The Office of Nuclear Material Safety and Safeguards will continue to provide technical assistance to and coordinate with the Office of Nuclear Regulatory Research for these regulations.

The NRC will continue regulatory efforts to improve radiography safety. The Office of Nuclear Material Safety and Safeguards will examine the need for additional radiography safety requirements through FY 1991.

f. After the Office of Nuclear Regulatory Research completes the final rule on Standards for Protection Against Radiation (10 Code of Federal Regulations (CFR) Part 20) the Office of Nuclear Material Safety and Safeguards will provide technical assistance to and coordinate with them to update regulatory guides associated with the revised regulation. The Office of Nuclear Material Safety and Safeguards will complete and maintain standard review plans and inspection

b. The NRC will maintain the capability to conduct a thorough review of a major fuel facility license application, should it receive one.

procedures associated with this regulation. The Office of Nuclear Material Safety and Safeguards will also communicate the new regulatory requirements and NRC positions to its licensees.

f.g The NRC will ensure implementation of its responsibilities under the West Valley Demonstration Project Act and the Memorandum of Understanding between the Department of Energy (DOE) and the NRC. The NRC will provide timely reviews of DOE safety analysis and perform monitoring visits and preoperational assessments of key systems consistent with the DOE operational schedule.

f.h The NRC will improve its communications (e.g., workshops and newsletters) with material licensees so that licensees are better informed of NRC requirements, lessons learned from incidents, results of enforcement actions, etc. Through improved communications, the NRC should be promptly informed of licensee problems, incidents, allegations, etc.

f.i The NRC will pursue cooperation with existing private organizations (e.g., the American Society of Non-Destructive Testing; the American College of Radiology; and groups representing the public, such as the American Association of Retired Persons) and other Federal/State organizations (e.g., the Joint Committee on Accreditation of Health Care Organizations, and the Conference of Radiation Control Program Directors, Inc.), which have a safety-related oversight role to enhance NRC efforts to improve material license safety.

f.j The NRC will evaluate alternative ways to improve the accountability for nuclear materials to include methods to track commercially employed nuclear materials which could, under special circumstances, lead to public health hazards.

f.k The NRC will coordinate with the International Atomic Energy Agency (IAEA) in evaluating the possibility of establishing a system for notifying regulatory authorities of shipments of radioactive material into their countries, as one means of improving the control and accounting of nuclear material.

f.l. The NRC will strengthen its existing practices and guidance (e.g., NRC staff training and examination of

licensee performance) to ensure that vigorous enforcement, including license denial or revocation, is recognized and appropriately used as a regulatory tool.

X. ~~The NRC will establish and implement financial assurance requirements to ensure safe operations and post accident cleanup can be reasonably assured~~.

m. The NRC will develop and, following Commission approval, implement a methodology and approach for considering human factors in materials licensing and inspections.

n. The NRC will discourage long-term storage as a substitute for disposal of surplus radioactive material, taking into account the availability of disposal facilities, and coordinating with the DOE as appropriate.

o. The NRC will review and revise, as appropriate, its regulatory requirements for general licensees.

2. Ensure that the disparity in levels of risk associated with nonreactor uses of nuclear material is recognized in the NRC regulatory approaches.

a. By FY 1990, the NRC will determine ways to improve its ability to differentiate and measure different levels of performance and risk associated with nonreactor uses of nuclear material.

UPDATE WITH CURRENT STATUS

b. In FY 1989, the NRC will initiate a pilot program to categorize and measure licensee performance according to the risk of nonreactor uses of nuclear material.

c. In FY 1991, the NRC will define a range of initiatives to produce timely corrective action for licensees that do not satisfy the NRC measures of performance.

3. Provide leadership to better ensure that the nonradiological risks associated with nonreactor uses of radioactive and nuclear material are recognized and appropriately regulated.

a. By FY 1990, the NRC will expand licensing and inspection staff training to better identify the range of nonradiological risks associated with the use of radioactive material and will provide leadership in coordination with other organizations to ensure hazards are appropriately regulated by the appropriate agency.

NUCLEAR MATERIAL TRANSPORTATION AND SAFEGUARDS PROGRAM

This program is designed to ensure that licensees transport nuclear materials in packages that will provide a high degree of safety in the event of a transportation accident and that they deter, detect, and protect against the radiological sabotage, theft, or diversion of special nuclear materials at licensed nuclear fuel-cycle facilities and in transport. This program is composed of three major elements: Regulating the Transport of Nuclear Materials, Safeguards Licensing and Inspection, and Specialized Safeguards Evaluations and Coordination.

Over the 5-year period from FY 1989 through FY 1993, the review of transport package designs to be used for shipments to facilities authorized under the Nuclear Waste Policy Act of 1982 will increase. In FY 1989-1991, the program will develop review criteria related to the certification of plutonium shipment packages and for actual package certification reviews if an application is received pursuant to the Nuclear Waste Policy Amendments Act of 1987, Section 5062, and funds are provided by a foreign government. In FY 1989-1990, an NRC/DOE comparability review of transport protection requirements for Category I and Category II strategic special nuclear materials will be initiated.

Planned resource expenditures for this program are:

	FY 1988	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993
Program Support	$ 2,430	$ 3,545	$ 3,595	$ 3,100	$ 3,200	$ 3,200
(Staff)	(86)	(86)	(86)	(83)	(82)	(82)

Resources for this program remain relatively constant during the 5-year period.

PROGRAM GOAL

- Ensure that current and future transport of nuclear materials is safe and adequately safeguarded. In addition, ensure that special nuclear material is accounted for and adequately protected against theft, diversion, and radiological sabotage.

PROGRAM PLANNING ASSUMPTIONS

- The number and type of nonreactor licenses will remain relatively constant over the next few years. The actual licensing

Not meaningful to the outside reader - can't indicate trends in major worlds

work load receipts for the next 5-year period will not deviate significantly from the annual "Office of Nuclear Material Safety and Safeguards Licensing Work Load Forecast."

