POLICY ISSUE
(Notation Vote)

June 14, 1995 SECY-95-154

FOR: The Commission

FROM: James M. Taylor
Executive Director for Operations

SUBJECT: REPORT ON PARTS TWO AND THREE OF THE NATIONAL PERFORMANCE REVIEW: PHASE II STUDY PLAN - NRC FUNCTIONS AND EFFICIENCY REVIEW

PURPOSE:

The purpose of this paper is to present the results of the staff's review of NRC functions and to recommend indepth studies of those areas identified as candidates for improved efficiency.

BACKGROUND:

As described in my memorandum of March 15, 1995, the staff has undertaken a study of agency regulations, functions, and efficiency in response to the Commission's staff requirements memorandum (SRM) of February 16, 1995, and Phase II of the Administration's National Performance Review (NPR). In an April 12, 1995, memorandum ("COMSECY-95-012 - National Performance Review Phase II"), the Commission approved the study plan, and provided comments to be factored into the review. In SECY-95-123 ("Report on Part One of the National Performance Review: Phase II - NRC Regulations Review") dated May 15, 1995, the staff submitted to the Commission the results of the first part of this study, the regulations review. For the second and third parts of this study (functions and efficiency review), the Commission requested that the staff conduct a comprehensive examination of agency functions and activities, with emphasis on reengineering and the zero-based process, and examine in detail those NRC functions and activities that are most staff-intensive and those agency processes and procedures that are used most

CONTACT:
Jack W. Roe, NPR Steering Committee
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frequently in reaching regulatory decisions. The objective of the examination is to determine whether a specific function or process is needed and, if needed, whether it can be accomplished more efficiently. The Commission further requested a critical examination of possible alternatives to agency procedures for making regulatory decisions and of possible alternatives to staff activities that involve significant resources. In the SRM, the Commission requested a two-phase study: the first phase focusing primarily on identifying those agency functions or activities that could best be done by other organizations and those activities that need not be done at all and the second phase focusing primarily on improving the efficiency of those functions and activities that will be continued by the agency (i.e., How can NRC best carry out its business? How can things be done differently, in simpler and more efficient ways? What are the impediments to adopting new processes, and how can those impediments be removed?).

DISCUSSION:

The staff has completed the first phase of the requested study and has developed a set of recommended evaluations for the second phase. Each of these is described in the attached report. In my memorandum of April 3, 1995, to office directors and regional administrators, each office and region was asked to examine its functions and activities from a zero-based perspective to determine if the function is needed, if the function should be performed at the Federal level or devolved to a lower level, if the function is duplicated in another Federal agency, and if the NRC or another Federal agency should perform the function. The focus of the review was on agency functions and activities that involve significant agency resources (i.e., more than 10 FTEs) and the processes and procedures used most frequently to reach regulatory decisions. In addition, for those functions and activities to be performed, offices and regions were asked to identify ways to implement them more efficiently. These were to be identified considering factors such as time required to accomplish the function or activity, number of steps involved in performing the function or activity, value added by each step, the number of NRC offices and/or personnel involved, resources expended, and the levels of review required to approve the end product of the function or activity. Organizational changes were not the focus or intent of the review; however, it is recognized that the results of the functions and efficiency reviews could ultimately lead to organizational changes.

To gather and integrate the results of these reviews, the NPR Steering Committee interviewed each office director and regional administrator (including in some cases office and regional staff). The steering committee also interviewed each Commissioner and the Inspector General. In addition, the Nuclear Energy Institute (NEI) provided input to this process in a meeting on March 16, 1995, and also in letters dated May 30, 1995, from William H. Rasin, Vice President, to Dr. Jack Ror Director, NPR, and May 31, 1995, from John Schmitt, Director, Radiological Protection, Emergency Preparedness and

Waste Regulation, to Jack Roe. These letters addressed risk-based and performance-based regulation, improving the effectiveness and efficiency of the inspection process, the concept of regulatory threshold, guidance on severe accident management, and emergency planning.

On the basis of the results of the interviews and other information received, the steering committee developed recommendations regarding functions and areas that were considered candidates for improved efficiency. These recommendations represent a distillation of ideas and suggestions obtained through the interviews and followup discussions. Input received from NEI at the March 16, 1995, meeting was also considered; however, their written recommendations will be addressed separately, having been received only recently.

With respect to functions reviews, the staff considered what functions the agency was performing, whether they were appropriately Federal functions that NRC should perform, whether they overlap functions of another Federal agency and, if so, should the overlap be eliminated. On the basis of this review, the staff identified one area where it recommends a change to a current NRC function. Specifically, the staff recommends that the Commission adopt a policy to encourage further devolving some materials licensing and low level waste functions (as defined in the attached report) to the States through expansion of the Agreement States program. In the attached report, the staff gives the rationale for this recommendation and proposes an evaluation of how it should be implemented, including the questions of fees and the results from the National Academy of Science study on medical licensing. All other functional areas were considered appropriate Federal functions. In several areas NRC functions overlap those of other Federal agencies. These areas are also discussed in the attached report along with actions that have been taken to eliminate or better coordinate this overlap.

With respect to improving efficiency, the staff reviewed a number of new ideas, suggestions, and ongoing initiatives. This review led to the identification of seven major candidate efficiency improvements that, because of their potential policy and/or resource implications, are being provided for Commission consideration. These seven candidate efficiency improvements are discussed in more detail in the attachment and are presented in the form of recommended evaluations that should be conducted to determine what, if any, changes should be made to current NRC practices and what gain in efficiency could be expected. They are categorized as either programmatic or administrative and cover the following areas:

- Programmatic

  - Safety Research
  - Agreement State Program and Interface with States
  - Events Assessment and Review of Operational Data
  - Incident Response
  - Maintenance of Staff Expertise

- Administrative

  - Interoffice Administrative/Support Overlap
  - Training and Development

For each candidate efficiency improvement, a background discussion, resource information, a recommendation, lead office, and target date for completing the evaluation are provided. If approved by the Commission, the lead office will be responsible for conducting the evaluations and preparing for EDO and Commission approval the results and final recommendations in the form of individual reports. The results and, in some instances, the approach may require working in partnership with the union. This will also be included in the evaluation process. In addition to the seven major items discussed above, the staff has identified a number of other ongoing or planned initiatives that could improve efficiency. These initiatives were ongoing, planned or initiated as a result of the NPR Steering Committee's activities. These are summarized for the Commission's information in an appendix to the attached report.

It is recognized that these evaluations will require staff resources. However, the amount of resources is not expected to affect other high-priority work and is justified considering the potential savings and gains in efficiency that may result. All evaluations are scheduled for completion within the next 12 months, and the results and recommendations will be presented individually to the Commission as they are completed. Additionally, as requested in the SRM of February 16, 1995, the staff will provide a report to the Commission by June 1, 1996, that will include a status of the efforts (seven candidate items plus those in Appendix A) as of that date.

RECOMMENDATION:

I support the recommendations in this report, however, as you are aware, the Executive Director's Senior Executive Review Committee is producing a separate report dealing with organizational efficiency and effectiveness matters. Initiatives from this committee could impact some of the recommendations in this Commission Paper. My final recommendations for Commission action will be addressed in the EDO Senior Executive Review Committee Report. I recommend the Commission consider both reports together.

SCHEDULING:

The staff recommends a closed session if this paper is scheduled for a Commission meeting.

COORDINATION:

This paper has been coordinated with other affected offices, and the Office of the General Counsel has no legal objection.

James M. Taylor
Executive Director
for Operations

Attachment: Report on Agency Functions and Efficiency

Commissioners' comments or consent should be provided directly to the Office of the Secretary by COB Thursday, June 29, 1995.

Commission Staff Office comments, if any, should be submitted to the Commissioners NLT Thursday, June 22, 1995, with an information copy to the Office of the Secretary. If the paper is of such a nature that it requires additional review and comment, the Commissioners and the Secretariat should be apprised of when comments may be expected.

This paper is tentatively scheduled for discussion at a Closed Meeting on Wednesday, June 21, 1995.

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REPORT ON AGENCY FUNCTIONS AND EFFICIENCY

PREPARED BY THE USNRC
NATIONAL PERFORMANCE REVIEW PHASE II
STEERING COMMITTEE

JUNE 1995

Table of Contents

INTRODUCTION

This report presents the results of a functions and efficiency review conducted in response to a February 16, 1995, Commission request. The report is divided into three chapters. Chapter 1 describes the approach and process for conducting the review, as well as the process for translating the results of the review into candidate efficiency improvements. Chapter 2 describes the results of the functions review, including recommended changes. Chapter 3 and Appendix A describe the results of the efficiency review, and, additionally Chapter 3 contains recommendations for Commission approval to evaluate in more detail seven candidate efficiency improvements.

BACKGROUND

As described in a memorandum dated March 15, 1995, from James M. Taylor to the Commissioners, the staff has undertaken a study of agency regulations, functions, and efficiency in response to the Commission's February 16, 1995, staff requirements memorandum (SRM) and Phase II of the Administration's National Performance Review (NPR).

In an April 12, 1995, memorandum, ("COMSECY-95-012 - National Performance Review Phase II"), the Commission approved the study plan and provided additional comments to be factored into the review.

In SECY-95-123 ("Report on Part One of the National Performance Review: Phase II - NRC Regulations Review"), dated May 15, 1995, the staff gave the Commission the results of the first part of this study. For the second and third parts of this study (functions and efficiency review), the Commission requested that the staff comprehensively examine agency functions and activities, emphasizing reengineering and the zero-based process and including those NRC functions and activities that are most staff-intensive and those agency processes and procedures that are used most frequently in reaching regulatory decisions. The objective of the examination was to determine whether a specific function or process is needed and, if needed, whether it can be accomplished more efficiently. The Commission further requested a critical examination of possible alternatives to agency procedures for making regulatory decisions and of possible alternatives to staff activities that involve significant resources.

This SRM requested a two-phase study: the first phase focusing primarily on identifying those agency functions or activities that could best be done by other organizations and on those activities that need not be done at all and the second phase focusing primarily on improving the efficiency of those functions and activities that will be continued by the agency (i.e., How can NRC best carry out its business? How could things be done differently, in simpler and more efficient ways? What are the impediments to adopting new processes, and how can those impediments be removed?).

CHAPTER 1: APPROACH AND PROCESS FOR CONDUCTING THE REVIEW

In this chapter, the approach and process for conducting the functions and efficiency review are described, as well as the process for translating the results of the review into candidate efficiency improvements.

The staff, as requested, examined in detail those NRC functions and activities that are most staff intensive and those agency processes and procedures used most frequently to reach regulatory decisions with a view to determining whether the function or process is needed, and whether it could be accomplished more efficiently. An NRC NPR-II Steering Committee comprised of senior NRC staff representing major headquarters offices and regional offices was established to coordinate and help perform the review. The steering committee members were selected on the basis of their broad experience and knowledge of agency regulations, functions, and organizational structure. The steering committee members are listed in Appendix B.

The objective of the review was to identify those agency functions and activities that should continue to be performed at the Federal level by NRC, that could best be done by other organizations (Federal or other, e.g., States, professional boards, industry), or that need not be done at all. For those functions and activities to be performed by NRC, the review was to identify candidate areas for improved efficiency and a plan for improving their efficiency.

The review was performed in two steps as described in an April 3, 1995, memorandum from James M. Taylor to Office Directors and Regional Administrators. In the initial step, Mr. Taylor requested that each office and region examine their functions with respect to whether they (1) are an appropriate Federal function; (2) overlap with another Federal agency and, if so, whether they should be given to another Federal agency (or vice versa); (3) should be devolved to States, industry, and so forth, or (4) should be eliminated. In this first step, the staff also identified those agency functions and activities that are most resource intensive and are used most often in making regulatory decisions. Legislatively mandated functions were not exempt from this review, but rather, if a change is recommended, the need for a legislative change was to also be identified. Because the results of this review are to be factored into the budget process, this initial step followed the structure of the agency's Five-Year Plan. In performing this review, organizational issues, such as combining offices and realignment of regional offices, are being evaluated by the Office of the Executive Director for Operations and, therefore, not explicitly considered within the scope of the review. However, the results of the functions and efficiency reviews may ultimately lead to recommended organizational changes.

The steering committee then conducted the second step and interviewed each Commissioner, office director, regional administrator, and selected advisory committees (Advisory Committee on Reactor Safeguards, Advisory Committee on Nuclear Waste and the Advisory Committee on Medical Uses of Isotopes) about their respective functions and activities and areas for improved efficiency.

The steering committee also interviewed the Inspector General to obtain his views on agency functions and efficiencies. To ensure consistency in the interviews, a core group of full-time committee members participated in all of the interviews, and additional members of the steering committee participating in some interviews. While the committee primarily relied on using the results of the internal NRC reviews, it considered any previous public or industry comments received on functions and efficiency. They also factored into the review areas where ongoing or planned efficiency improvements have already been initiated.

On the basis of the input received, the steering committee drafted recommendations about the disposition of agency functions and activities and candidate areas for assessing improved efficiency, considering the following factors:

- how often a function or activity occurs,
- the complexity and sequencing of steps required to accomplish a function or activity,
- the number of organizational entities involved (Branches, Division, Offices),
- the number of individuals involved,
- the levels of review and approval involved,
- the time it takes to complete a function or activity,
- the value added by the various steps, reviews, organizations, and whether they can they be consolidated or eliminated,
- whether technology could improve efficiency,
- the success of previous efficiency improvements, and
- whether further improvements should be undertaken.

In general, functions or activities performed at least once per month were defined as "frequently" and "resource intensive" and as requiring more than 10 full-time employees (FTEs), or equivalent, per year. Also, if it was estimated that a 10% or greater improvement in efficiency could be obtained, then a function or activity was considered a candidate for improvement. These draft recommendations were then given to the offices and regions for review and comment.

For those functions and activities the steering committee identified as candidates for improved efficiency, they requested a lead office/region to develop a plan for evaluating improving efficiency. Each lead office or region then recommended to the steering committee what additional efforts should be undertaken to improve efficiency and a brief plan for evaluating the improvements in more detail, including a schedule.

As a result of the functions and efficiency review, recommendations were developed regarding overlapping and devolving functions and improving efficiency. Chapter 2 describes the areas of overlapping functions with other Federal agencies and provides recommendations for their disposition.

Chapter 2 also recommends evaluating further devolving of certain functions to the States. Chapter 3 describes the results of the efficiency review and recommends seven areas for more detailed evaluation. Appendix A summarizes other ongoing efficiency improvement initiatives and planned activities for the Commission's information.

CHAPTER 2: FUNCTIONS REVIEW

In the review of agency functions, the areas of overlap with other Federal agencies and the possibility of eliminating or devolving functions to the States were examined. As a result, the steering committee recommended changes to reduce overlap as well as to devolve more to the States but found no functions to be eliminated. Section 2.1 discusses the areas of overlap that were examined and the resulting actions and recommendations. Section 2.2 discusses the functions that could be devolved to the States and the resulting recommendation.

2.1 FUNCTIONS THAT OVERLAP WITH OTHER FEDERAL AGENCIES OR THE STATES

NRC functions and regulations overlap with those of other Federal agencies in the following seven areas:

- Drug testing - Department of Transportation (DOT),
- Transportation of radioactive materials - Department of Transportation (DOT),
- Anti-trust reviews - Department of Justice (DOJ),
  - Securities and Exchange Commission (SEC)
  - Federal Energy Regulatory Commission (FERC)
- Import-export licensing - Department of State (DOS),
  - Department of Energy (DOE),
  - Department of Commerce (DOC),
- Radiation protection - Environmental Protection Agency (EPA),
  (for Medical) - Food and Drug administration (FDA),
- Emergency planning - Federal Emergency Management Agency (FEMA), and
- Worker Safety - Occupational Safety and Health Administration (OSHA).