- The regulation of nuclear materials in transport will continue to be a shared responsibility of the NRC and the Department of Transportation.

- The U.S. domestic safeguards environment is not likely to change in regard to nuclear theft and radiological sabotage in any way that will necessitate major changes to protective measures requirements for licensees. However, the changing nature of the threat will require that NRC continually review the threat environment so that timely action can be initiated for NRC-licensed facilities.

- No efforts will be made by industry or the Government to initiate fuel reprocessing.

Update with Current Status

- The NRC will likely receive an application for plutonium shipment packages during FY 1989.

- The current level of NRC funding required to support the Nuclear Materials Management and Safeguards System will not change.

- Commission interest in the international safeguards and security area is expected to continue during FY 1989-1993 at about the current level of activity.

PROGRAM OBJECTIVES AND GUIDANCE

1. Ensure that the NRC safeguards regulatory approach at non-reactor facilities provides for licensees: accounting for and protecting special nuclear material against theft or diversion; maintaining adequate systems to protect facilities against radiological sabotage; safely transporting and adequately protecting special nuclear material during transit; adequately selecting and training personnel, and providing them with appropriate equipment; and learning from their own and others' operational experiences.

   a. The NRC will improve standards of performance and define measures of performance for safeguards licensees by FY 1991. The licensee implementation of the Low-Enriched Uranium and High-Enriched Uranium Reform Amendments and comparability upgrade requirements will be completed at the end of FY 1991.

   b. The NRC will continue to implement a program to identify, before an event occurs, needed improvements in the licensees' safeguards programs. This program

based on assessment of evolving trends and patterns, as well as significant events.

k. The NRC will continue to provide technical assistance to and coordinate with the Office of Nuclear Regulatory Research for safeguards rulemaking actions associated with nonreactor facilities and transportation activities.

2. Ensure that nuclear materials are transported in packages that ensure a high degree of safety under normal and accident transport conditions.

a. The NRC will continue to develop ways to improve its ability to review package designs for the transportation of nuclear material.

b. The NRC will continue to develop regulatory approaches commensurate with the consequences associated with the transportation of nuclear materials.

c. The NRC will continue to ensure that its responsibilities in regulating the transportation of nuclear materials are coordinated with those of other Federal agencies to achieve an integrated Federal program for protecting the public health and safety, common defense and security, and the environment, while minimizing unnecessary impacts on the regulated industry. The staff will conduct transportation workshops, as necessary.

Update with current status

d. In FY 1989, the NRC will initiate a study for the development of review criteria related to the certification of plutonium shipment packages and will begin an actual package certification review if an application is received for transportation of plutonium from a foreign nation to a foreign nation pursuant to the Nuclear Waste Policy Amendments Act of 1987, Section 5062, and funds are provided by the foreign government.

PROGRAM ELEMENTS AND ACTIVITIES

Regulating the Transport of Nuclear Materials (Program Element)

This program element consists of the NRC activities associated with the transportation of radioactive materials, such as special nuclear materials, industrial radiography devices, and low-level, high-level, and transuranic radioactive wastes. These activities include review and evaluation of transport package applications and issuance of package certifications, inspection of licensees' quality assurance and control programs for packaging and shipping these materials, and inspections of physical security measures during shipments of special nuclear material and spent fuel. The NRC

The NRC is currently participating with DOE, the State of Nevada, a coalition of Nevada local governments, a coalition of industry groups, the National Congress of American Indians, and a coalition of national environmental groups on a committee to negotiate a rulemaking on the Licensing Support System for the high-level waste licensing proceeding.

Update to reflect current status

The Commission has approved the concept of the NRC acting as administrator for the Licensing Support System, once system development has been completed by the DOE. The NRC plans to continue its participation on the negotiating committee, select the administrator, coordinate with DOE on the design and development of the Licensing Support System, and formulate plans to start administering the system in the early 1990's.

Although several NRC offices are either involved with the negotiated rulemaking or are otherwise following the Licensing Support System development as it relates to NRC's regulatory responsibilities, no resources are specifically identified in this plan for the system. The NRC expects to negotiate a Memorandum of Understanding with the DOE to provide for the transfer of resources to the NRC in amounts sufficient for the operation, maintenance, and oversight of the system.

The LLRWPA makes each State responsible for providing for the disposal of low-level waste generated within its borders. The LLRWPAA gives the NRC responsibility for defining low-level waste, for licensing the Federal disposal of commercial low-level waste greater than Class C (as defined in 10 Code of Federal Regulations (CFR) Part 61), for granting States and waste generators emergency access to non-Federal disposal facilities, for providing regulatory guidance on alternatives to conventional shallow-land burial, for ensuring that license reviews can be completed within 15 months, and for expeditiously addressing petitions to declare wastes as below regulatory concern.

The UMTRCA directs the NRC to develop regulations and to license the disposal of mill tailings from licensed uranium mills. Congressional action has directed that the NRC regulations be amended to conform to the Environmental Protection Agency (EPA) standards for both radiation and groundwater protection. The UMTRCA directs the NRC to approve licensee mill tailings disposal plans, to review and concur in the site-by-site implementation of the DOE program for mill tailings remedial actions, and to license DOE's possession of these sites.

This mission area consists of two major programs: High-Level Waste and Low-Level Waste. These programs and their resources and activities for the next 5 years are described below. The research conducted by NRC's Office of Nuclear Regulatory Research contributes to the technical basis for NRC nuclear waste regulations and licensing decisions, and is described in the Nuclear Safety Research mission area.

Update with Current Status

	Calendar Year
Issue site characterization plan	December 1988
Start exploratory shaft construction	Second quarter 1989
Begin in situ testing	Fourth quarter 1990
Issue draft environmental impact statement	1993
Issue final environmental impact statement	1994
Submit site-recommendation report to the President	1994
Submit license application to the NRC	1995
Receive construction authorization from the NRC	1998
Begin repository construction	1998
Begin phase 1 operations (400 metric tons per year)	2003
Begin phase 2 operations (900 metric tons per year)	2006
Attain full-design acceptance schedule (3,000 metric tons per year)	2008

Planned resource expenditures for this program are:

	FY 1988	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993
Program Support	$ 7,723	$ 7,385	$ 8,650	$ 8,450	$ 8,350	$ 8,350
(Staff)	(76)	(76)	(77)	(72)	(73)	(74)

The funding increase in FY 1990 is to support the increased level of activities necessary to evaluate DOE's site characterization program so that potential licensing issues can be identified and resolved early. The increased funds are required to develop additional staff technical positions on potential licensing issues, increase observation of DOE's quality assurance audits at the site and develop new independent staff assessment methods that support both the License Application Review Plan and review of DOE's site characterization program.

PROGRAM GOAL

- Conduct a high-level waste repository regulatory program that provides DOE with necessary guidance; identifies and resolves major licensing issues, as early as possible; and enables the Commission to carry out its responsibilities contained in the NWPA, the NWPAA, and any subsequent legislation.

PROGRAM PLANNING ASSUMPTIONS

- The overall high-level waste repository program will proceed according to the basic process established by the NWPA, as amended, in which DOE issues an SCP and progress reports for NRC and State review in an iterative process leading to a decision on whether to proceed with repository development.

- ~~DOE will issue a formal SCP for the Yucca Mountain site in FY 1989 for NRC review~~.

- DOE will issue approximately 30 study plans for near-term work, primarily related to surface testing and exploratory shaft activities, by the end of FY 1989. Subsequently, DOE will issue approximately 70 additional study plans for later-term work such as in situ testing.

- NRC staff initiatives and petitions for rulemakings will result in an average of two rulemakings per year being initiated during FY 1990-1993.

- The NRC will have increased interaction with the State of Nevada ~~will become increasingly interactive with~~ as the national ~~NRC's~~ high-level waste program. The State also will conduct oversight activities relative to DOE's waste management activities at the Yucca Mountain site. proceeds.

- The NRC actions required under the NWPA, the Atomic Energy Act of 1954, the National Environmental Policy Act, the Energy Reorganization Act of 1974, and other applicable legislation will be interpreted narrowly and will not encompass broad oversight of the entire NWPA implementation (e.g., review of DOE siting decisions and methodology, cost, and schedule considerations).

- There will continue to be a wide span of jurisdiction and interest in the nation's high-level waste management program and interagency agreements (e.g., between DOE and the Mine Safety and Health Administration on mine safety requirements and between DOE and the National Academy of Sciences on oversight) will not impair the execution of NRC's regulatory responsibilities.

- The NRC's rulemaking on the Disposal of Radioactive Waste (SECY-88-51) assumes that materials that are high-level waste for licensing purposes under the Energy Reorganization Act of 1974 will also be regarded as high-level waste under the NWPA. This includes primary reprocessing waste streams at DOE facilities. This could result in sizeable NRC efforts in this area. However, due to significant uncertainties in the schedule, no resources are included in this plan for licensing defense waste disposal.

- An MRS facility application is not likely to be submitted to NRC before FY 1994.

- Utilities will continue to expand onsite storage of spent fuel cognizant that an MRS facility may not be available under the terms of the NWPAA, until approximately the year 2000, at the earliest. Additional spent fuel storage capacity at reactor sites can be ~~achieved by dry storage in the early 1990s (1991-1998)~~ achieved through several techniques including installation of high density storage racks, construction of on-site dry storage facilities, or by spent fuel rod consolidation. Licensee requests to increase spent fuel storage capacity are expected in the early 1990s.

- The Center for Nuclear Waste Regulatory Analysis (CNWRA), a Federally-funded research and development center, will continue to provide limited technical assistance to the NRC in FY 1989 and will be fully operational in FY 1990.

- The NRC staff will be required to interact with the Office of the Nuclear Waste Negotiator, the Nuclear Waste Technical Review Board, and the MRS Commission created by the NWPAA.

PROGRAM OBJECTIVES AND GUIDANCE

1. Ensure that the NRC has a high-level waste regulatory program that meets statutory timeframes for NRC actions, as dictated by DOE schedules, and provides for the proper siting, design, construction, and operation of a high-level waste repository by DOE; and provides for the safe closure of, prevention of inadvertent human intrusion into, and reasonable assurance of the long-term performance of the repository without the need for active maintenance by DOE.

   a. The NRC will continue the current program to establish a technically sound and usable system for definition and categorization of wastes.

   b. The NRC will continue the current program to develop the regulatory framework and license application review capability for determining whether barriers in the repository system perform satisfactorily in providing reasonable assurance of waste isolation.

   c. The NRC will continue the program to conduct preapplication reviews of the DOE high-level waste program to ensure that it provides timely regulatory guidance on technical issues and timely identification and resolution of issues.

   d. The NRC will continue an active program of interaction and cooperation with the State of Nevada, affected counties and Indian tribes, and interest groups.

e. The NRC will interact with the Office of Nuclear Waste Negotiator and with the Nuclear Waste Technical Review Board, as necessary.

f. The NRC will continue to examine and streamline the repository licensing process.

g. The staff will continue to investigate and recommend to the Commission methods to facilitate the licensing decision regarding of the high-level waste repository.

h. The NRC will implement a quality assurance requirement/guidance taking advantage of lessons learned from reactor licensing that will result in adequate quality assurance by the DOE.

i. NRC's initiatives form the base program essential to the emplacement of the regulatory framework and guidance necessary to resolve licensing issues before DOE submits a repository application. This work on issue resolution will be crucial for the NRC to meet the NWPA-mandated 3-year licensing review. However, NRC prelicense reviews (activities generally dependent on DOE site-specific efforts and products, e.g., review of SCP) will be accomplished at the expense of these initiatives to the extent that available resources are inadequate to accomplish both.

j. The offices of Nuclear Material Safety and Safeguards, Nuclear Regulatory Research, and the General Counsel will coordinate waste management activities closely (including efforts to streamline and facilitate the repository licensing process) to ensure efficient and effective program planning operations and products (e.g., rulemakings, the interactive and concurrent development of the Office of Nuclear Material Safety and Safeguards review plans for repository licensing, and the development of the Office of Nuclear Regulatory Research standard format and content guide for the licensing application).

k. If it becomes clear that the NRC cannot maintain its schedule to review a high-level waste repository site proposed by DOE, because of insufficient resources or other factors, the staff will promptly inform the Commission so that the required notification can be made to the DOE and the Congress.

waste facility performance assessment and decommissioning guidance in FY 1990.