Drug Testing

Both NRC and DOT have drug testing programs and potentially could overlap in regulating the area of transportation of category 1A material (highly enriched uranium or plutonium directly useable in the manufacture of a nuclear explosive device). Part 26 of Title 10 of the Code of Federal Regulations (10 CFR Part 26) includes persons who transport such material in the NRC drug testing program for licensees (transporters are under a general license in 10 CFR Part 70). If such licensees are also common or contract carriers subject to DOT safety rules, drivers would be subject to the DOT drug testing program. Currently and for several previous years, no commercial carrier has transported such material. Such material is now transported exclusively in United States Government DOE-owned and operated vehicles exempted from NRC regulation. Thus, while a potential for overlap exists if a commercial carrier ever again engages in this activity, in practice, no overlap exists today. Nevertheless, a rulemaking action is underway to reduce overlap in the area of drug testing. This was summarized in SECY-95-123, dated May 15, 1995.

Transportation of Radioactive Materials

With respect to the regulation of the transportation of licensed radioactive material, the statutory jurisdictions of the NRC and the Department of Transportation (DOT) overlap. The Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, as amended, authorize NRC to license and regulate the receipt, possession, use and transfer of "source material," "byproduct material," and "special nuclear material." The NRC is, thus, responsible for ensuring that standards, rules, and regulations provide for adequate protection of the health and safety of the public and maintenance of the national defense and security during the transport of radioactive materials. The Hazardous Materials Transportation Act and other statutes require the DOT to regulate safety in the transportation of all hazardous materials, including radioactive materials. This role includes ensuring the safety of certain packages and regulating the conduct of shippers and carriers.

A Memorandum of Understanding (MOU) published in the Federal Register on July 2, 1979, was entered into by the NRC and DOT to avoid duplication of effort and to clarify agency roles. In general, the DOT is responsible for regulating safety during transport of all radioactive materials and packaging for smaller quantities of radioactive materials. The NRC is responsible for regulating the design, manufacture, and use of packages containing fissile material and larger quantities of radioactive material as described in 10 CFR Part 71. Additionally, 10 CFR Part 73 includes requirements for the protection of certain radioactive materials during transport against deliberate acts to seize, damage, or sabotage the shipments. Comments received from the Nuclear Energy Institute (NEI) indicated that in the area of transportation of radioactive materials, the functions of NRC and DOT were well coordinated and no changes were recommended. The staff also agrees with this view and, accordingly, recommends no changes in this area.

NRC certification of DOE packages is not required for most DOE shipments because DOE has its own certification program. One significant exception is the requirement in an amendment to the Nuclear Waste Policy Act (NWPA) requiring use of NRC certified packages for NWPA shipments. This requirement was consistent with an earlier NRC/DOE Procedural Agreement For Nuclear Waste Policy Act Shipments signed on November 3, 1983, which expressed DOE's intent to use NRC-certified packages and provided for pre-licensing consultation on package design, development and testing. This is the only formal procedure that exists between DOE and NRC for package review although DOE has requested NRC review of packages used in other DOE shipments (i.e., spent fuel from naval reactors and shipments of radioactive waste to the Waste Isolation Pilot Plant, WIPP). With regard to the NRC/DOE interface, the staff is considering development of a formal procedure between NRC and DOE regarding NRC certification of packages in addition to the procedure developed for NWPA shipments.

Anti-trust Review

In the area of anti-trust reviews, NRC is required by the Atomic Energy Act to conduct these reviews for reactor applicants and licensees. As discussed in

SECY-95-123, the staff views this as unnecessary overlap with the DOJ, SEC and FERC and has recommended preparing a legislative proposal that will remove this responsibility from NRC.

Import-Export Licensing

Responsibilities in the import-export licensing area are shared among NRC, DOE, DOS, and DOC. NEI recommended that NRC responsibilities in this area be reduced to that of providing technical assistance on an as requested basis. As a result, import-export licensing is discussed separately below in Section 2.1.1.

Radiation Protection

On March 16, 1992, NRC and EPA signed a Memorandum of Understanding, which has been periodically revised, that provides the framework for the agencies' regulation of radionuclides in the environment. In the area of medical radiation regulation, NRC and the Food and Drug Administration, Department of Health and Human Services (DHHS), share regulatory responsibilities and to coordinate these an MOU was signed on August 26, 1993. NEI did, however, recommend that the overlap between NRC and EPA on radiation protection be eliminated. As a result, radiation protection, including medical, are discussed separately below in Section 2.1.2

Emergency Planning

The responsibilities of the FEMA and NRC overlap both substantively and procedurally in the area of emergency planning. By Executive Order, FEMA has been charged with the responsibility for establishing Federal policies and coordinating emergency planning activities among Federal, State, and local authorities to facilitate emergency preparedness, emergency response, and recovery programs. The NRC, under its general authority to license nuclear facilities only if the health and safety of the public is adequately protected, has developed regulations requiring mandatory emergency planning for certain NRC licensees, almost all of which are power reactors. The President has specifically assigned FEMA the responsibility to review and evaluate the adequacy of the off-site portion of emergency plans required by NRC.

An MOU between FEMA and NRC became effective on June 17, 1993, updating several previous MOUs. Abiding by this MOU, the agencies cooperate to ensure FEMA can provide the results of its reviews of NRC applicant's or licensee's emergency plans for consideration during the NRC licensing process. NRC and FEMA have also developed joint guidance documents for use by NRC licensees to assist them in developing adequate emergency plans for radiological emergencies. Overlapping areas of interest have led to agency cooperation with respect to coordination of Federal response to radiological emergencies. The agencies have reached agreement as to lead responsibilities during radiological emergencies that require Federal response.

Currently, NRC and FEMA have an effective, cooperative relationship. The process developed for FEMA review of emergency plans and supplying of input

for use in the NRC licensing processes has worked well, resulting in relatively efficient treatment of emergency planning issues in the context of NRC licensing proceedings. Agreements for cooperation with respect to joint response to radiological emergencies are in place. Absent significant changes in either the responsibilities of the respective agencies or the magnitude of radiological emergency planning activities involving the agencies, no specific recommendation is being made to change the NRC/FEMA roles in emergency planning. NEI, however, recommended in a letter from John Schmitt to Jack Roe, dated May 31, 1995, that FEMA involvement in emergency preparedness be greatly reduced. Due to this recommendation being received only recently, it is to be responded to in a separate action.

Worker Safety

The responsibilities of the OSHA and NRC, while not overlapping, exist concurrently at NRC licensed facilities. OSHA's enabling statute does not permit OSHA regulation of an area of worker safety that is being regulated by another Federal agency. This effectively prevents a direct overlap of jurisdiction by NRC and OSHA in such areas as radiological health and safety where NRC has developed comprehensive regulations to protect the worker. An MOU between OSHA and NRC, dated October 21, 1988, provides a framework for OSHA and NRC activities within each agency's respective jurisdiction at NRC-licensed facilities. From NRC's perspective, the current OSHA/NRC interface has worked well. Expanded NRC and OSHA responsibilities with respect to the assumption of regulatory oversight for the DOE-owned, and United States Enrichment Corporation operated, gaseous diffusion plants (GDPs) are currently being addressed by the agencies through development of an additional MOU. Other than completing the current agreements related to the GDPs, no further action is recommended at this time.

2.1.1 Import-Export Licensing

NRC's role in export-import licensing is defined by the Atomic Energy Act (AEA), especially in the amendments contained in the Nuclear Non-Proliferation Act of 1978 (NNPA), and in associated procedures and regulations including 10 CFR Part 110. NRC's primary role concerns the issuance of licenses for nuclear materials and equipment, including reactors. We consult with other agencies before approving such exports and our regulations provide for public participation. Other agencies issue licenses or authorizations in related areas: (1) DOE for nuclear technology exports and for re-transfers of previously exported materials and equipment; (2) DOS for munitions made with depleted uranium; and (3) DOC for nuclear reactor balance-of-plant equipment and nuclear/non-nuclear "dual-use commodities."

Each agency is obliged to consult with the other departments and agencies about certain types of cases, and with the Department of Defense and the Arms Control and Disarmament Agency for the most significant cases. This complexity was legislated with greater concern for checks and balances than for efficiency and user-friendliness. In NRC's case, the emphasis was on our role as an independent agency.

In 1980, following the accident at TMI-2, the possibility of ceding NRC's import-export licensing role to the DOS was considered as part of the NRC Reorganization Plan. In the months before the accident, NRC had been busy implementing NRC's export-related responsibilities under the NNPA. Although a majority of the Commissioners expressed support for transferring NRC's export licensing role to the State Department, this did not occur because of Congressional opposition.

Current Situation

NRC processes about 100 licensing applications per year. About 1.5 FTE are committed by the Office of International Programs (OIP) to this effort. The work is supervised by the OIP Director for Non-Proliferation, Exports and Multilateral Relations. Outside technical (safeguards) and legal support is provided by NMSS and OGC, respectively. These utilize approximately another 2 FTE. License application fees are collected to recover these costs. An additional 1-2 FTE of OIP effort per year is spent on generally-related matters, e.g., rulemaking activities; U.S. export control and non-proliferation policy issues; export authorizations under the jurisdiction of other agencies; and international safeguards and physical security issues.

NRC's export licensing cases are processed in a timely manner. Moreover, because of the clearly-defined licensing criteria in the AEA and Part 110, and well-documented findings on past cases, NRC staff and Commission decisions are predictable.

The steering committee considered the following pros and cons for reducing NRC's role in export licensing:

Pros:

1. Divestiture would simplify the interagency review process, making it somewhat less confusing and more efficient. Less time would be required by government and private sector personnel on procedural and jurisdictional questions.

2. NRC's role is, in NPR-II terms, similar to that of other Executive Branch agencies that have the expertise and are required by statute to review all matters relating to an export license that NRC subsequently reviews.

3. Nuclear export licensing decisions, including analysis of the criteria established by law, are based on non-proliferation, national security and foreign policy considerations. Such considerations are within the appropriate constitutional purview of the President.

4. NRC charges application and processing fees to applicants; other agencies do not charge fees.

5. A small number of NRC resources would be freed to perform health and safety functions.

Cons:

1. NRC's role is defined by statute. Divestiture would require legislation. Reopening the AEA/NNPA for amendment could involve an array of conflicting or intersecting interests, such as, regulatory reform; non-proliferation policy; open trade; trade sanctions; and foreign aid restrictions. Senator Glenn was a principal sponsor of the NNPA. He supports NRC's central involvement in nuclear export licensing as a means of ensuring that long-term non-proliferation interests are not sacrificed to the exigencies of U.S. foreign policy.

2. U.S. trading partners (e.g., EURATOM) would be especially concerned about proposed changes on the U.S. side that might give the Congress a basis for extending U.S. statutory controls over reprocessing of exported U.S. fuel. A vital U.S.-EURATOM nuclear supply and cooperation agreement is near the end of several years of difficult negotiations wherein Europe's fear of "another NNPA," imposing U.S. requirements, was a central concern.

3. Part 110 contains public participation provisions that may be difficult to shift to an Executive Branch agency.

Recommendation

On the basis of the above pros and cons, reducing the NRC's role in export licensing is not recommended unless overall agency priorities and available and projected resources dictate such a change.

2.1.2 Radiation Protection

The responsibilities of NRC and EPA overlap in a number of areas in which EPA issues standards for activities that are also subject to NRC licensing. EPA also has statutory authority to issue generally applicable standards to protect the environment from many sources, including radiological hazards associated with activities licensed under the Atomic Energy Act. For example, one that has been prominent in the last several years is the regulation of emissions of radionuclides to the air. The NRC regulates air emissions from its licensees, while EPA has general authority to regulate emissions of hazardous air pollutants, including radionuclides.

Other areas in which the obligations and interests of the two agencies overlap include high-level radioactive waste, low-level radioactive waste, mixed waste (containing both NRC-regulated radioactive material and EPA-regulated chemicals), and sites to be cleaned up under the Superfund legislation.

EPA and NRC have been attempting to address problems associated with dual regulation, through a March 1992 MOU, and periodic revisions, that provides the framework for resolving differences. In addition, the staffs of NRC and EPA are working together to develop a white paper on "risk harmonization," designed to ensure greater consistency in the two agencies' approach to radiological hazards of various kinds.

In the area of medical radiation protection, NRC and FDA share regulatory responsibilities. On August 26, 1993, the two agencies signed an MOU to coordinate their regulatory programs in this area.

FDA regulates manufacturers to ensure the safety and effectiveness of drugs, biological products, and medical devices, including those that utilize or produce ionizing radiation. The FDA oversight of radiation therapy devices is not limited by the source of radiation. However, FDA's regulatory programs have focused on the approval of devices or drugs for clinical use, review of voluntary or mandatory problem reports, enforcement actions including product removal and recall, and prosecution and civil penalties against manufacturers. Simply stated, NRC and the Agreement States regulate the medical use and users of byproduct material, whereas FDA regulates the manufacturers of drugs and devices.[1]

Recommendation

Currently, NRC has a cooperative working relationship with EPA. There remain however, significant matters of mutual interest whose resolution will require continued management attention. The staff believes that at the present time it is more productive to continue to work with EPA through the MOU to resolve differences and develop a consistent regulatory program. Pursuing legislation will be time consuming, will probably affect the current working relationship with EPA, and may result in an outcome less desirable than the current arrangement.

With respect to the cooperative working relationship with FDA, it is premature to make a recommendation for changes since regulation of NRC's medical area is being evaluated. The National Academy of Sciences study is scheduled to be completed by January of 1996; the staff must then evaluate it and develop recommendations for Commission consideration. Once the Commission's decision on these recommendations is reached, it may be appropriate to reevaluate our MOU with FDA at that time.

2.2 FUNCTIONS THAT COULD BE DEVOLVED TO THE STATES

The NRC materials regulation role was identified as a functional area where the NRC could devolve a significant part of this function to the States. The basis for the position is described in the following section.

The NRC Materials Regulation Role

States have traditionally been responsible for assuring protection of the public health and safety of its citizens. However, in the area of radiation

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[1] Section 201(h) of the Federal, Food, Drug, and Cosmetic Act, as amended, defines device as follows: "The term "device" means an instrument, apparatus, implement, machine, contrivance, implant, in vitro reagent, or other similar or related article....."

protection, this responsibility is commonly carried out by the Federal government or by a regulatory program managed by a specifically designated State agency. These State regulatory programs normally encompass rulemaking, licensing, registration of sources of radiation, or inspection of licensees and registrants, and enforcement.

In 1959, Congress enacted Section 274 of the Atomic Energy Act to establish a statutory framework under which States could assume certain regulatory jurisdiction over byproduct, source, and small quantities of special nuclear material. A primary purpose of the legislation was to authorize the NRC to devolve some of its responsibilities in this area, and for the States to assume regulatory authority over these materials. The Commission retains regulatory authority over the licensing of certain facilities and activities such as nuclear reactors, large quantities of special nuclear material (fuel cycle facilities), and the export and import of nuclear materials. Although the Commission retained authority over Low-Level Waste (LLW) management and disposal, in practice, LLW burial sites are regulated by States.

At present, 29 States have entered into such agreements and the 29 Agreement States collectively exercise regulatory responsibility over more than two-thirds of the nation's approximately 22,000 materials licensees. Four States (MA, PA, OH and OK) are also currently seeking Agreement State status.

There has been a decline in the number of NRC licensees since 1990 due primarily to the requirement for full fee recovery. This declining trend will continue if States that are currently negotiating agreements consummate full agreements and additional States enter negotiations for agreements. The reduced number of NRC licensees will further compound the full fee-recovery cost issue.

The legislative history of section 274 recognized that the legislation passed in 1959 was considered interim in nature. Section 274a.(6) of the AEA which states: "a. It is the purpose of this section -- (6) to recognize that, as the States improve their capabilities to regulate effectively such materials, additional legislation may be desirable." The Joint Committee on Atomic Energy recognized that "this is interim legislation in that, as the States improve their capabilities, additional legislation may be needed, perhaps in approximately five years....". None of the amendments to section 274 since its initial promulgation in 1959 have expanded the responsibilities of the Agreement States.

After 36 years, it is time to consider whether the regulation of some materials should remain a Federal function, and whether the States should be given a full role in this area of responsibility. The principal reasons are the experience of the States in the protection of the public health and safety from radiation from various sources; the issue of equity of Federal fees; and that the NRC regulations do not cover sources of radiation such as naturally occurring-and accelerator-produced materials, non-ionizing radiation sources, and electronic product sources.

Recommendation

Accordingly, in addition to the statutory framework enacted by Congress in 1959, the steering committee recommends that the NRC establish a policy and program to devolve to the States a significant portion of the regulation of certain categories of radioactive material. These categories are: source material; byproduct material (radioisotopes) as defined in section 11e.(1) of the AEA; byproduct material (uranium and thorium mill tailings) as defined in section 11e.(2) of the AEA; and regulatory responsibilities for low-level radioactive waste disposal (excluding storage at reactor and fuel facility sites) as defined in section 2(9) of the Low-Level Radioactive Waste Policy Amendments Act of 1985. As part of this devolvement, the recommendations of the National Academy of Sciences on the regulation of the medical uses of byproduct material need to be considered as well as the fee structure to encourage and support the program.

Because of the resource and efficiency implications of this recommendation, it is included in Chapter 3 as a candidate efficiency improvement. Accordingly, the issue and a recommended evaluation is discussed in more detail including the measures that can be taken, without legislation, to increase State involvement.

CHAPTER 3: CANDIDATE EFFICIENCY IMPROVEMENTS

3.1 INTRODUCTION

For those functions that are appropriate Federal functions that the NRC should continue to perform, the steering committee identified seven major candidate efficiency improvements (CEIs) requiring Commission review. They are organized into two categories: (1) Programmatic and (2) Administrative as follows:

Programmatic Candidate Efficiency Improvements

- Safety Research,
- Agreement State Program and Interface With States,
- Events Assessment and Review of Operational Data,
- Incident Response, and
- Maintenance of Staff Expertise.

Administrative Candidate Efficiency Improvements

- Interoffice Administrative/Support Overlap and
- Training and Development.

Each function is discussed in more detail in this chapter and each requires a more detailed evaluation to assess the alternatives, recommended action and resource implications. Each was selected based on qualitative factors and the judgement that they had the potential for significant savings as well as significant organizational changes. In addition, some involve policy issues. Accordingly, before work continues on these functions, Commission review and approval is considered appropriate.

The format for each CEI includes sections for discussion, recommendation, lead office, and completion date. Budget information for FY 1994 through 1997 is included in the discussion, as applicable. Specific programmatic areas may sometimes overlap. Therefore, more than one office or region may be assigned to work on the evaluation; however, the first office listed is considered the lead office. The completion date refers to the estimated date for the lead office(s) to submit the results of their evaluation and proposed implementation of the CEI recommendations. This submission, most likely in the form of a Commission paper, will discuss proposed implementation alternatives and recommend an alternative for Commission approval. It will also discuss any partnering that has taken place or needs to take place.

3.2 PROGRAMMATIC CANDIDATE EFFICIENCY IMPROVEMENTS

3.2.1 Safety Research

DISCUSSION:

The Office of Nuclear Regulatory Research (RES) provides an independent source of technical information that is used by the NRC to establish regulatory requirements, to review applicants' conforming analyses, and to anticipate problems of potential safety significance. This source of information, combined with dedicated technical reviewers in other program offices, provides the NRC with the independent technical capability that Congress intended and has led to NRC's preeminence in regulation around the world. Since the mid-1980s, RES's responsibilities have also included related standards development and technical rulemakings.

The recent and projected RES budget and staff are shown below and are based upon NUREG-1100, Vol. 11, "Budget Estimates for Fiscal Years 1996-1997." The RES budget and staff have been gradually declining over the past several years and is projected to continue this trend over the next several years. This is due to several factors, including a reduction of new designs being reviewed and the overall trend of reduced government spending.

	FY94	FY95	FY96	FY97
Non-HLW				
FTE	226	218	218	217
CONTRACT SUPPORT ($M)	84.4	80.7	75.5	73.6
HLW				
FTE	6	6	6	6
CONTRACT SUPPORT ($M)	6.4	6.6	6.7	6.5

Legislative History

The Energy Reorganization Act defines the NRC's research function broadly, empowering the Commission to do research that it deems necessary for the performance of its licensing and regulatory functions.

The Conference Report on the Act cites a need for "an independent capability for developing and analyzing technical information related to reactor safety, safeguards and environmental protection in support of the licensing and regulatory process." The report further states that the NRC should limit its research to "confirmatory assessment" and that the agency "should never be placed in a position to generate, and then have to defend, basic design data of its own." Rather, the NRC "must insist on the submission of all of the data required to demonstrate the adequacy of the design contained in a license application or amendments thereto. This requires professional competence in the regulatory agency to determine whether any substantive data are lacking or

whether experimental or analytical data provided by an applicant or licensee are professionally adequate." The Senate Report on the Act refers, in addition, to "defects, abnormal occurrences and shutdowns involving light water reactors" as a motivation for establishing a safety research function within the regulatory agency.

The Evolution of NRC's Reactor Safety Research Function

During the 1970s and early 1980s, NRC's research was focused on postulated design-basis accidents, whose analyses were required in applications for reactor licensing actions. Considerable attention was given to loss-of-coolant accidents and their licensing criteria that were established in lengthy hearings. Large experimental programs were conducted, including LOFT, Semi-Scale, Power Burst Facility, and others; and complex thermal-hydraulic computer codes were developed to permit the NRC to independently audit applicant analyses. Extensive work was also done on reactor pressure vessel integrity, particularly under conditions of pressurized thermal shock.

In the early 1980s, in the aftermath of the 1979 TMI accident, and with further indirect impetus from the 1986 Chernobyl accident, emphasis in the research program shifted from design-basis accidents to severe accidents. Experimental work was again performed in test reactors and out of reactor, and new complex computer codes were developed. A major probabilistic risk assessment was performed, and attention was given to human factors, emergency operating procedures, and accident management. Work was also performed to understand aging of plant components such as reactor vessels, steam generators, and structural, mechanical, and electrical components.
In the early 1990s, emphasis shifted again, this time to a group of new advanced reactor designs including the Westinghouse AP600 and the new General Electric SBWR. These designs raised new issues regarding design-basis accidents and severe accidents. By this time, budgets were already declining and fewer experimental programs were conducted. More emphasis was given to improving analytical tools to increase confidence in their predictions.

In 1995, we are now at a point where specific research in support of advanced reactors is being completed and we face the challenge of maintaining NRC's independent technical capability to deal with the large population of operating reactors. Aging issues are still with us, and high-level waste disposal remains a national priority. Economics, reduced energy demand, and alternative energy sources have combined to eliminate the likelihood of any new reactor license applications until well after the year 2000. Funding available for research will likely decline by 30 to 50 percent between now and FY 2000. The combined effect is the need to reexamine the role of RES in general, and to reexamine all research programs. A minimum program of research must be defined that will allow the agency to continue to be a responsive and credible regulator.

ISSUE: What should be the future role and mission of the NRC's safety research program?

RECOMMENDATION: Evaluate the NRC safety research program functions and activities with respect to the agency goals and mission through FY 2000. As the research program is reduced and refocused it is essential that RES--

- consider the views of NRC program offices that use the results of research,
- consider the views of advisory groups such as the ACRS, ACNW, and NSRRC,
- recognize that budget cuts will be significant over the next several years, leaving room for only the highest-priority programs,
- critically examine which program elements will need to be continued into FY 2000 and beyond and at what level,
- maintain a limited capability to accommodate unanticipated safety issues that will arise from operating experience,
- explore the feasibility of shifting the contractor mix away from relatively expensive sources (DOE laboratories) to less costly sources, especially universities,
- explore the potential for shifting work from contractors to in-house staff to reduce costs without losing essential capabilities,
- determine areas where it is necessary to maintain a core of critical expertise, through a mix of in-house staff and contractors, and
- take full advantage of international cooperation in nuclear safety research that will permit cost sharing and avoid unnecessary duplication.

Specific items to be documented from the evaluation include--

Mission

- The purpose of NRC-funded research (e.g., confirmatory, exploratory, response to user needs, development of independent data/tools, etc).

- Major technical areas to be included in the RES mission (materials, thermal/hydraulics, etc).

- Core programs/activities necessary to accomplish the mission (e.g., code development/maintenance, rulemaking, exploratory research, etc).

- The role of RES vs. program offices (e.g., should all technical assistance and license specific work be done by program offices, and if not, how should it be split between the offices and RES; how should rulemaking be split between RES and program offices; what RES work could more efficiently and effectively be done by program offices; what work should be centralized in RES).

- The role of RES vs. program offices in staying abreast of national and international nuclear safety developments, emerging technologies, and design concepts.

Strategy

- The role of NRC research vs. industry research (i.e., what should NRC require industry to do)?
- How can NRC research be done more efficiently and effectively:
  - cooperative programs with industry and foreign governments,
  - more in-house work and
  - use of consensus standards.

Expertise

- What will be done in-house vs. by contractors?
- What type of staff will be needed to accomplish the mission:
  - which disciplines and
  - which skills.
- Should overlap among offices in technical expertise and function (e.g., NRR/RES thermal-hydraulic and severe accident analysis) be restructured to minimize duplication, enhance staff technical interaction and promote cadres of expertise?

Budget Needs

- FTEs
- Program support/travel funds

The results of the evaluation will be presented in the form of a draft policy which can be used to guide and defend the program and be incorporated in planning and budget documents.

LEAD OFFICE: RES/NRR/NMSS/AEOD

COMPLETION DATE: 2/1/96 to develop recommended policy.

3.2.2 Agreement State Program and Interface With States

This topic is discussed in three related parts:

- The Agreement State Program,
- NRC Administration of the Agreement State Program, and
- State, Federal, and Indian Tribes Liaison Programs.

Each of these parts represent an area that can be evaluated and acted upon as a separate item or in combination.

DISCUSSION:

Part 1: THE AGREEMENT STATE PROGRAM

In 1959, Congress enacted Section 274 of the Atomic Energy Act to establish a statutory framework under which States could enter into agreements with the NRC to assume regulatory jurisdiction over byproduct, source, and small

quantities of special nuclear material. To enter into an agreement, the governor must certify, and the Commission must find, that the State's program for regulation of agreement material is both adequate to protect the public health and safety and compatible with the Commission's program for regulation of similar materials. At present, 29 States have entered into such agreements The 29 Agreement States collectively exercise regulatory jurisdiction over more than two-thirds of the nation's approximate 22,000 materials licensees. Four States (MA, PA, OH and OK) are also currently seeking Agreement State status.

The NRC Agreement States program is principally administered by the Offices of State Programs (SP), Nuclear Material Safety and Safeguards (NMSS), Analysis and Evaluation of Operational Data (AEOD), and each Regional Office. Legal guidance is provided by the Office of the General Counsel (OGC). NRC conducts on-site, in-depth program reviews periodically of each Agreement State in which organizational, administrative, personnel, regulatory, licensing, compliance and enforcement program areas are reviewed. These reviews are usually conducted by the Regional State Agreements Officer (RSAO) or SP staff with assistance in specific technical areas provided by Regional, NMSS or AEOD staff, as needed. Upon completion of the review, the State receives a report from the NRC with an adequacy and compatibility determination.

In addition, NRC provides training for Agreement State personnel by providing space in NRC training courses for attendance by State personnel. Examples are courses in health physics, industrial radiography radiation safety, nuclear medicine, licensing procedures, inspection procedures, radiological engineering, well logging, and transportation of nuclear materials. These NRC training courses are administered by AEOD in coordination with other Offices, primarily SP and NMSS. NRC also provides technical assistance to Agreement States on a range of specific technical questions or issues that may arise as a part of Agreement State licensing and inspection activities.

Resources

The resources identified below for SP and NMSS are consistent with NUREG-1100, "Budget Estimates for Fiscal Years 1996-1997," Volume 11. These resources reflect the full range of activities carried out by SP and NMSS staff involving the Agreement State program. Resources for SP include 4.5 Regional FTE for the Regional State Agreement Officers. The resources listed may be subject to revision based on the resource options identified in SECY 95-047.

	FY94	FY95	FY96	FY97
FTE				
SP	15.75	15.75	17.75	17.75
NMSS*	4.00	3.00	5.00	5.00
CONTRACT SUPPORT ($K)				
SP	823	454	1628	1308
NMSS*	0	0	0	0

*Includes Regions

New Initiatives and Circumstances Affecting Agreement State Program

(a) Decline in Number of NRC Licenses

There has been a decline in the number of NRC licensees since 1990 due primarily to the requirement for full fee recovery. This declining trend will continue if States that are currently negotiating agreements, (MA, PA, OH, OK) consummate full agreements and additional States enter and complete negotiations for agreements. The reduced number of NRC licensees will further compound the full fee recovery cost issue. Interest in negotiating new agreements may be negated by NRC changes in funding for Agreement State training and technical assistance (see Item (b) and by NRC materials licensing business process redesign efforts that will likely reduce licensing fees for some categories of NRC licenses.

(b) NRC Policy on Reimbursable Agreements for Training and Technical Assistance

NRC has covered the costs for NRC oversight and administration of the Agreement State program. NRC has also had to cover the costs for development of NRC regulations, guidance, and research in the materials area through fees paid solely by NRC licensees even though these activities benefit all Agreement States and both NRC and Agreement State licensees. Recently, the Commission adopted a policy that Agreement States, beginning in FY 97, will pay on a reimbursable basis the cost for travel, training, and technical assistance previously provided to Agreement States at no cost. This recent change in policy may affect the interest of some States to continue in the program and may affect interest by States negotiating an agreement in continuing active negotiations. Based on comments received from the Agreement States, we are reviewing the decision to require Agreement States to pay for their training and travel.

(c) NRC Policy on Seed Money for New Agreement States

NRC has also reaffirmed a policy that NRC will not provide seed money to a State to hire staff, develop regulations, and develop other program elements necessary to support a State's request to the NRC for an agreement. This policy has affected the interest of some States in negotiating an agreement.