PROGRAM GOAL

- Ensure that low-level radioactive waste and uranium mill tailings are managed safely. Develop and implement a program for the decontamination and decommissioning of licensed facilities.

PROGRAM PLANNING ASSUMPTIONS

- The LLRWPAA will remain in effect and unchanged during the 5-year period.
- States will continue their efforts to develop regional low-level waste disposal facilities, and States and compacts will generally try to meet the timetables of the LLRWPAA. However, the ability of all States and compacts to meet these timetables is uncertain.
- There will continue to be a wide span of jurisdictions and interest in the nation's low-level waste management program.
- The number of Agreement States will probably increase during the next 5 years. In particular, States that are likely to site low-level waste disposal facilities may request limited Agreement States status.
- The actual licensing work load receipts for the 5-year period will not deviate significantly from the annual "Office of Nuclear Material Safety and Safeguards Licensing Work Load Forecast."
- NRC will not be required to license the disposal of the low activity fraction of the wastes removed from the high-level waste tanks at Hanford, West Valley, and Savannah River.
- Requests for assistance for low-level waste disposal guidance from States and compacts will steadily increase over the next 5 years, particularly in their need for training.
- Licensing reviews for the Hanford and Barnwell low-level waste disposal sites will continue to be performed by the Agreement States, except for criticality safety and physical security reviews which will be performed by the NRC.
- The NRC has referred the issue of naturally-occurring and accelerator-produced radioactive material to the Committee on Interagency Radiation Research and Policy Coordination for its recommendations; however, the NRC will develop guidance for the disposal of naturally-occurring and accelerator-

produced radioactive material at NRC/Agreement States-licensed waste-disposal facilities.

- Although permitted by regulation, NRC is not expecting an application for a greater than Class C waste disposal facility, but may be required by legislation to review storage of greater than Class C. This plan does not include resources for such actions.

- NRC will not undertake rulemaking to address alternatives to shallow-land burial, decommissioning criteria, or the third step of conformance to the EPA's UMTRCA standards.

- Technologies proposed in low-level disposal license applications reviewed by the NRC will be those addressed in the standard format and content guide and the standard review plan.

- The EPA will promulgate low-level waste standards by FY 1990 and the NRC will be required to undertake a conforming rulemaking. Due to uncertainties in the schedule, this plan does not include resources for such actions.

- The uranium recovery industry will continue to be in a depressed condition, and the predominant regulatory involvement will be related to decontamination, decommissioning, and reclamation of the currently-licensed uranium mills. However, nonconventional uranium recovery operations (in situ) will continue.

- The DOE will get a legislative revision that will extend the uranium mill tailings Title I program through FY 1994 and will permit groundwater restoration to continue beyond that date. The NRC will continue its concurrence and oversight role and will eventually license DOE for custody of all Title I sites.

Update to reflect current status

- The general requirements for the decommissioning of nuclear facilities rule will become effective in FY 1988. Staff reviews of decommissioning funding plans will begin in FY 1989.

PROGRAM OBJECTIVES AND GUIDANCE

1. Ensure that the NRC program for low-level waste management, uranium mill tailings regulation, and decommissioning provides for the safe management and disposal of all types of low-level waste and mill tailings.

   a. The NRC will continue the current program to: (1) develop regulations, guidance, and evaluation methodologies for use by applicants, appropriate State agencies, and the NRC staff that permit timely processing of low-level

Update based on current status and Commission direction to stabilize the performance indicator program and to develop meaningful maintenance indicators.

The important program schedules and milestones are as follows:

1. Issue Performance Indicator Reports - every calendar quarter.
2. Implement cause codes/corrective actions (trial basis) - June 1988.
3. Complete Commission Paper on the results of the validation of safety system function trends and maintenance indicators in November 1988.
4. Continue development of programmatic and risk-based indicators - FY 1989-1990.

Planned resource expenditures for this program are:

	FY 1988	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993
Program Support	$ 4,098	$ 3,920	$ 5,250	$ 5,250	$ 5,250	$ 5,250
(Staff)	(48)	(48)	(48)	(47)	(47)	(48)

Increases in program support from FY 1989 to FY 1990 are to provide increased trends and patterns analysis of operating events and to further the trending and analysis of component failures in nuclear power plants. In addition, the funding increase is to improve the capability to conduct probabilistic risk assessment of operational events and to support special plant-specific studies of operating experience.

PROGRAM GOALS

- Ensure that licensees operate nuclear power plants safely and are adequately prepared to respond to accidents.
- Ensure that the uses, transportation, storage, and disposal of nuclear and radioactive materials are safe and are provided with adequate safeguards.
- Ensure that special reviews and investigations of NRC activities are continued.

PROGRAM PLANNING ASSUMPTIONS

- ~~Performance~~ at nuclear plants will continue to vary ~~widely~~; however, ~~performance~~ of individual plants can ~~be~~ improved through vigorous action ~~by~~ the licensees, the nuclear industry, and the NRC. The ~~number of~~ events that occur will depend on the number of relatively new operating reactors, how well the licensees learn from experience, and the ~~effects~~ of aging on operating plants.

Replace with insert on next page to maintain consistent with page III-18

INSERT FOR PAGE VII-13

Overall, performance at nuclear plants is expected to continue to improve. However, performance among individual plants may vary widely. Nevertheless, performance of individual plants can be improved through vigorous actions by the licensee, the nuclear industry, and the NRC. The number of operating events that occur will depend on various factors, including the number of operating reactors, as well as the number of recently licensed reactors; licensee expertise and the ability to learn from experience; maintenance practices, operator training, and other managerial considerations; and the effects of aging on operating plants.