(d) New Policy on Statement of Principles for the Agreement State Program

The Commission is currently considering three major initiatives that will directly affect the Agreement State program. The first is a final "Statement of Principles and Policy for the Agreement State Program" (SECY-95-115), dated May 5, 1995. This policy statement describes the respective roles and responsibilities of the NRC and the States in administration of the program. It addresses Federal-State interaction under the Atomic Energy Act to establish agreements with States, ensure that post-agreement interactions are coordinated and compatible and that

Agreement State programs continue to protect the public health and safety. The policy also includes provisions for phased implementation of new agreements, specific defined actions for NRC program review findings, and defined procedures for suspension or termination of a section 274b agreement.

(e) New Policy on Adequacy and Compatibility

The second initiative is the "Final Policy Statement on Adequacy and Compatibility of Agreement State Programs" (SECY-95-112) dated May 3, 1995. The policy will establish Commission guidance on the terms "adequate to protect the public health and safety" and "compatible with the Commission's regulatory program." It also describes the general framework that the Commission will use in determining those NRC program elements and regulatory requirements that Agreement State programs must implement to be adequate to protect the public health and safety and to be compatible with the Commission's program.

(f) Integrated Materials Performance Evaluation Program (IMPEP)

The third major initiative before the Commission is the "Staff Analysis and Recommendations on the Integrated Materials Performance Evaluation Program" (SECY-95-047) dated February 28, 1995. The purpose of this paper is to receive Commission approval of the IMPEP. IMPEP is intended to guide a common process to assess the performance of the 29 Agreement States and NRC's regional materials program against a common set of performance indicators. For Agreement States, it establishes a new interoffice team-based review process with increased headquarters involvement.

(g) Materials Licensing Business Process Redesign

Presently, NRC is undertaking a BPR project in the materials licensing area which reflects a radical departure from present licensing approaches. NRC plans to make the system available to Agreement States for voluntary use and will invite Agreement State participation in development of the new process. The BPR will realize substantial improvements in processing of applications and issuance of licenses over current processes, apply modern information technology, and reduce the level of resources NRC needs to devote to the materials licensing program. In addition, the National Academy of Science (NAS) is evaluating NRC's role in the regulation of medical uses of byproduct material. NRC plans to make the results of this evaluation available to the Agreement States.

(h) Examination of General Licenses and Specific Licenses

The NRC staff has prepared, for Commission approval, a proposal to work with Agreement States to develop a new approach to control sources that are now generally or specifically licensed. The new approach will be designed to increase accountability, thereby addressing concerns from industry and other groups about lost sources. A significant reduction

in fees for some classes of NRC materials licensees could result from this effort, while previous general licensees might become subject to fees for the first time.

ISSUE 1. Given the circumstances and initiatives previously described, should changes be considered to facilitate an expansion of the Agreement State program? If so, what NRC actions could lead to an expansion of the role and number of Agreement States?

RECOMMENDATION:

Evaluate the benefits and impacts of an increase in the role and number of Agreement States, including the possibility of all States obtaining agreements. Evaluate changes to the Agreement State program that would serve to encourage additional Agreement States, maintain current States in the program, and facilitate entrance of States to the program. The evaluation should include coordination with the Agreement States to obtain their input on ways to expand their role and encourage additional Agreement States. The evaluation should ensure that the changes proposed will enhance a national coherent program of regulation in the materials area. The evaluation should include consideration of options including legislative initiatives, financial incentives, technical assistance, and reimbursement of States for inspections conducted of NRC licensees.

The following areas will need to be examined as a part of the evaluation to encourage additional Agreement States:

1. Whether NRC should establish, as policy, a position that explicitly encourages non-Agreement States to seek agreements?

2. Whether the current Commission policy on not providing seed money to Agreement States should be modified? NRC could provide funding to a State over a limited period (e.g., 2 to 3 years) to assist a State in the development of required staff expertise, regulations, and other program elements necessary to assume regulatory responsibility from the NRC. Assistance at NRC cost could also continue to be provided in the training of State staff who will be responsible for administration of the State's program. The current Commission policy on provision of training to State staff should also be weighed against its effect on both proposed and existing Agreement State programs. Although the staff believes sources of funding are limited, the evaluation should examine possible sources of funds for providing seed money to States interested in negotiating agreements and in providing training and technical assistance.

3. The ability of the Organization of Agreement States and the Conference of State Radiation Control Program Directors (CRCPD), to provide assistance to non-Agreement States in preparing to assume regulatory authority from the NRC. Such assistance could include training of staff, development of internal licensing and inspection procedures, and development of model State regulations. The CRCPD presently develops and makes available to States, model State regulations and procedures

based on corresponding NRC equivalent regulations and procedures. CRCPD receives $110,000 in annual support from NRC each year; this cost could increase if CRCPD provided assistance to States in negotiating agreements.

4. If additional States enter the program and the States collectively assume greater responsibility for the nation's materials program, evaluate what to include in strategic planning and the five-year plan documents for the NRC to maintain a core base of expertise in the materials area. Such a core base of expertise would be applied to assist in the developing and updating of national materials safety regulations, to ensure a level of consistency in the national materials regulatory program, and to continue regulation in non-Agreement States and Federal facilities.

5. Legislative change to remove the Agreement State program training and technical support cost from the 100 percent fee-recovery base should be examined. The potential loss of training and technical assistance programs can jeopardize existing Agreement States with limited State funds.

6. The reimbursable policy for the Agreement State Program should be reviewed to look at alternatives to mitigate impact on the Agreement States (a paper is being prepared to address this issue).

7. The type and level of oversight needed for nuclear materials programs in Agreement States.

8. What portions of the regulation of certain categories of radioactive material should be devolved to States? These categories are: source material; byproduct material (radioisotopes) as defined in Section 11e.(1) of the AEA; byproduct material (uranium and thorium mill tailings) as defined in Section 11e.(2) of the AEA; and regulatory responsibilities for low-level radioactive waste disposal (excluding storage at reactor and fuel facility sites) as defined in section 2(9) of the Low-level Radioactive Waste Policy Amendments Act of 1985. The recommendations of the National Academy of Sciences on the regulation of the medical uses of byproduct material should also be considered.

LEAD OFFICE: SP in coordination with NMSS, Regions, and the Agreement States.

COMPLETION DATE: 3/1/96

Part 2: NRC ADMINISTRATION OF THE AGREEMENT STATES PROGRAM

DISCUSSION:

Presently, review of Agreement State programs has been a principal responsibility of the five Regional State Agreements Officers (RSAO) with

support from SP and NMSS, as needed. Under the team approach advocated for IMPEP, the RSAO's would be integrated into the pool of personnel who would conduct Agreement State and regional reviews along with selected SP, NMSS, and regional staff.

Commission approval of IMPEP and the two new Agreement State program policies provide an opportunity to review the current functional arrangement for interacting with the Agreement States in the implementation of the Agreement State Program. The Principles and Adequacy and Compatibility Policy Statements will be implemented through activities such as the evaluation of proposed radiation control programs of States seeking an agreement with NRC, through existing Agreement State program reviews using the IMPEP, and in the development and issuance of associated implementing procedures.

Resources

See resources shown above for Part 1.

ISSUE 2. What changes should be considered in the internal NRC organization for administration of the Agreement State program?

RECOMMENDATION:

Evaluate the current NRC organizational relationship and structure for implementation of the Agreement State program to determine if changes are warranted; if implementation of the program can be streamlined and efficiency improved; and if functions currently carried out among several offices can be consolidated. This would include addressing the question of return of the RSAO function to Headquarters and the transfer or consolidation of the Agreement State function presently in SP into another major office, such as NMSS.

LEAD OFFICE: SP/NMSS/OP/Regions.

COMPLETION DATE: 1/1/96

Part 3: STATE, FEDERAL AND INDIAN TRIBES LIAISON PROGRAMS

DISCUSSION:

The State Liaison Program is directed at establishing cooperative relationships with State and local governments, and interstate organizations to help ensure and facilitate effective liaison with these organizations. State liaison activities are implemented through the NRC regional offices by the Regional State Liaison Officers (RSLO), with policy and program guidance provided by SP, and in coordination with other NRC Offices. Through the program, Governor-appointed State Liaison Officers (SLO) are kept informed on matters of interest to the States, such as those involving commercial nuclear power plants. This includes emergency notifications, preliminary notifications, SALP reports, inspection reports, watch list, and Commissioner travel to facilities within the State. States are kept informed of NRC meetings with NRC licensees and may also observe inspections and inspection

entrance and exit meetings. Through this program, States may also negotiate memoranda of understanding (MOU) with NRC that allow States to perform inspections for and on behalf of the NRC. For example, the State of Illinois has entered into an MOU providing for State resident engineers and for ASME Code and LLW inspections.

The Federal Liaison Program promotes NRC visibility among pertinent Federal agencies to ensure a better understanding of the NRC and its activities, as well as the activities of other Federal agency staff. A program objective is to provide NRC managers with advice and information on other Federal agencies. The Federal Liaison, located in SP, maintains sources of information relevant to the NRC, analyzes the information with regard to its effect on NRC and keeps NRC staff apprised of significant developments affecting its agency. The Federal Liaison also receives pertinent rulemakings, correspondence, and legislation that may affect NRC relations with other Federal agencies and advises NRC staff, as appropriate. The Federal Liaison is the NRC representative to the interagency Environmental Justice Subcommittee on Policy and Coordination and represents the NRC before other Federal agencies on a variety of issues.

NRC maintains communications with American Indian Tribes, including their national organizations, potentially affected by, or otherwise interested in, NRC regulatory activities. Tribal interest in nuclear-related activities has increased in recent years and has provided for a number of government-to-government exchanges of information related to NRC's regulatory authority in the areas of high-and low-level waste, storage, disposal, transportation, and reclamation. Tribal interests are also represented by the National Congress of American Indians' membership on the NRC's Licensing Support System Advisory Review Panel. The NRC maintains liaison with the Department of Interior, Bureau of Indian Affairs, to help keep their constituency abreast of nuclear-related issues affecting Indian interests.

Resources

The resources identified below for SP are consistent with NUREG-1100, "Budget Estimates for Fiscal Years 1996-1997," Volume 11. These resources reflect the full range of activities carried out by SP and the Regional State Liaison Officers involving the State Liaison Program, activities carried out by SP involving the Federal Liaison Program, and a small effort devoted to Indian Tribe Liaison. Other Regional staff effort devoted to the State, Federal and Indian Tribe Liaison activities is subsumed within existing NMSS, NRR and AEOD resources identified for the Regions. Regional and certain NMSS, NRR and AEOD resources devoted to the State, Federal, and Indian Tribe Liaison activities are not separately identified in NRC's budget.

	FY94	FY95	FY96	FY97
FTE				
State Liaison*	6.5	6.5	6.5	6.5
Federal Liaison	0.75	0.75	0.75	0.75
CONTRACT SUPPORT ($K)				
State Liaison*	125	125	125	125

Federal Liaison (*Includes Indian Tribe Liaison)	3	3	3	3

ISSUE 3. Should changes be considered in the internal NRC organization for administration of the Federal Liaison, State Liaison, and Indian Tribe Liaison Programs?

RECOMMENDATION: Evaluate the current functions of major offices involved in interfacing with other Federal agencies, with States and with Indian Tribes to determine:

- The value added by each function,
- What interfaces can be streamlined,
- What functions can be consolidated, and
- The State's perspective/Indian Tribe perspective/other Federal agencies' perspective.

The evaluation should assess the effectiveness of the current ad hoc, decentralized approach for liaison with Indian Tribes and evaluate the need for development of an NRC policy statement on Indian Nation/Tribe relationships. Any recommendations relating to these functional areas, such as consolidation with another NRC office, should also consider similar consolidation of the Federal Liaison Program.

LEAD OFFICE: SP in coordination with NMSS, NRR, AEOD, and the Regions.
COMPLETION DATE: 1/1/96

3.2.3 Events Assessment and Review of Operational Data

DISCUSSION:

After the Three Mile Island (TMI) accident in 1979, the NRC and the nuclear industry implemented major programs to learn and communicate the important safety-related lessons of operating experience. Problems with systematic evaluation of operating experience before the TMI accident are discussed in the report of a special inquiry on the accident performed for the NRC by the law firm Rogovin, Stern, and Huge.[1] NRC Management Directive 8.5 (formerly Manual Chapter 0515), "Operational Safety Data Review," establishes the objectives, responsibilities, and basic requirements for NRC's review of operating experience and implementation of appropriate actions. The goal of the program is to protect the public health and safety by reducing the recurrence of incidents and the potential for accidents at facilities licensed by the NRC. Events assessment may be viewed as the immediate and short-term review and evaluation of individual events or groups of events to implement regulatory actions. Operational data review may be thought of as the broader

[1] M. Rogovin and G. Frampton, *Three Mile Island:* A Report to the Commissioners and to the Public, Vol. 1, January 1980, pp. 94-101.

and longer term systematic study and evaluation to determine and communicate important safety lessons not identified by the short-term review, as well as the assessment of the effectiveness of NRC regulatory programs related to operational safety.

Licensees and vendors supplying equipment or services to licensed facilities are required by Title 10 of the Code of Federal Regulations (CFR) to report significant events and problems to the NRC. Section 50.72 (10 CFR 50.72) requires licensees to notify NRC by telephone of significant events at operating nuclear power plants within either 1 hour or 4 hours, depending on the severity of the event, and serves as the initial source of information for beginning the short-term evaluation. Section 50.73 requires nuclear power plant licensees to submit a written report on the event within 30 days, including its causes and corrective actions taken. 10 CFR Part 21 requires licensees, construction permit (CP) holders and their suppliers to report facility or basic component defects that could create a substantial safety hazard. Section 50.55e requires CP holders to report design or construction deficiencies that could adversely affect safety, were they to remain uncorrected. The majority of reportable nuclear power plant events and problems are reported under these regulations. Similar regulations require nonpower reactor licensees to report significant events and problems. Agreement States similarly report events and problems occurring at their licensed facilities. In addition, events and problems are identified by the resident inspectors at licensed facilities and through NRC inspections at licensed facilities. Operational safety information from industry groups and international organizations are another important source of such data. NRC's program and regional offices implement a coordinated and integrated process to assess events and review operational data in order to communicate the safety lessons to licensees, the nuclear industry, the Congress, the public, Agreement States, and to others within the NRC for incorporation into the NRC's regulatory process.

In fiscal year (FY) 1994, the NRC reviewed reports on approximately 2,000 reactor events and 500 nonreactor events. The tables included herein show resource estimates for events assessment and operational data review activities. Estimates are based on NUREG-1100, Vol. 11, "Budget Estimates for Fiscal Years 1996-1997," and supplemented by information from the "Report of the Review of Operational and Occupational Event Review, Evaluation, and Followup," dated August 1, 1994. Full-time equivalent (FTE) estimates do not include overhead resources which account for approximately another 40 FTE. In addition, the NRR and Regional FTE reflect the level of effort for the full range of activities and organizational elements involved in responding to operational events and issues (e.g., information collection and processing, safety screening, action plan development, issue tracking and resolution documentation). Although the Office for Analysis and Evaluation of Operational Data (AEOD) uses contractors for support, other offices have not used contractor support for near-term operational experience analysis and evaluation. However, the Office of Nuclear Reactor Regulation (NRR) plans to use contractor support for short-term accident sequence precursor analysis in FYs 1996 and 1997. Contractor support is used for the long-term evaluation and resolution of technical issues arising from operating experience. These resources are not included in the table.

REACTOR PROGRAM RESOURCE ALLOCATION ESTIMATES

	FY94	FY95	FY96	FY97
FTE				
AEOD	34	34	34	33
NRR	53	53	53	53
REGIONS	84	84	84	84
RES	1	1	1	1
TOTAL	172	172	172	171
CONTRACT SUPPORT ($K)				
AEOD	5438	5639	5570	5460
NRR			200	200
TOTAL	5438	5639	5770	5660

NUCLEAR MATERIALS AND NUCLEAR WASTE PROGRAM RESOURCE ALLOCATION ESTIMATES

	FY94	FY95	FY96	FY97
FTE				
AEOD	5	5	5	5
NMSS	5	6	6	7
REGIONS	12	12	12	12
OSP	<1	<1	<1	<1
TOTAL	22	23	23	24
CONTRACT SUPPORT ($K)				
AEOD	5	5	5	5

Office for Analysis and Evaluation of Operational Data

In 1979, the Commission established AEOD for the purpose of analyzing and evaluating operational safety data associated with all NRC-licensed activities independent of the program offices (i.e., NRR and the Office of Nuclear Material Safety and Safeguards [NMSS]) and communicating the lessons of experience. AEOD was formed as a partial response to lessons learned regarding failures to identify or to communicate precursor events of the TMI accident. As quoted from the report of the special inquiry performed by Rogovin, Stern, and Huge --

> "Finally, on July 12, the Commission decided to establish a full-time Office of Analysis and Evaluation of Operational Data (AEOD) that would be part of none of the program offices but would report directly to the NRC's Executive Director for Operations (EDO). This new office would have an oversight function, independent of the NRC's individual program offices; it would be the focal point for communication with industry and the ACRS; and it would develop recommendations and provide guidance."[2]

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[2]Ibid

AEOD was assigned an oversight/peer review role and was to be the NRC's primary point of interaction with outside organizations involved in operational data reviews, such as the Institute of Nuclear Power Operations, the Nuclear Safety Analysis Center (NSAC) of the Electric Power Research Institute, and the Institute of Electrical and Electronics Engineers. AEOD develops the criteria that define the operational events and data that must be reported to the NRC. NRC's longer term operational data review functions are performed primarily by AEOD. AEOD evaluates trends and patterns, performs probabilistic risk assessments, conducts statistical analysis and engineering evaluations of repetitive problems, assesses safety significance and communicates the generic lessons learned to industry and to others within the NRC for incorporation into the NRC's regulatory process. AEOD has the lead responsibility for reviewing and analyzing foreign events. AEOD does not interact directly with licensees on regulatory issues related to events and problems. Rather, AEOD issues technical reports on systems, components, specific significant events, and safety issues; reliability of selected safety systems and components based on operating experience; risk significance of safety-significant events; and objective performance indicators of nuclear power plants. AEOD technical study reports contain suggestions or recommendations, as appropriate, for followup action by the nuclear industry and/or the NRC. AEOD also issues quarterly reports to Congress on abnormal occurrences (AOs) at licensed facilities as required by Section 208 of the Energy Reorganization Act of 1974.

In October 1985, the Commission approved establishment of the NRC Incident Investigation Program (IIP) and assigned overall program development and administrative responsibilities to AEOD. The IIP is agency-wide and investigates safety-significant operational incidents at NRC-licensed facilities. The most significant events are investigated by Incident Investigation Teams (IITs) which report to the EDO to ensure independence. Less significant incidents are investigated by Augmented Inspection Teams (AITs) reporting to the appropriate regional administrator. AEOD implements the IIP, with the assistance of other NRC offices.

Office of Nuclear Reactor Regulation

After the TMI accident, NRC's program offices such as NRR were directed to set up organizational components for analyzing operating experience in support of their office responsibility. The assessment of events at licensed reactor facilities is the direct responsibility of NRR and the NRC regional offices. For nuclear power reactors, NRR, as the program office, and the appropriate region are responsible for the prompt review of significant operational safety events when they are first reported to the NRC Operations Center. NRR also determines the necessary short-term and plant-specific actions and assesses the safety significance and generic applicability of events and problems. NRR and the appropriate region interact directly with licensees on regulatory issues related to events and problems. NRR issues information notices, bulletins, and generic letters to licensees to provide information on problems that could apply to their facilities or to request actions to reduce the probability of occurrence of events and problems.

Office of Nuclear Material Safety and Safeguards

The assessment of nonreactor events (fuel cycle and materials events) is performed by NMSS and the NRC regional offices. NMSS is responsible for assessing the overall safety significance and generic applicability of events and for oversight of short-term and licensee-specific actions taken by the regions. NMSS interacts directly with licensees on regulatory issues for these licenses issued directly from NRC Headquarters. The majority of byproduct materials licenses are issued by the regions. NMSS issues information notices, bulletins, and generic letters to materials licensees to provide information on problems that could apply to their facilities or to request actions to reduce the likelihood of problems occurring at their facilities.

Office of Nuclear Regulatory Research

The Office of Nuclear Regulatory Research (RES) conducts the assessment of operational safety data to the extent necessary to support, confirm, or revise ongoing and planned safety research programs and associated RES policies. RES also develops methodologies for use by other offices to perform operational safety data analyses related to quantitative risk assessment; human factors analysis; system, component, and human quantitative reliability studies; and accident sequence probability. RES also coordinates guidance to outside organizations, such as the American National Standards Institute (ANSI) and the American Society of Mechanical Engineers (ASME), with regard to the incorporation of operational data safety reviews into ongoing code and standards development activities.

NRC Regional Offices

The regions interact directly with licensees and are primarily responsible for the day-to-day review of plant-specific events and problems reported by licensees or identified in inspections. The events assessments performed by NRR (or NMSS) are conducted in coordination with the regions. Except for Incident Investigation Team investigations, the regions have primary responsibility for the prompt review of events, onsite followup and, where applicable, the identification of violations of NRC regulations for enforcement purposes. In this regard, resident inspectors, who report to the regions, at power reactor sites and selected fuel cycle facilities are the first NRC personnel to respond to these sites to conduct the initial assessment of events. The regions are responsible for the conduct of Augmented Inspection Team inspections of selected events and issue inspection reports and other documentation on NRC's evaluation of licensee corrective actions and event closeout.

Recent Efficiency Improvements

In February 1994, the NRC established a task group to perform an interoffice evaluation of the processes for reviewing, evaluating, and following up operational events and problems. The results of the evaluation are documented in the "Report of the Review of Operational and Occupational Event Review, Evaluation, and Followup," dated August 1, 1994. The task group reviewed

agency needs in events assessment; evaluated currently defined responsibilities; estimated the current resources employed in event review, analysis, and followup; determined the extent of overlap and duplication; and recommended revision of current policies and procedures.

The task group identified several areas of unnecessary overlap and duplication. In addition, the task group noted areas of intentional overlap of the scope of the event review, stemming from appropriate multioffice review of the same types of events and operational data, which is conducted to support different office functions. For example, NRR reviews events to identify generic issues and, together with the regions, assesses the need for followup event response whereas the regions focus more on the plant-specific aspects of an event. AEOD evaluates all information related to operational safety to further reduce the likelihood that an important precursor event or condition escapes identification and, hence, communication of appropriate lessons learned. Other functions include determination of trends and patterns and assessment of overall regulatory programs related to operational safety.

The task group made the following recommendations to reduce or eliminate unnecessary overlap and duplication:

- Form a human factors/performance coordination committee with representatives (at the branch chief level) from NRR, NMSS, AEOD, RES, and the regions and develop a human factors/performance program.

- Continue current efforts to develop the Probabilistic Risk Assessment Implementation Plan to enhance coordination of risk assessment activities and increase the benefit from the use of risk assessment tools.

- Continue the ongoing efforts of the Safety Programs Division, AEOD, to reduce the level of involvement of staff members in the day-to-day aspects of event followup.

- Revise the governing inspection manual chapter guidance to provide greater flexibility and thereby reduce unnecessary licensee event report (LER) inspection followup and documentation. Eliminate one of the three levels of LER review within the Safety Programs Division, AEOD.

- Revise Inspection Manual Chapter 0350, "Staff Guidelines for Restart Approval," to clarify what actions are needed for closure of certain checklist items, to allow closure of certain checklist items on the basis of other inspections, and to allow application of less than the entire checklist in some situations.

- Reinforce the existing guidance related to early coordination of staff efforts on information notices to regional and NRC Headquarters personnel to ensure that staff efforts are not duplicated.

- Assign one office (AEOD) the sole responsibility to maintain the nuclear materials events database.

- Eliminate the submission of the monthly summary report of nuclear materials LERs from the regions to AEOD once the new nuclear materials events database is fully operational.

- Form a review group to study the issue of event-related database consolidation (information systems), with the goal of consolidating as many event databases as practicable.

- Consolidate the various agency reports, such as Preliminary Notifications, Morning Reports, and Daily Staff Notes and Highlights into a single system.

In addition to the recommendations to enhance efficiency, the task group also made the following recommendations to improve the effectiveness of the review and followup of events in the nuclear materials program (including the Agreement States program):

- OSP and AEOD should implement actions, such as conducting workshops for Agreement States officials and publishing AO reporting guidelines to increase the level of awareness of officials of Agreement States regarding events that satisfy the AO criteria. The NRC staff should consider adding a requirement for Agreement States to report events to the NRC.

- Similarly, NMSS, Regions and AEOD should implement actions, such as conducting workshops for licensees and publishing reporting guidelines, to increase the level of awareness of nuclear materials licensees regarding reporting requirements.

These recommendations have either been resolved or will be addressed in the near future.

In addition to the actions to resolve the recommendations of the task group report of August 1, 1994, AEOD described plans and actions to improve its efforts to evaluate operating experience in a memorandum to the Commission, "Expanded AEOD Activities to Address Reactor and Nuclear Materials Safety Issues," dated July 26, 1993. The AEOD actions described in this memorandum were to place additional emphasis on an expanded, broad view of operating experience to evaluate integrated technical issues and the industry's followup to previously resolved issues. Reliability and risk analysis techniques were to be systematically applied to (1) identify and provide a quantitative context for new safety issues; (2) evaluate the effectiveness of current regulations, regulatory actions, and initiatives taken by licensees to resolve safety issue concerns; and (3) help guide and focus follow-on studies. AEOD has implemented these actions over the past 2 years.

ISSUE: Can the agency-wide events assessment and review of operational data be made more efficient and effective?

RECOMMENDATION: Evaluate the current functions of those involved in events assessment and review of operational data (AEOD, NRR, NMSS, RES, and the regions) to determine:

- What are the challenges and the environment for events assessment and review of operational data in 1996 compared to 1980? What operational data should be reviewed and analyzed?

- What level of redundancy, diversity, and independence of reviews is necessary within NRC for 1996-2000, based on current experience and the environment? Can the events assessment functions and/or reviews of operational data of the various offices and regions be consolidated or made more efficient?

- Are all current office function contributions useful and necessary? Are the values added in all cases worth the resource costs?

- How and by whom are the various functions and output used? Are they essential? Can selected assessment and review activities be terminated?

- Can licensee analysis of significant events be utilized and credited as an alternative for selected NRC activities?

LEAD OFFICE: AEOD/NRR/NMSS/Regions

COMPLETION DATE: 1/1/96

3.2.4 Incident Response

DISCUSSION:

As a result of the lessons learned from the TMI accident (1979), major actions were initiated to extensively strengthen the NRC's incident response program. A dedicated emergency response staff was established to develop and maintain a formal NRC incident response program. One of the first steps of the staff was to develop a comprehensive and integrated plan for NRC's response to incidents involving NRC licensees. The plan that was developed is documented in NUREG-0728 and the associated implementing procedures are contained in NUREG-0845. Together these plans provide the basis for allocating resources among the NRC's organizational elements needed to implement the incident response function. As described in the plan, the NRC's major roles during an accident are to:

- Monitor licensee activities to ensure that appropriate protective action recommendations are made to offsite officials.

- Support offsite authorities, including confirming the licensee's protective action recommendations.

- Support the licensee's response efforts.

- Keep other Federal agencies, Congress, the White House, and the international community informed of the technical aspects of the event.

- Keep the media informed of the technical aspects of the event.

- Intervene to direct the licensee's onsite response in those unusual and rare situations when needed.

The NRC Emergency Response Program maintains a capability to receive and promptly analyze event (accident) reports on a 24 hour-a-day basis; activate the NRC's Headquarters Operations Center, assess the accident, and provide assistance to State and local governments and the licensee within a few hours of being notified; dispatch a team to the accident site within 6-12 hours; and notify other Federal agencies of an accident, coordinate the total Federal assessment of the radiological aspects of the accident, and, act as the spokesperson for the Federal government with the press, Congress, and the White House. The technical tools and capabilities required to assess severe accidents are kept current with research activities, lessons learned from exercises and events, and changing guidance from other Federal agencies (e.g., EPA, FEMA, USDA).

In April 1981, a new Headquarters Operations Center (HOC), with significantly improved response capabilities, was constructed and placed into operation in an NRC-leased office building located in Bethesda, MD. An Emergency Response Branch was established for the purpose of managing the Emergency Response Program, including (1) maintaining the HOC in a high state of readiness; (2) training NRC and other Federal agencies; (3) conducting drills and exercises; and (4) developing response procedures and technical tools. In 1983, the NRC established full-time operations officers to receive and assess licensee telephone calls received by NRC as a result of immediate notification requirements.

The agency's principal site-specific knowledge needed to respond to an emergency resides within the respective regional staffs. In addition, because HQ personnel assigned to the HOC were scattered among a large number of buildings from Bethesda to Rockville, the regions were able to respond to an incident more quickly, and the lead for early response (standby) was assigned to the regions, necessitating a standby emergency center in each region. Each regional office designed and constructed a standby Incident Response Center (IRC) to have all of the capabilities (e.g., computer tools, training, telecommunication equipment) of the HOC. The initial standby mode was expected to be of extended duration to reflect the slow evolution in seriousness of credible accident scenarios. Each region also established lead and assistant emergency response positions to coordinate the region's program.

In 1985, the HOC was moved to another NRC-leased building in Bethesda. The new HOC had technical advances, which included improved telecommunications, improved human factors design and integrated information technology applications. New methods were developed for estimating offsite dose based on plant conditions and provided the basis for the Radiological Assessment System for Consequence Analysis (RASCAL) computer code. The Emergency Response Data System (ERDS) was also developed and installed to provide real-time displays and trends of plant data transmitted by the licensee. The transmitted data is shared with State and local governmental entities.

In conjunction with the NRC's consolidation at White Flint in Rockville, MD, the HOC was moved to TWFN in June 1994. The new HOC incorporates state-of-the-art design features.

The table below provides the allocation of resources for the NRC Emergency Response Program.

ALLOCATION OF EMERGENCY RESPONSE PROGRAM RESOURCES

	FY94	FY95	FY96	FY97
Contractor Support ($M)	1.83	1.98	1.79	1.70
(FTE)	31*	28*	28*	28*

*Includes 7 FTEs from the regions

Current Efficiency Initiatives

Several efforts have recently been initiated to increase efficiency and reduce resource burdens in the area of incident response.