- Industry groups, such as the Institute of Nuclear Power Operations and the Nuclear Utility Management and Resources Committee, will continue with operational improvement programs similar to those in place today.
- Significant operational issues, whose potential effect on safety will require further study, will continue to be identified by the staff, the public, and the industry.
- There will continue to be a wide spectrum of uses and performance by nonreactor licensees; however, performance can be improved through vigorous action by the NRC and licensees.

PROGRAM OBJECTIVE AND GUIDANCE

1. Ensure that the NRC maintains a regulatory program that provides for all operating reactor and nonreactor licensees achieving a low frequency of challenges to safety systems and timely learning from their own and others' operating experience.

   a. The NRC will continue to evaluate plant performance and other means to improve its ability to identify potential plant problems that could affect safe operations.

   b. The NRC will continue to evaluate the safety experience of licensed nuclear fuel and radioactive materials facilities.

   c. The NRC will continue to refine and improve standards and measures of performance.

   d. The NRC will continue cooperative programs with other organizations and countries to learn from operating experience.

   e. The NRC will continue to maintain a capability to evaluate operational experience.

   f. The NRC should develop an integrated program for the collection, analysis, and distribution of data needed for risk assessment.

Revise for clarity and include description of AEOD's independent oversight role.

PROGRAM ELEMENTS AND ACTIVITIES

Operational Data Analysis (Program Element)

This program element comprises the review of nuclear power reactor licensee event reports; review of extensive documentation of events involving NRC headquarters daily reports, 10 Code of Federal

PROGRAM GOAL

- Continue to perform independent reviews of NRC activities regarding the licensing/operation of nuclear facilities and the regulation of nuclear waste activities consistent with applicable statutes, regulations, and Commission guidance.

PROGRAM PLANNING ASSUMPTIONS

- Significant generic design and operational issues, whose potential effect on safety will require further study, will continue to be identified by the staff, the Advisory Committee on Reactor Safeguards, the public, and the industry. Many issues will require long-term evaluation to determine whether changes to NRC safety requirements are needed.

- There will be continuing and increasing requirements to review and provide advice on NRC programs related to high-level and low-level nuclear waste management, transportation, storage, and disposal.

PROGRAM OBJECTIVES AND GUIDANCE

1. Continue to meet statutory requirements by maintaining an Advisory Committee on Reactor Safeguards to provide safety reviews and independent advice to the Commission.

   a. The committee will continue to provide safety reviews of and independent advice on the safe operation of reactors and related licensing issues.

   b. The committee will continue to provide reviews of and independent advice on the development of an implementation plan for the safety goal policy.

   c. The committee will continue to provide reviews of and independent advice on the identification and resolution of generic safety issues and safety-related standards.

   d. The committee will continue to provide reviews of and independent advice on the safety-related aspects of the NRC regulatory process and safety research activities.

2. Provide the Commission with technical review of and independent advice on all aspects of nuclear waste management and disposal, including transportation, storage, and safeguarding, as appropriate, by maintaining an Advisory Committee on Nuclear Waste.

INDEPENDENT ADJUDICATORY REVIEWS PROGRAM

This program is designed to conduct hearings pursuant to the Administrative Procedure Act, the Atomic Energy Act of 1954, and the National Environmental Policy Act and to provide tribunals to review and issue initial and final decisions in statutory licensing matters and other Commission-assigned proceedings. Organizationally, this program is carried out by the Atomic Safety and Licensing Board Panel and the Atomic Safety and Licensing Appeal Panel.

For the period FY 1989-1993, hearings arising out of licensed nuclear operations and waste management and storage issues will continue as the work of this program evolves from a principal work load of construction and operating license applications.

Planned resource expenditures for this program are:

	FY 1988	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993
Program Support	$ 752	$ 871	$ 880	$ 880	$ 880	$ 880
(Staff)	(40)	(40)	(40)	(40)	(40)	(40)

PROGRAM GOAL

- Continue to conduct independent adjudicatory reviews of NRC licensing and enforcement activities.

PROGRAM PLANNING ASSUMPTIONS

- ~~The NRC responsibility to protect the public health and safety will continue to involve many complex and controversial technical and legal issues. Thus, it is necessary that the NRC maintain reviews and activities independent of its line organization.~~

- Future work will change as the new reactor licensing work load declines and activity associated with the high-level waste repository and the operation of licensed facilities increases.

~~Note:~~ Prior to publication of the FY 1989-1993 Five-Year Plan in February ~~1989~~, a full-time equivalent position will be transferred from the Nuclear Safety Research mission area to the Special and Independent Reviews, Investigations, and Enforcement mission area for FY 1989-1993, as discussed in the September 12, ~~1988~~, memorandum from Eric Beckjord to Paul Bird and Ronald Scroggins.

EXTERNAL INVESTIGATIONS PROGRAM

This program is designed to conduct agency investigations of allegations of wrongdoing by NRC licensees. Such investigations are conducted through the Office of Investigations.

The number of cases involving applicants for operating licenses is decreasing, while the number of cases involving operating facilities and nonreactor licensees is increasing. ~~Each case is thoroughly and completely investigated.~~ Subsequent findings and reports are disseminated in a timely manner to cognizant program offices and/or regions to ensure prompt attention to safety concerns and potential enforcement actions.

Cases meeting the Commission case-opening threshold are projected to remain at 60 to 90 cases per year for each of the next 5 years. ~~These cases are expected to become much more complex and controversial as allegations regarding wrongdoing at operating plants and facilities increase~~.

Update to current status

In response to congressional directives, effective February 1, 1988, the Office of Investigations began reporting as a unit to the Executive Director for Operations. Thus, rather than reporting directly to the Commission, the Office of Investigations now reports to the Commission through the Office of the Executive Director for Operations. Full compliance with the conferee's directive will occur as a second step after a permanent organizational plan for integrating the investigative functions of the Office of Investigations within the Office of the Executive Director for Operations has been developed by the Commission.

Planned resource expenditures for this program are:

	FY 1988	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993
Program Support	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
(Staff)	(45)	(45)	(45)	(45)	(45)	(45)

PROGRAM GOAL

- Continue to conduct investigations of alleged wrongdoing by NRC licensees and others within NRC's regulatory jurisdiction.

PROGRAM PLANNING ASSUMPTION

- The NRC responsibility to protect the public health and safety will continue to involve ~~many complex and controversial technical and legal issues~~ issues where investigative expertise is required to determine appropriate regulatory action.
- Workloads are expected to remain essentially constant over the planning peri

other assumptions?

PROGRAM OBJECTIVE AND GUIDANCE

1. Ensure that the NRC maintains a regulatory program to provide for investigations of allegations of wrongdoing by NRC licensees and others within NRC's regulatory jurisdiction.

   a. Consistent with available resources, the office will perform investigations in a timely manner and will initiate and terminate them in accord with approved Commission policy. It will provide findings and conclusions on questions of intent and willfulness to cognizant offices. Information believed to be of potential safety significance should be immediately referred to the cognizant office. All findings and conclusions that result from investigations are provided to the Executive Director for Operations so that the staff can review and consider the issues involved and determine whether enforcement action is warranted. Suspected or alleged criminal violations concerning NRC licensees and others within NRC's regulatory jurisdiction will be referred to the Department of Justice.

   b. The office will improve the management of the backlog of investigations and reduce it to the extent practicable.

   c. The office should maintain close coordination as appropriate between the Commission, headquarters staff, and the regional offices regarding investigative matters.

PROGRAMMATIC ACTIVITIES

Investigations (Activities)

1. The NRC will continue to conduct investigations of allegations of wrongdoing by NRC licensees and others within its regulatory jurisdiction. The office currently has a work load of approximately 80 active cases and, in addition to normal-priority cases, 30-35 new, high-priority cases are expected each year in FY 1989-1993. (Program Guidance 1.a, 1.b, 1.c)

2. The NRC will continue to refine, administer, and maintain quality control standards pertaining to the conduct of investigations. (Program Guidance 1.a, 1.b, 1.c)

Referrals (Activities)

1. The NRC will apprise the Commission and appropriate agency offices of matters under investigation that may affect the public health and safety or other aspects of the agency's

- Ensure safe handling and use of radioactive materials by nonreactor licensees through enforcement of applicable requirements.

- Improve regulation of the nuclear industry by ensuring uniform enforcement of requirements.

- Encourage industry self-identification and correction of safety problems through prompt, tough, but fair application of the revised enforcement policy.

PROGRAM PLANNING ASSUMPTION

- ~~Licensee performance will continue to vary widely; however, licensee performance can be improved through vigorous enforcement action by the NRC and licensees.~~

replace with insert on next page to make consistent with page III-18.

PROGRAM OBJECTIVES AND GUIDANCE

1. Protect the public health and safety by imposing sanctions to deter future violations of NRC requirements by NRC licensees.

   a. The NRC will continue to maintain a capability to encourage compliance with regulations and license conditions and encourage improvement of licensee performance through prompt and aggressive enforcement actions that include significant sanctions where necessary.

   b. The NRC will maintain the enforcement policy in conformity with other agency directives ~~including the policy on completeness and accuracy of information~~.

No longer needed since material false statement rule issuance

2. Encourage an aggressive approach by licensees to ensure adequate protection, and give credit for prompt reporting of deficiencies by licensees and for their prompt, thorough, and voluntary corrective actions.

   a. The NRC will continue to maintain a capability to encourage compliance with regulations and license conditions and to encourage improvement of licensee performance.

3. Direct enforcement activities to ensure that licensee corrective actions with regard to deficiencies in performance are appropriate and that future compliance with requirements is ensured.

   a. The NRC will continue to maintain a capability to encourage compliance with regulations, license conditions, and other Commission directives and encourage improvement of licensee performance.

4. Effectively utilize the benefits of information resulting from enforcement activities in NRC's overall regulatory mission.

INSERT FOR PAGE VII-39

Overall, performance at nuclear plants is expected to continue to improve. However, performance among individual plants may vary widely. Nevertheless, performance of individual plants can be improved through vigorous actions by the licensee, the nuclear industry, and the NRC. The number of operating events that occur will depend on various factors, including the number of operating reactors, as well as the number of recently licensed reactors; licensee expertise and the ability to learn from experience; maintenance practices, operator training, and other managerial considerations; and the effects of aging on operating plants.

COMMISSION

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

Planned resource expenditures for the Commission are:

	FY 1988	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993
Program Support	$ 156	$ 160	$ 160	$ 160	$ 160	$ 160
(Staff)	(43)	(43)	(43)	(43)	(43)	(43)

PROGRAM GOAL

Establish appropriate guidance and direction to permit effective allocation of

- ~~Allocate~~ NRC's human and capital resources and direct the agency's activities so that they contribute most effectively to the mission of protecting the public health and safety.

PROGRAM PLANNING ASSUMPTION

- No legislation will be enacted to restructure the NRC as a single-administrator agency.

The resources in FY 1989 represent the costs associated with the second building, which include costs for space layout and design, space preparation, and modernization of telecommunications with the purchase of a main digital switch and a digital switch for the NRC Operations Center. The increase in FY 1990 reflects the costs for space preparation, demountable walls, property and supply, moving and relocation costs, and security. The substantial decrease in funds in FY 1991 reflects the expected completion of consolidation in that year.

PROGRAM GOAL

- Consolidate NRC headquarters in a single location in the Washington, D.C., area so that the human and capital resources of the agency will be more efficiently and effectively utilized.