Electronic Plant Information Books

The Plant Information Books (PIBs) are a consolidated source of information on each nuclear power plant and are useful references for incident response activities. A technical volume is maintained by AEOD and contains emergency planning information, one-line system drawings, and plant system and component information. Maintaining PIBs costs about 1 FTE annually. AEOD has initiated a pilot project to place PIBs on the NRC's External WWW server. This will allow licensees (on a voluntary basis) to ensure information on their facilities is up to date and accurate. This effort is being coordinated with NRR - Projects so that all FSAR updates are consistent with the agency's Internet PIB database.

State Outreach Consolidation

State Outreach/Response Technical Manual training is conducted in each region once a year replacing the State-by-State training over a three year period. Presentations to State, licensee, and Federal agency regional offices are made concurrently, followed by a presentation for NRC regional staff on the same subject matter. This approach has allowed substantial resource savings and allows State outreach to be accomplished more frequently (i.e., once a year instead of every three years).

Revised Training Matrix

Headquarters and the regions have developed a simplified and streamlined training matrix. Courses have been reduced from 17 to 6 through

consolidation, where practical, and elimination, where appropriate.[3] Team position training, which is conducted prior to an exercise, is being revised to include all required refresher training; thus, qualifications could be accomplished by participation in an exercise every two years.

TWFN Consolidation

As discussed previously, having the HOC in TWFN has resulted in several benefits and efficiencies in addition to more rapid reporting of HQ response personnel. For example, AEOD now more efficiently utilizes NRC support organizations (e.g., ADM and IRM) to help maintain certain aspects of the HOC (e.g., telephones, physical facility). Representatives from these offices and their contractors (e.g., TECOM) can respond more quickly to HOC facility problems. This has reduced the number of contracts (and subcontracts) required to maintain the operational readiness of the HOC.

Future Efficiency Initiatives Under Consideration

With HQ staff consolidation and relocation of the HOC at TWFN completed, staffing an HOC can occur more rapidly than in the past. This has removed an important basis for the past decision on the role of the region in the early phase of NRC's emergency response. Accordingly, NRC management has initiated discussion on the continuing need for a regional lead for early response (standby) and the necessity of having a standby emergency center in each of the regional offices. Additionally, the expansion of the overall Federal response capability (i.e., the Federal Response Plan and the Federal Radiological Emergency Response Plan) emphasizes the need for a consolidated agency lead in Washington, DC. These and budgetary considerations have led to the tentative conclusion that the early emergency response role of the regions can be redirected to responding to the site, with the HOC assuming the lead in standby. Such changes in roles would allow for a significant reduction in regional IRC capabilities and emergency response staffing needs, with attendant cost savings to the NRC.

ISSUE: What changes to the incident response program and facilities could result in greater efficiency and effectiveness?

RECOMMENDATION: Conduct an evaluation of additional changes that may be made to the Incident Response Program and nationwide facilities to reflect the consolidation/move of the HOC to White Flint and the potential disabling of the HOC due to an external threat.

LEAD OFFICE: AEOD/Regions/NRR/NMSS

COMPLETION DATE: 1/1/96

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[3] One of the guiding principles in this effort was that response specialists are technically proficient in their area of specialty; therefore, the response Training Matrix does not need to address technical skills (e.g., health physics principles for a dose assessment specialist).

3.2.5 Maintenance of Staff Expertise

DISCUSSION:

The NRC currently employs a well-educated and highly experienced professional workforce whose knowledge and experience were primarily derived from participation in formal college-level degree programs and by working in the Federal and private sectors. In order to continue to provide a technical staff with the appropriate knowledge and experience necessary for the agency to perform its changing mission in an environment of downsizing and budget cutting, the NRC must focus efforts on maintaining and upgrading the current staff's knowledge and experience. This effort will require a combination of agency training and development programs, continuing formal education, and broadened work experience. The following discussion describes measures that are being taken or may be taken to obtain, maintain, and enhance such a workforce.

The widespread Federal Government and industry downsizing is expected to produce an ample supply of individuals at the full-professional level. However, significant FTE and funding reductions through FY 2000 will reduce external recruiting. Nevertheless, when limited external recruitment is utilized, the long-term needs of the agency will require a continuing focus on entry-level recruitment of new college graduates, although a certain amount of recruitment of full professionals in specialized areas must continue.

To ensure the right mix of experience and expertise within the staff, it will be necessary to develop more refined methods for correlating needed staff expertise with current staff expertise in light of changing mission requirements. It will also be necessary to continue to evaluate and improve job analysis practices to identify the full range of skills, knowledge, and abilities required for positions so that the required training, retraining, and continuing education can be identified and supplied to meet changing NRC job requirements.

The staff will face many new challenges in the near future as the agency moves much of the specialized technical work previously done by contractors to in-house staff. This will require the technical skills of NRC staff to be updated so that they can successfully complete this transition. Both university education and agency training may be needed for these staff members as well as rotational assignments to groups doing related work in the NRC and the industry.

Skills requirements will need to be closely monitored in relation to allowable personnel replacement rates to ensure that skill needs are addressed. In addition, as the impacts of funding reductions on personnel staff levels are more clearly identified, these impacts will need to be assessed in terms of skill imbalances and other attrition factors.

Long-term skill development is expected to extend over a period of years. The NRC is presently engaged in providing programs to meet changing staff skill requirements and will continue to improve and develop these programs.

Training and development of NRC staff will be a critical part of the change in the regulatory culture of the agency.

A number of developmental tools will need to be endorsed and employed to enhance long-term agency skills. These include job aids, expert systems, on-the-job training, coaching, mentoring, rotational assignments and other developmental opportunities, job redesign, and computer-based/multi-media instruction. The planning for developing and enhancing skills is expected to require a number of disparate paths to acquire special skills to support NRC's mission. These include use of the Graduate Fellowship Program, Senior Fellowship Program, Distinguished Engineers and Distinguished Scientists Program, agency courses, and courses offered by colleges and universities.

Programs to provide and maintain needed skills must be assessed and, as appropriate, developed and implemented for the various technical staff positions. These programs must identify the knowledge, skills, and experiences required to achieve minimum and full job performance. Qualification and/or training programs will then need to be developed to specify the activities that employees must complete to initially qualify for and maintain the position.

In addition, skills surveys conducted during the planning period should examine areas such as experience and abilities that employees think are not being used. The information obtained from this type of survey research should trigger more intensive evaluation of the skills available, their application to mission requirements, and any agency development requirements to maintain needed skills at the appropriate level of proficiency.

Current Initiatives

- The agency Human Resources Strategic Plan is being updated to address NRC's foreseeable human resource issues, including those discussed above.

- A survey to determine what skills and knowledge are required of the current staff for successful technical job performance and how these skills and knowledge were acquired is underway. This information will then be used to determine requirements for future technical job performance, and where to obtain the necessary expertise. The findings will also be used as one indicator for determining requirements for maintaining and enhancing the staff's knowledge and experience to meet changing mission requirements. To date, office directors and regional administrators have identified current and future critical needs areas, and subject matter experts in these areas.

- Rotational assignments and other developmental opportunities are available to provide NRC professionals with the kind of experience and training identified as valuable for professional career advancement purposes. In line with enhancing individual and organizational performance, new developmental programs for prospective Resident Inspectors, Senior Resident Inspectors, and Senior Reactor Analysts are being established and implemented.

- The area of probabilistic risk assessment has expanded greatly in the last few years. This is one example of an area that has required enhancement of staff expertise through hiring, and by training the staff. It has been recognized that a combination of experience, education, and training is needed to carry out the mission of the agency. A PRA Training Focus Group has been formed to assess the different levels of PRA knowledge and experience required for different staff positions and identify methods and sources for providing the needed expertise. As described in an agency position paper on the status of agency-wide implementation of probabilistic risk assessment, the PRA Training Focus Group has endorsed the concept of three categories of PRA user skill levels as originally proposed by the PRA Working Group. These three categories of PRA skill levels for the agency are classified as basic users, advanced users, and expert practitioners. Staff training in PRA is seen as the most important component for agency staff to achieve the category of basic user. In order to achieve the category of advanced user, staff will require additional training as well as education and focused experience to reinforce learned skills. The staff feels that no amount of training can get agency staff to the expert practitioner category. Development of this very sophisticated level of PRA skill and knowledge is characterized by considerable additional university education and significant work experience actually working on PRAs.

- A similar effort is underway in the digital instrumentation and controls area. Licensing review of advanced reactor designs will include safety analysis of computer-based instrumentation and control systems incorporating state-of-the-art hardware and software applications whose reliability in a radiation environment may not be well known. These advanced digital instrumentation and control systems will also be backfit into current generation reactors requiring review and inspection of these systems as well. A Digital Instrumentation & Control Work Group is assessing staff needs and identifying methods and sources of training for the staff in this area.

Resources

Volume 11 of NUREG-1100, "Budget Estimates Fiscal Years 1996-1997," does not specifically address budgeted resources. It is estimated that more than 10 FTEs are utilized each year in the area of the maintenance and utilization of staff expertise in addition to the FTE utilized for technical training and career or professional training of the staff conducted by AEOD/TTD and OP.

ISSUE:

How will NRC obtain and maintain a technical staff with the appropriate knowledge and experience necessary for the agency to perform its mission?

RECOMMENDATIONS:

Continue development of an agency plan for identifying the technical expertise and associated skills and knowledge that will be required for successful job

performance to support the changing mission and structure of the NRC. The plan should describe how the agency will enhance and maintain the technical expertise and skills and knowledge of current NRC employees through education and experience, and the responsibilities and authority for implementation. The discussion should include evaluation techniques that will be used to determine the need for formal qualification and/or training programs and continuing education requirements, and hiring options for obtaining the necessary expertise through external recruitment.

The plan should also address how the agency will determine the adequacy of existing agency programs for improving and maintaining staff expertise and, based upon the evaluation, develop recommendations for enhancement, as necessary. The recommended action should describe the use of a variety of activities designed to enhance and maintain staff expertise, including training and development programs; education at universities; rotational assignments (within NRC and the industry); participation in national and international professional societies (e.g., standards and technical committees); and methods for assigning staff to technically interesting work to create an environment that maintains the appropriate depth of knowledge and expertise required.

LEAD OFFICE: OP/AEOD

COMPLETION DATE: 4/1/96

3.3 ADMINISTRATIVE CANDIDATE EFFICIENCY IMPROVEMENTS

3.3.1 Interoffice Administrative/Support Overlap

DISCUSSION:

Until recently, NRC has experienced a steady growth in technical programs and staff since inception of the agency in January 1975. Similarly, the growth and dispersion of administrative functions has evolved over time in response to incremental changes in agency programs and legislative requirements, and for logistical reasons. As a result, there are some overlaps and inefficiencies in performance of agency administrative support activities which warrant further review in the context of today's environment, budget reductions, NPR initiatives, and agency streamlining.

NRC has four central support offices whose missions are to serve the administrative/support needs of the agency: the Office of Administration (ADM), the Office of the Controller (OC), the Office of Information Resources Management (IRM), and the Office of Personnel (OP). In addition to these central support offices, administrative functions are performed in varying degrees by program support staffs in other NRC offices and in each of the four regions.

Central Support Offices in Headquarters

The Office of Administration provides centralized administrative and logistical support services for the agency, specifically in the areas of procurement, facilities and property management, transportation, security, printing, duplicating, publications services, mail and distribution services, Freedom of Information Act requests, privacy protection, rulemaking support, and local public document rooms (LPDRs), as well as certain support services for the regional offices.

The Office of the Controller is responsible for developing, maintaining, and overseeing the implementation of policies, procedures, and standards for carrying out all agency financial management activities. These activities include exercising budget and accounting responsibilities; providing agency senior management with analyses of policy, program, and resource issues; and ensuring adherence to applicable legislation, Office of Management and Budget (OMB) circulars and bulletins, and other government-wide financial management directives, including the Chief Financial Officers (CFOs) Act of 1990. OC also administers the license fee program and provides payroll, travel, and other fiscal services for the NRC.

The Office of Information Resources Management provides centralized information resources management in the areas of computer, telecommunications, and information support services, including planning and program management, nationwide telecommunications equipment and services, systems development, data administration, office automation, microcomputers, records management and services, library services, document control and management, computer operations, computer security, user support services, and graphics.

The Office of Personnel provides recruitment, organization, utilization, and development of the agency's human resources; plans and implements NRC personnel policies, programs, and services; administers agency-wide recruitment, staffing, compensation, and position management; provides for training, awards and benefits administration, employee health assistance, and counseling services; provides labor relations policy guidance and negotiates the collective bargaining agreement; collects, analyzes, and provides data on NRC's work force and supports agency-wide equal employment opportunity and affirmative action programs and activities, and provides administration and guidance for the human resources strategic planning effort. Training and development activities by OP provide all education and training (other than reactor technology and associated technical training under the purview of the AEOD's Technical Training Center) for agency headquarters and regional staff.

Other Administrative/Support in Headquarters

NRC program offices also have central support staffs to provide direction and coordination of administrative support functions involving long-range planning, personnel/manpower analysis, resource control, budget, financial management, contract management, mail services, records management, technical editing, FOIA coordination, other general administrative matters, management information systems development, and word processing systems operation.

Each NRC office varies in its approach to administrative support. Some offices have central support organizations performing most, if not all, of these services for the office while others have assigned many of these administrative responsibilities to their technical divisions, resulting in relatively small central support staffs. In addition to policy functions, office support staffs manage the processes and paperwork normally associated with administrative support functions. These support activities also enabled or allowed offices to overcome logistical problems, because until 1994, NRC Headquarters staff were housed in seven (at one point 11) different buildings in Rockville and Bethesda, MD, and Washington, DC. Over time, this created some inefficiencies in the way NRC accomplishes basic administrative functions, for example, duplication in coordination and processing of personnel, travel, training, and procurement actions.

Regional Administrative/Support Activities

In 1982, NRC embarked on a regionalization program to strengthen inspection and oversight for power reactors and materials licensees assigned to each region. For logistical reasons and to ensure regional administrators had the necessary authority and resources to carry out their programs, the agency established a Division of Resource Management and Administration (DRMA) in each of the five (now four) regions. The regional administrators have certain authorities and responsibilities normally held by headquarters, including personnel, contracting (small purchases), space management, accounting, travel, reproduction, ADP/telecommunication and information management, personnel, and legal support. ADM, OC, OP, IRM and OGC have provided guidance and oversight to the regions in these areas, as appropriate. From an administrative standpoint, this has resulted in four autonomous regions, each having a separate central administrative support organization to provide most of the administrative and logistical support services required for regional operations.

Resources associated with administrative/support needs of the agency from "Budget Estimates Fiscal Years 1996-1997," NUREG-1100, Volume 11, are shown below. This table includes FTEs and contract dollars for the resource and administration cost center which covers financial management, administrative and logistical support, information resources management, personnel, and training. DRMA resources are also included in this table. The table does not include resources devoted to administrative activities in the program offices, nor those included in the policy and direction cost center (OEDO, SECY, OGC or other offices reporting directly to the Commission). Contract funds include $22.5 million in nondiscretionary rent and building operations expenses.

Resources	FY94	FY95	FY96	FY97
FTE	510	501	499	493
CONTRACT SUPPORT ($K)	83,799	83,926	84,780	81,790

The number of resources performing administrative activities varies from office to office. It is estimated that between 150 and 250 staff currently perform some type of administrative support service within the headquarters

technical offices, approximately half of which appear to be performing nonclerical functions. It is difficult to estimate the resources devoted to program policy functions versus those devoted to administrative activities in the central support organizations and/or the divisions within each major program office. However, it is clear that the dispersion of administrative functions has created some inefficiency and overlap in the administrative support area. (This overlap was also noted in the November 1993 Report of Headquarters Organizational Review.)