PROGRAM PLANNING ASSUMPTIONS

Update to reflect current status

- The necessary Montgomery County approvals (building permit) will be available by October 31, 1988.
- The White Flint North Limited Partnership will begin construction of Two White Flint North on receipt of the necessary permits. Exterior construction will be completed within 24 months from starting time.
- Occupancy of Two White Flint North will begin in the fall of 1990 and will be completed in the spring of 1991.

PROGRAM OBJECTIVE AND GUIDANCE

1. Consolidate NRC headquarters staff in a single location during 1991.

   a. The NRC will complete occupancy of Two White Flint North in 1991.

PROGRAMMATIC ACTIVITIES

The administrative support costs for consolidation are divided into seven areas: repair and maintenance, telecommunications systems and equipment, facility and space preparation costs, property and supply, moving and relocation costs, security, and miscellaneous costs for consolidation.

Repair and Maintenance

1. Payment of repair and maintenance costs for One White Flint North, with continuation through FY 1991 with completion of occupancy of Two White Flint North.

can be understood by the general public. This is a key element in the public's understanding of the responsibilities of the agency and should involve not only the reporter who covers the agency, but also editorial writers.

c. The NRC will explain in plain language the safety significance of the information that it provides to the public.

d. The NRC will communicate its role in the licensing and enforcement hearing process so that the public perceives the NRC as an objective regulator, ~~taking prompt and corrective action~~.

e. The NRC will improve communication with all parties involved in the regulatory process.

f. The NRC will continue its efforts to provide information on its activities to civic and other groups (e.g., public interest groups, schools, and industry organizations). While it is generally recognized that the best way to reach large groups of people is working through the news media and with elected and appointed officials, there are other activities which are of value to the agency in informing the public of how NRC carries out its responsibilities to protect the public health and safety.

g. The NRC will maintain a close working relationship with elected and appointed officials so that it can better understand their interest and concerns, and they can be informed on the work of the NRC.

h. The NRC will continue and improve training of its employees who work with the various public elements. This should include making available existing information and developing other information to assist staff in these activities and making employees aware of the wealth of information available from the NRC.

4. Develop an expanded and active role in communicating NRC policies, decisions, actions, and legislative needs to members of Congress, congressional committees, and their staff.

a. The NRC will identify, at the earliest possible time, issues, actions, meetings, reports, etc., that are likely to be of congressional interest.

b. The NRC will present ~~develop coherent~~, understandable explanations of the rationale and safety significance of NRC actions when providing information to Congress.

c. The staff will meet and interact with the widest possible spectrum of members of Congress and congressional staff.

d. The staff will identify congressional issues of concern to the NRC and help to develop the Commission's position on those issues in advance of congressional requests.

e. The NRC will develop policies and procedures for release of information to ensure that the Congress has complete and coherent advance information whenever possible.

f. The NRC will establish and maintain a tracking system to assure that all agency commitments to Congress are documented and fulfilled on a timely basis.

g. The NRC will establish and maintain a question bank of congressional responses and an automated congressional correspondence data base.

5. Ensure effective international interchange and cooperation in fulfilling NRC's regulatory responsibilities.

a. The NRC will continue its international objectives to support the Commission's statutory responsibilities and contribute to U.S. foreign policy and national security objectives. International program priorities for the NRC will be as follows.

High Priority - International activities that are closely connected to U.S. public health and safety or U.S. national security interests. These include support of operational safety of U.S.-licensed facilities and materials including radiation protection, export control matters, cooperative safety research on high-priority safety issues, and improvement of international safeguards and physical security.

Medium Priority - International activities which deserve substantial near-term NRC involvement and include high-visibility aspects or promise special benefits to the NRC or the U.S. government. These include support of foreign operational safety, cooperative efforts in waste management, influencing the international nuclear safety agenda, and transboundary issues and crisis management.

Low Priority - International activities which involve long-term technical cooperation and assistance programs, but are not especially time-urgent or contain discretionary elements which could be deferred or cancelled. This includes cooperative safety research on lower-priority safety issues, and regulatory and technical safety assistance to developing countries.

b. The NRC will continue to maintain an understanding of the nuclear experience of foreign countries with respect to safety areas of special interest.

ADMINISTRATION AND RESOURCES MANAGEMENT

This program provides for budgetary and fiscal management for the agency, administrative and logistical support services for headquarters and some services for the regional offices, and information resources management for users within the agency. The program is managed by the Office of Administration and Resources Management and is composed of four major elements: Director's Office, Financial Management, Administration, and Information Resources Management.

During the next 5 years, increased emphasis will be placed on information resources management reflecting the NRC's commitment to support safety-related information systems and computer analysis of safety-related data. Additionally, the office will continue to provide administrative and logistical support to headquarters and will assume ~~the full operating~~ responsibility ~~of~~ the ~~two~~ second for White Flint building in FY 199_.

Planned resource expenditures for this program are:

	FY 1988	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993
Program Support	$ 11	$ 49	$ 400	$ 400	$ 400	$ 375
Administrative Support	50,682	52,464	69,250	68,100	62,500	60,900
(Staff)	(404)	(402)	(402)	(402)	(402)	(402)

The resource increase from FY 1989 to FY 1990 is primarily due to the higher rental cost that GSA imposes for space at White Flint as compared with existing rental costs and the funding associated with four large information management projects: office automation system replacement, satellite communications, optical disk technology, and the Safety Information Network. The reductions in FYs 1991 through FY 1993 reflect the cost avoidance achieved through greater automation, upgrading, and centralization of Information Resources Management support activities.

PROGRAM GOAL

Same as for EDO. Revise appropriately for this activity

- Allocate NRC's human and capital resources and direct the agency's activities so that they contribute most effectively to the mission of protecting the public health and safety.

PROGRAM PLANNING ASSUMPTIONS

Not seen as a useful assumption

- ~~Increasingly~~ diversified, user-oriented software and ~~low-cost~~ equipment will ~~stimulate the spread of automated~~ data processing expertise ~~and capability~~ for ~~automation of~~ NRC program ~~functions~~.

- NRC headquarters staff will be consolidated at White Flint during FY 1991.

- Implementation of the Emergency Response Data System will continue in accordance with its current design and implementation schedule (i.e., House of Representatives Bill 1570 will not be enacted).

not Needed here

- ~~The Department of Energy's (DOE) Licensing Support System for the high-level waste repository will be operational in FY 1991. For planning purposes, the Five-Year Plan does not include FY 1989-1993 resources for the NRC to assume responsibility for the Licensing Support System.~~

- When the NRC headquarters is fully consolidated in Rockville, Maryland, it will centralize its official docket files either in the Office of the Secretary or the Office of Administration and Resources Management. No resource shifts have been made in this plan since the Commission has not yet decided where the official docket files will be centralized.

PROGRAM OBJECTIVES AND GUIDANCE

1. Allocate NRC resources to the activities that have the greatest potential health and safety benefits for society.

   a. The NRC will maintain a long-range planning and budgeting system and provide adequate flexibility in its long-range planning, budget development, and budget execution to handle contingencies and changing priorities.

   b. The NRC will provide prompt, efficient, and dependable financial services that fully support its staff in meeting the NRC mission, goals, and objectives.

   c. The NRC will provide appropriate support for agency compliance with applicable statutes and regulations.

2. Prioritize the agency's programmatic activities to: (1) assist the Executive Director for Operations and Commission in making decisions on the overall Five-Year Plan resource levels; (2) provide a basis for the Executive Director for Operations and Commission to allocate and explain the impacts of budget reductions; and (3) provide a basis for the Chairman, Executive Director for Operations, and office directors to reallocate available resources to accomplish unbudgeted priority activities that may be identified during the year. ~~The approach for prioritizing NRC activities in the Five-Year Plan to meet this objective is to enhance the current process to make it more proactive and to improve communication of priorities between the Commission and staff~~.

PERSONNEL AND TRAINING

replace with a program description

This program is managed by the Office of Personnel and is composed of three major elements: Personnel, Training and Development, and NRC-Wide Support.

Planned resource expenditures for this program are:

	FY 1988	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993
Administrative Support	$ 2,359	$ 1,811	$ 2,500	$ 2,500	$ 2,330	$ 2,330
(Staff)	(78)	(78)	(78)	(78)	(78)	(78)

The increase in administrative support in FY 1990 reflects the allocation of resources for expanded probabilistic risk assessment training, a technical training needs assessment, and increased costs associated with health care services. The decrease in FY 1992 reflects the completion of the initial equipping of the day-care center and wellnesss/fitness center at Two White Flint North.

PROGRAM GOAL

same as for EDO. revise appropriately for this activity

- Allocate NRC's human and capital resources and direct the agency's activities so that they contribute most effectively to the mission of protecting the public health and safety.

PROGRAM OBJECTIVES AND GUIDANCE

1. Ensure that the NRC develops, funds, supports, and implements effective human resource management and administrative policies and practices to achieve and maintain:

   - a work force well organized, managed, and motivated to carry out existing and future agency responsibilities;

   - a unified, efficient, forward-looking organization that is positively committed to the well-being of NRC employees and provides employees an equal opportunity to develop individual skills and capabilities in accomplishing the agency's mission;

   - prompt, efficient, and dependable administrative services that fully support the agency's staff in meeting the NRC missions and objectives; and

   - an agency reputation for having people throughout the organization who are team oriented and highly respected for their performance and integrity.

SMALL AND DISADVANTAGED BUSINESS UTILIZATION AND CIVIL RIGHTS

replace with a program description

This program consists of three major elements: the Small and Disadvantaged Business Utilization Program, the Civil Rights Program, and the Federal Women's Program.

No changes are envisioned in the scope of this program over the 5-year period.

Planned resource expenditures for this program are:

	FY 1988	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993
Program Support	$ 74	$ 150	$ 150	$ 150	$ 150	$ 150
(Staff)	(7)	(7)	(7)	(7)	(7)	(7)

PROGRAM GOAL

Same as for EDO. replace with appropriate description for this activity.

- Allocate NRC's human and capital resources and direct the agency's activities so that they contribute most effectively to the mission of protecting the public health and safety.

PROGRAM PLANNING ASSUMPTION

- There will be no legislative or regulatory changes affecting the Small and Disadvantaged Business Utilization and Civil Rights Program.

PROGRAM OBJECTIVE AND GUIDANCE

1. Ensure that NRC develops, supports, and implements effective human resource management and administrative policies and practices to achieve and maintain an organization that provides employees an equal opportunity to develop individual skills and capabilities in accomplishing the agency's mission.

   a. The NRC will continue to foster an equal employment opportunity climate that will eliminate occurrences of discrimination complaints, develop and maintain a viable equal employment opportunity program to include specific affirmative steps designed to preclude barriers to employment opportunities within the NRC and eradicate underrepresentation of women and minorities at all occupational grade levels within the NRC.

2. Ensure that NRC supports the utilization of small and disadvantaged businesses and historical Black colleges and universities.

Attachment 3

OUTSTANDING ACTION ITEMS IDENTIFIED IN CHAIRMAN'S AUGUST 10, 1988 MEMORANDUM THAT TRANSMITTED THE COMMISSION'S COMMENTS ON THE DRAFT FIVE YEAR PLAN TO THE EDO

Actions to be taken to make reactor licensing action review process more efficient so that Commission's guidance on inventory levels can be achieved.

Commission paper recommending specific fire protection research activities for inclusion in Five Year Plan.

Commission paper outlining staff's position on resolution of uncertainties in the source term as they impact closure of severe accident issues.

Include in NUREG 1150 Commission Briefing, a discussion of regulatory impact of this NUREG, particularly on emergency preparedness.

Commission paper justifying research on hydrogen transport and combustion beyond FY 1989.

Drafts of changes to research program requested by Commission, but not included in the last draft plan.

Analysis of actions needed to avoid growth in materials licensing backlog from 1500 in FY 1988 to 2800 in FY 1993.

Explanation of why NMSS should develop guidance for Agreement States on disposal of NARM, if NRC is not going to regulate NARM.