In contrast to the diverse nature of program support activities among the Headquarters offices, all of the DRMA offices are very similar in structure. However, like the Headquarters offices, there is a difference in the number of resources and approach to performance of some administrative functions among the regions. Currently, resources devoted to administrative support functions in the DRMA organizations range from 25 to 35 FTEs. In addition, some resources within other divisions perform clerical support functions in the regions.

Changing Environment

In the past few years, NRC has experienced a dramatic change in the way we communicate. A sequential, paper-driven, process-oriented way of doing business is giving way to a more instantaneous electronic communications capability. Microcomputer-based local area networks deployed throughout the agency provide enhanced intra-agency communication; improve the capability to electronically create, modify, transfer, and share documents and data; improve personal productivity; and streamline administrative functions.

With our consolidation in the White Flint Complex, we have also eliminated the significant logistical inefficiencies associated with operating out of several locations throughout the area, enhancing communications among NRC staff considerably. NRC expects this trend to continue and to result in further improvements in the efficiency of operations, particularly in the administrative support area, as we gain experience with use of new technology in a consolidated environment.

Ongoing Initiatives

NRC has several initiatives underway to ensure optimum use of these capabilities in the way administrative support services are provided to the agency, while at the same time assuring appropriate controls are in place. These initiatives include, but are not limited to form automation, electronic commerce, online technical editing for headquarters and regions, NUDOCS replacement (new text and image retrieval system), property management automation, use of streamlined cost center approach to budget formulation, development of an integrated payroll and personnel system which includes electronic time and attendance reporting, automated contract payments, use of Computer Aided Design and modeling techniques in space management, and implementation of the BankCard program and other innovations under NRC's Procurement Reinvention Laboratory.

ISSUE: Where can we reduce/eliminate interoffice administrative/support overlap to improve efficiency?

RECOMMENDATION: Evaluate a full range of ways to reduce overlap and improve efficiency of administrative functions (e.g., personnel, contracting, financial management, IRM, etc.). The evaluation should --

- Identify each type of administrative service being performed by the offices/regions and determine areas in which inefficient/overlap and redundant processes exist.

- Determine type of administrative activity and minimum level of support required for each office/region and, considering value added at each step of the process, recommend the best approach for providing such support (evaluation should consider use of personnel dedicated by office, satellite offices, etc.).

- Assess whether combining organizations that perform similar or complementary functions will achieve any significant efficiency gains and/or resource savings and can be accomplished without sacrificing necessary controls.

LEAD OFFICE: EDO/ADM/OC/OP/IRM/NMSS/NRR/AEOD/RES/REGIONS

COMPLETION DATE: 4/1/96

3.3.2 Training and Development

DISCUSSION:

The NRC technical training program is managed by the Technical Training Division (TTD) of AEOD. TTD coordinates with the NRC Headquarters offices and regions in the development and implementation of formal NRC staff qualification and training programs. Technical training is provided to best meet the integrated training needs defined by formal NRC staff qualification and training programs in the curriculum areas of reactor technology, probabilistic risk assessment, engineering support, radiation protection, fuel cycle technology, security and safeguards, and regulatory skills. TTD manages the Technical Training Center (TTC) facility in Chattanooga, TN. The TTC includes seven classrooms and five full-scope reactor training simulators.

Formal career and professional development programs are managed by the Organizational Development and Training component of the Office of Personnel (OP). Training is provided to NRC employees in areas that include supervisory, management and executive development, clerical, administration, science and engineering, computer technology, communications, equal employment opportunity, sexual harassment prevention, and organizational development. In addition, OP manages all external training (individual training opportunities)

through the NRC Form 368, "Request for Training and Authorization", process. OP manages the Professional Development Center (PDC) and the Individualized Learning Center facilities in TWFN. The PDC includes four classrooms of conventional design and three designed to support computer training.

The Government Employees Training Act of 1958 is the authority under which the head of each agency may establish, operate, and maintain a training program. Prior to 1974, reactor technology training for the then Atomic Energy Commission staff was obtained through the GE and Westinghouse nuclear steam supply system vendors. In recognition of the need to provide relevant training with more regulatory perspectives and avoid possible conflict-of-interest situations, the first in-house technical training organization was established at NRC headquarters in Bethesda, MD, in 1974 within the Office of Inspection and Enforcement. In 1975, the Management Development Training Staff was established within ADM to provide executive development programs, supervisory and management development programs, professional employee training, and to improve management and career development and training opportunities for women and minorities.

The technical training function was relocated to Chattanooga, TN, in 1980 and established as the Reactor Training Center (RTC) in accordance with SECY-79-622, "Improvements in the Inspection and Enforcement Training Program." The major reasons for this relocation were as follows: to place all students on an out-of-town basis in order to minimize office or personal distractions and maximize student concentration on training activities; to realize the reduced travel costs accrued by the relatively low per-diem rates; to take advantage of the relatively low cost of living which would encourage recruitment and retention of a high-quality instructional staff; and to maximize the proximity to TVA reactor and simulator facilities.

Over time, the role of the RTC expanded to include many specialized technical training topics needed for a more diverse cross section of NRC employees. This expansion of mission scope resulted in the redesignation of the RTC to the Technical Training Center (TTC) in 1983.

Anticipating the need for an in-house computer training curriculum, OP established in 1985 an Information Technology Support Laboratory in Bethesda, MD. This effort has continued with a large number of computer courses now available for NRC personnel.

In 1987, as part of an overall NRC reorganization, the technical training function was shifted to AEOD, and the career and the professional development training function was shifted to OP.

As availability of time on industry simulators was reduced to negligible amounts and reasonably priced, previously owned simulators became available, NRC began the acquisition of simulators to support the internal reactor technology training program. Full-scope simulators were acquired as follows: GE BWR/6 design in 1986; Westinghouse SNUPPS design in 1987; B&W design in 1988; CE design in 1992; and GE BWR/4 design in 1994. A Westinghouse design (Trojan reference plant) simulator has been acquired and will be installed at TTC in 1995 to replace the Westinghouse SNUPPS simulator. This was more cost-

effective and had less uncertainty than attempting to upgrade the dated Westinghouse SNUPPS simulator.

The simulation infrastructure to support the reactor technology training program currently consists of an integrated network of simulators, instructor stations, simulator development stations, and the Nuclear Engineering Workstation Simulator. The integrated simulation program serves as a foundation for formal technical training programs in the reactor program area for NRC staff personnel. Acquisition costs for these simulation assets were approximately $8 million. Replacement costs for these assets are estimated at $60 million.

Following acquisition of the BWR/4 simulator, the GE curriculum was modified to reflect the BWR/4 design as the baseline. Implementation of the resulting BWR/4-based training program allows GE reactor technology training on a design representative of approximately 75 percent of the BWRs in the United States. Similar conversion of the Westinghouse curriculum to reflect the Trojan design as the baseline is in progress. Consistent use of a reference plant design within each reactor technology area allows integration of simulator demonstrations in classroom courses to reinforce concepts and facilitate student learning.

A major expansion of the radiation protection curriculum began in 1988. There is now a large cadre of radiation safety and non-reactor-related technology courses available for NRC personnel in the reactor health physics, nuclear materials, and nuclear medicine areas.

A major expansion to create a fuel cycle curriculum began in 1993. Development and implementation of about half of the courses have been accomplished. When development is complete in 1996, there will be a stable curriculum of about 10 fuel cycle courses that can be made available as needed to support agency fuel cycle inspectors.

Responsibility for the PRA training program began in RES and was shifted to OP in 1982. This responsibility was further transferred from OP to TTD in 1994 to more fully integrate it within the technical training program.

Responsibility for training of Agreement State personnel was shifted from OSP to TTD in 1994. In accordance with the transition plan, TTD now makes available suitable training opportunities for Agreement State personnel to attend courses that are also attended by NRC nuclear materials inspectors.

In 1995, the Professional Development Center training facility was opened in TWFN as part of NRC consolidation in the OWFN/TWFN complex.

In addition to the formal training provided by TTD and OP, a significant amount of less formal training is provided by personnel from the NRC program offices and regions for their respective staffs.

Formal qualification programs have typically determined the resources needed to implement the technical training program. Such programs have existed for regional inspector positions since the early 1980s. In 1988, an effort was

undertaken by AEOD, NRR, and NMSS to specify training requirements for technical positions in these offices. SECY-91-016, "Technical Recruitment, Development, and Retention Planning and Implementation," provided the technical training sequences that were intended for personnel within the reactor program.

The NRC technical positions for which formal qualification programs currently exist are as follows: NRC Inspectors (IMC 1245); Materials License Reviewers (IMC 1246); Operator Licensing Examiners (NRR LOLB-MC-170), Headquarters Operations Officers (AEOD Procedure), and Reactor Technology Instructors (TTD Policy Document). These positions represent approximately one-third of the agency's technical personnel.

The formal development programs for which there have been or will be formal technical training requirements are the following: Reactor Engineer Intern, Senior Reactor Analyst, Senior Resident Inspector, and Resident Inspector Development Programs.

Agency employees not presently covered by formal qualification or development programs typically attend technical training courses consistent with their management-approved individual development plans or their office approved training needs. This includes employees who are seeking to advance their professional goals, consistent with agency needs, in accordance with the Federal Workforce Restructuring Act of 1993.

OP-sponsored training has historically been provided for agency employees who are in formal qualification or development programs and employees who are seeking to improve their skills through training that requires university or other currently available external courses, NRC supervisors or employees in supervisory or SES development programs, and NRC employees who need computer training for common NRC applications.

Resources

Resources for this area are consistent with NUREG-1100, Volume 11, "Budget Estimates Fiscal Years 1996-1997" and are shown below. These resources do not include those associated with technical assistance to foreign countries (primarily Russia and Ukraine through Lisbon Initiative priorities).

	FY94	FY95	FY96	FY97
Technical Training and Qualification -- Reactor Program (AEOD Budget)				
FTE	25	25	25	25
CONTRACT SUPPORT ($K)	4,540	4,728	4,573	4,502
Technical Training and Qualification -- Nuclear Materials and Nuclear Waste Program (AEOD Budget)				
FTE	2	2	2	2

CONTRACT SUPPORT ($K)	356	692	729	725

Personnel Training -- Resource and Administration Program (OP Budget)

FTE	9	9	9	9
CONTRACT SUPPORT ($K)	3,632	3,556	3,131	3,047

Information Technology - Resource and Administration Program (IRM Budget)

CONTRACT SUPPORT ($K)	500	500	500	500

A variety of methods are used to provide training to the NRC staff. When sufficient numbers of NRC staff need the same type of training which is not available at universities or other organizations, it is generally more cost-effective and productive to develop custom courses for the NRC staff. This is done both by using in-house FTE resources and through the use of contracting dollars. Custom courses are typically more effective for NRC purposes than off-the-shelf courses because they are customized to emphasize areas that are most important to regulatory personnel. Almost all reactor technology training is conducted using in-house resources. Most of the specialized technical training is conducted through contracts that are managed by TTD. Most of the OP-provided training is conducted through contracts managed by OP. Appropriate NRC staff or line managers are commonly used in contracted courses to supplement contractor presentations and provide NRC perspectives.

Training courses are provided in the location that makes the most sense. When facilities or special equipment are not critical, courses are presented where the majority of the students are located (in Headquarters or in a region). Courses that are dependent on special equipment, training, or facilities are scheduled for presentation at the TTC, the PDC, or a contractor facility, as appropriate. Intense technical training courses, particularly longer reactor technology courses, are conducted at the TTC.

Both TTD and OP use the principles of the systems approach to develop courses and programs, thereby creating a life cycle that includes analysis, design, development, implementation, and evaluation. New courses are developed and existing courses are modified to meet new or changing needs identified by the NRC line organization.

When full-scope reactor training simulators are incorporated within the reactor technology training program infrastructure, their use is integrated into courses that were previously only presented in classrooms. This allows consistent reinforcement of concepts, additional insights, and more efficient learning by students.

The Individualized Learning Center offers a training alternative to classroom instruction. A wide variety of video and audio tapes, computer-based instruction, and multi-media training are available for self-study by the NRC staff.

Workgroups have been established to facilitate advice of the agency experts in the areas of PRA and digital instrumentation and control. The PRA Training

Focus Group is making recommendations to shape the PRA training program to best meet the integrated agency needs associated with the PRA Implementation Plan. The Digital I&C Workgroup is defining training requirements for appropriate agency personnel.

Current plans are to establish one or more TTC-like classrooms in the OWFN/TWFN complex to allow Headquarters presentation of some courses previously available only at the TTC. This will require permanent installation of high-technology training aids such as the Nuclear Engineering Workstation Simulator and the interactive laser videodisc system in these classrooms in order to maintain the course standards.

A number of efforts are either underway or currently planned to make training administrative processes and even training less dependent on the physical location of the users. A project is currently underway to establish an agency training tracking system that will provide reliable information in the format needed by agency managers to oversee and track the status of staff training and obtain more realistic determination of course demand. An effort is underway to establish an integrated schedule of formal training courses provided by TTD and OP. Once available, training coordinators, managers, and employees should be routinely more aware of available courses. An electronic registration system is planned to provide a more user-friendly system that provides better training information earlier to those who need it.

Use of distance learning equipment and techniques such as video conferencing for presentation of selected courses is being considered. The first equipment is scheduled for delivery in the PDC, TTC, and ACRS facilities and selected regions in FY 1996.

In light of changing agency needs and course attendance patterns, courses in the CE and B&W reactor technology areas are being restructured to concentrate on differences and integrate simulator and classroom presentations.

ISSUE: How can NRC training and development programs be made more effective and are agency training and development programs sufficiently inclusive?

RECOMMENDATION: Evaluate NRC training and development programs to assess how they may be made more effective and efficient and evaluate whether the agency training and development programs are sufficiently inclusive. Specifically--

- Assess whether the existing qualification, training, and development programs meet current needs of the agency and whether changes are needed in program design, size, goals, or implementation in light of agency plans to maintain and broaden staff expertise and operate more efficiently.

- Assess how formal training can be managed so that it is less intrusive and more efficient.

- Assess whether there is sufficient linkage in the training process (i.e., between needs determination, course development, course scheduling, student registration, and student attendance) and

the effectiveness of information flow from program offices to training organizations(s) for new or changing requirements.

- Assess whether significant efficiencies and/or program effectiveness could be gained by organizational and/or geographical consolidation of training functions. This evaluation should assess efficiencies that would include not only resources but also other factors such as utilization of training staff expertise, better integration and communication among training, regional and Headquarters staff and having training more accessible to HQ staff (e.g., no travel time required).

- Assess the continued need for multiple reactor simulators.

LEAD OFFICE: AEOD/OP/NRR/NMSS/Regions/RES

COMPLETION DATE: 4/1/96

APPENDIX A

ONGOING AND PLANNED EFFICIENCY INITIATIVES

APPENDIX A: ONGOING AND PLANNED EFFICIENCY INITIATIVES

Table of Contents

INTRODUCTION

During the National Performance Review Phase II (NPR-II) Functions and Efficiency Review, the steering committee identified several ongoing and planned efficiency initiatives that were consistent with the objective of the review. This appendix provides a description of these ongoing or planned initiatives. The initiatives are organized into the following categories:

A. Programmatic and
B. Administrative

The format for each initiative includes a brief discussion of the background and any ongoing or planned activities to achieve the desired efficiency. A status of each of these items will be provided to the Commission in June 1996.

A. PROGRAMMATIC EFFICIENCY INITIATIVES

A-1 Operating Reactor Licensing Program

DISCUSSION:

For more than five years, the staff has been making a concerted effort to increase the efficiency and effectiveness of the operating reactor licensing program. This effort has reflected in part the need to conserve both the NRC's and the licensees' resources when safety will not be affected. This effort has been built upon NRC initiatives and those of licensees to eliminate requirements that have little or no impact on safety. Eliminating unnecessary regulatory burden will result in efficiencies for both the staff and licensees in that resources will no longer be expended on items of marginal safety benefit and can be redirected to those items that are more safety significant.

ONGOING AND PLANNED INITIATIVES:

Continuing Program for Regulatory Improvement

In May 1994, the Commission established the "Continuing Program for Regulatory Improvement" (SECY-94-090), based on the fundamental principle that all regulatory burdens must be justified and that the regulatory process must be efficient. In addressing reduction of unnecessary regulatory burdens, the agency is substituting performance-based requirements and guidance for prescriptive requirements and guidance to the maximum extent practical. In addition, the NRC is using the insights gained from probabilistic safety assessments to develop risk-based regulations that balance regulatory burden against safety benefit. The Continuing Program for Regulatory Improvement consists of three initiatives:

1. The Marginal to Safety Program,
2. The Regulatory Review Group Implementation Plan, and
3. The Cost-Beneficial Licensing Action Program.

The Marginal to Safety Program is the agency's continuing effort to eliminate or modify regulations that are marginal to safety and impose a substantial regulatory burden on licensees. Initially, its charter was to determine which requirements should be relaxed or eliminated. But the program was eventually redirected to focus on petitions for rulemaking and regulatory guidance identified by industry that have a high implementation cost and a marginal impact on safety. In refocusing the program, the staff placed the initiative for burden reduction on industry.

In 1993, the Regulatory Review Group (RRG), a group of senior-level NRC staff, conducted a review of selected power reactor regulations and related processes, programs and practices, with special attention placed on the feasibility of substituting performance-based requirements and guidance for those that are more prescriptive. The RRG came up with a plan that identified areas with significant potential for relief of burden with little or no adverse safety impact. The group made 71 recommendations (SECY 94-003) covering a wide spectrum of issues and topics, with 32 of them completed as of April 1995. Examples of items completed include issuance of improved fire protection guidance, which provides licensees with additional flexibility in how they meet fire protection requirements, eliminating the requirements for quarterly submittal of safeguards logs, and issuance of NUREG-1482, "Guidelines for Inservice Testing at Nuclear Power Plants."

The Cost-Beneficial Licensing Action (CBLA) program is an agency initiative begun on a pilot basis in mid-1993 and expanded to all licensees in 1994. The objective of the CBLA program is to increase the staff's receptiveness to submittals from licensees that reduce or eliminate license requirements that have an incremental, small effect on safety but a high economic burden. As of May 2, 1995, licensees had submitted 171 CBLAs to the staff. Of these 171 submittals, 109 have been approved thus far for a cost savings (based on licensees' estimates) of over $485 million. In order to encourage more widespread participation in the CBLA program, the staff transmitted Administrative Letter 95-02, "Cost Beneficial Licensing Actions," to all reactor licensees on February 23, 1995.

The staff plans to continue implementation of the Continuing Program for Regulatory Improvement instituted in May 1994 and to continue to monitor the program's status.

Licensing Process Improvements

The staff is pursuing other opportunities to make general improvements in the way we regulate reactors. Some of these improvements are--

1. The potential conversion of licensees' technical specifications to the improved standard technical specifications (STS). While the benefits of converting to the new technical specifications are hard to quantify, licensee owners groups project annual savings of between $150,000 and $1.13 million per

site from the program. Facilities that have already converted to the STS include Crystal River, Clinton, Grand Gulf and Hatch. In total, licensees for 40 units are currently pursuing conversion to the new technical specifications.

2. The Line Item Improvement Process is similar to the Technical Specification Improvement Program in that it allows licensees to relocate specific license requirements to licensee-controlled documents. When individual requests from licensees to change plant-specific license requirements are judged to have generic applicability and can be extended to all licensees, the NRC informs industry, via generic letter, of the opportunity to pursue the line item improvement and allows each individual licensee to decide whether to pursue the potential change.

3. In order to increase staff efficiency and effectiveness, the staff is pursuing a number of license amendment process improvements. The objectives of this effort are to maintain the current high level of technical quality of amendments, encourage consistency of amendments, and minimize the staff effort and processing time for issuing license amendments. Some of the potential process improvements involve the work planning process and coordination between the project manager and technical staff, work priority, schedule and level of effort, and precedent research.

The staff will continue to evaluate changes to the NRC operating reactor licensing program, which would result in providing guidance to the licensees for broadening the areas of possible relaxation of certain commitments in licenses that would not require prior NRC approval. This will include assessing a range of methods to increase the use of improved standard technical specifications, continuing to implement the agency-wide program to move to risk-based regulation, encouraging broader participation in CBLA programs, working with industry to finalize staff acceptance of the industry's commitment management program, implementing graded quality assurance (QA), continuing to identify reporting requirements that are candidates for elimination, and vigorously pursuing the remaining open issues in the RRG implementation plan and bringing them to closure. Planning to broaden the technical expertise of reviewers (and Headquarters (HQ) inspectors) to increase the areas in which they can review should also continue.

A-2 Materials Licensing and Inspection Program

The materials licensing and inspection programs encompass byproduct materials, special nuclear material, decommissioning, uranium recovery, and fuel cycle facilities, which are discussed separately below.

Byproduct Materials Licensing Program

DISCUSSION:

In the early 1980s, the Office of Nuclear Material Safety and Safeguards (NMSS) transferred authority for nearly all of the byproduct materials licensing program to the NRC regions in order to improve communications

between the materials licensing reviewers and the inspectors who were already based in the regions. This also brought license reviewers closer to the regulated community. At about the same time, NMSS took a number of other steps to upgrade the program. It conducted an extensive series of training for new regional licensing reviewers; developed a new format for issuing program guidance, which became known as Policy and Guidance Directives; issued a series of draft Regulatory Guides and Standard Review Plans that covered most categories of byproduct licenses; and established a computer-based system that is now called the Licensing Tracking System.

In the ensuing period, a number of changes have occurred. The number of byproduct materials licenses regulated by NRC has dropped from about 9,000 to about 6,500. The number of Agreement States has risen from 26 to 29, with the addition of four States to the program (Illinois, Maine, Utah, and Iowa), and the return of one (Idaho) to NRC regulatory control. In the decade of the nineties, major rulemakings such as the decommissioning rule, the 100-percent fee recovery rule, and the changes to the byproduct material program in 10 CFR Parts 34, 35, 36, and 39 have had profound effects on the regulatory base. Similarly, industrial advances and marketplace demands have led to new sets of industrial, academic, and medical uses for radioactive material.

Overall, there has been strong performance on the part of most NRC and Agreement State licensees. Nonetheless, those overexposures, medical misadministrations, and other non-reactor events that did occur played a role in the reshaping of the program. External parties, such as the public, the media, the regulated community, the States, Congress, and others, in conjunction with NRC, also influenced the program while emphasizing a number of currently open issues that merit additional consideration in any comprehensive review of NRC's current functions and activities. The recent Regulatory Impact Survey is another important source of feedback. Together, these elements bring us to the point where it is now time for NRC to take a fresh look at its regulatory, procedural, and administrative support infrastructure. NRC's increased emphasis on licensee workshops, especially in conjunction with major regulatory changes, indicates the agency's commitment to a grassroots approach, that is, to improve communications between itself and the licensee community.

ONGOING AND PLANNED INITIATIVES:

NRC has several projects underway. The staff, composed of members from the regions and NMSS Headquarters, has undertaken a Business Process Redesign (BPR) for the byproduct materials licensing program. When fully implemented, it is anticipated that BPR will provide a comprehensive and far-reaching set of solutions to problems, particularly in areas related to timeliness and process efficiency. NRC plans to make the system available to Agreement States for voluntary use and will invite Agreement States participation in development of the new process. Following additional instruction and guidance from the Commission, future phases of BPR are expected to evaluate the efficacy of additional process changes such as those recommended below.

A second project concerns NRC's control over, and accountability for, generally and specifically licensed devices. There are approximately 1.5 million generally licensed devices in Agreement States and areas of NRC jurisdiction. Approximately 450,000 of these are regulated by NRC. The staff is investigating whether some of the persons using devices under general license can be exempted from licensing requirements based on the type of device they possess. An NRC staff review has identified a number of issues related to risk and type of license involved. The staff is now considering the formation of an NRC/Agreement State Working Group to evaluate this issue from a national perspective, since it believes Agreement States share many of the same set of concerns.

NRC also conducted a Regulatory Impact Survey for materials and fuel facility licensees to determine the NRC's impact on licensees' operations. NRC is currently evaluating the survey results of the materials licensee survey. The fuel facility survey is addressed in the Fuel Facility Licensing Program section of this document.

The staff will evaluate changes to the NRC byproduct materials licensing program that would result in--

- Better timeliness of license processing and improved clarity and consistency in the byproduct licensing process through a number of guidance consolidation activities designed to facilitate consistency, clarity, and ease of retrievability of regulatory documents.

- An authoritative and comprehensive licensing manual that will be available to the staff, the public, applicants, and licensees. This evaluation will include a review of the information required or requested to be submitted to determine if it is actually needed to make a regulatory decision. Give consideration to ways in which NRC could minimize the number of documents that licensees are required to send in during the licensing process.

- Regulations for 10 CFR Part 30 that would implement a 10 CFR 50.59-like process to selected materials functional areas. Section 50.59 allows reactor licensees to make certain changes to their facilities or programs without prior NRC approval unless the changes involve an unreviewed safety question. Provide guidance to licensees when the 10 CFR 50.59 process should be used. Establish a program to return requests for review that should be done by the licensee through the 10 CFR 50.59 process.

As stated earlier, the staff expects to employ the BPR methodology to evaluate the above recommendations. The staff briefed the Commission on the first phase of BPR on May 10, 1995 (SECY-95-114, "Implementation of a Redesigned Materials Licensing Process").

Byproduct Materials Inspection Program

DISCUSSION:

Because of the different types of licensee operations, facilities, nuclear materials possessed, and qualification requirements, the byproduct materials inspection program requires a flexible, varied approach. Complex broad-scope universities and medical facilities comprise one end of the regulatory spectrum, whereas small-quantity, possession-only licensees in relatively low-risk areas comprise the other. Inspection procedures in NRC Inspection Manual Chapter 2800, "Materials Inspection Program," identified inspection scheduling frequencies that were once based largely on the risk of operations for that category of licensee, with little flexibility for adjusting these frequencies based on variances in individual licensee performance.

In June 1990, NMSS took a major step to allow the regions more inspection program flexibility when it designated core and non-core inspection activities. In April 1995, NMSS took a second step as it published a major revision to Inspection Manual Chapter 2800. This chapter establishes the inspection program for licensees authorized to possess and use radioactive material for radiography, medical programs, academic, research, and industrial uses, waste disposal operations, manufacturing and distribution of products, leak testing, calibration, and other types of services, and transportation related thereto. A task force of staff from NMSS, the regions, other Headquarters offices, and Agreement States met several times over the course of 6 months to introduce a number of changes to the materials inspection program. Specifically, the revised Inspection Manual Chapter 2800 places greater emphasis on reactive inspections over routine inspections, places greater program emphasis on individual licensee performance in the scheduling of materials inspections, and requires regions to make more extensive use of NRC Form 591, "Safety Inspection," rather than issue a full written inspection report, in appropriate instances. One key aspect of the new Inspection Manual Chapter 2800 will be to allow more regional flexibility to accelerate the inspection schedules for poorly performing licensees and extend the schedules for those that demonstrated consistently strong performance.

ONGOING AND PLANNED INITIATIVES:

The staff will evaluate changes to the NRC byproduct materials inspection program that would result in--

- Focusing on problem identification, by greater consideration of:
  - performance measures and
  - risk-important items
- Relating the identified problems in reports and findings to performance by the licensee (more performance-based inspections).
- Greater or full use of licensee self-assessments and inspection results.

- Broadening the technical expertise of inspectors so as to broaden the areas in which they can inspect.

- Reassessing the nature and extent of inspection report documentation required (e.g., address only problems discovered during inspection).

- Consolidating certain inspection activities at Headquarters or a region to improve efficiency and consistency, including assessing realignment of inspections by licensee type versus regional boundaries.

- Having inspectors and reviewers in the materials area improve coordination of their specific activities.

Decommissioning Program

DISCUSSION:

Each year the NRC must evaluate requests, mainly from materials and fuel facility licensees, to discontinue licensed operations. The majority of those requests are routine and straightforward and are acted upon in a timely manner such that the sites are remediated, if necessary, and released for unrestricted use based on NRC decommissioning criteria. However, termination of licenses at some sites is considerably more complex because soils and structures contain nonroutine radioactivity levels and volumes of radioactive contamination. NRC has identified approximately 50 sites that involve unique and difficult decommissioning issues requiring special attention to ensure timely decommissioning. Although none of these sites pose an immediate threat to public health and safety, they have contamination that exceeds existing NRC criteria for unrestricted release. All of these sites require some degree of remediation, and several involve regulatory issues that must be addressed by the Commission before the sites can be released for restricted or unrestricted use and the license terminated.

ONGOING AND PLANNED INITIATIVES:

NRC staff initiated the development of comprehensive changes to the decommissioning program in an effort to improve the efficiency and effectiveness of NRC's materials decommissioning program. The NRC staff has reviewed the information submitted by licensees and former licensees to limit information reporting to that which is needed to support regulatory decisions in approving decommissioning plans. The staff specifically considered similar information requirements imposed by the Environmental Protection Agency (EPA) and States in evaluating environmental remediation projects to improve consistency in decommissioning. Based on the review, the staff identified a number of program changes including developing and implementing consistent administrative procedures for decommissioning; revising performance measures for evaluating program performance; improving efficiency by conducting an interactive issue-resolution process with industry and other affected interests; conducting preliminary hazard analyses ("as found" analyses) for sites whose licenses had been formerly terminated; implementing an automated database for the Site Decommissioning Management Plan; and saving resources by deferring to the Environmental Protection Agency (EPA) or other regulatory

bodies whose programs overlap with NRC's in lieu of maintaining parallel regulatory reviews with NRC's (as described in SECY-95-56, "Deferral of Regulatory Oversight to the U.S. Environmental Protection Agency for Two Sites with Radioactive Contamination and Landfill Disposal of Licensed Material from Remediation of a Third Site").

In addition, the staff plans to further streamline the decommissioning approach by (1) reducing the review of characterization plans and reports and integrating the review of site characterization information along with the decommissioning plans and (2) reducing the scope of NRC confirmatory surveys at the conclusion of the decommissioning process. This will be applied in a graded manner to manage the risks associated with the approach by applying greater technical review and management attention to poor performers. Further, the staff identified several policy issues, such as thorium and uranium waste disposal and exposure assessment scenarios, that were briefed to the Commission on May 19, 1995. These issues are being evaluated to determine if a more effective, less burdensome approach can be implemented without impairing public or environmental protection or the agency's program.

The staff has already been incorporating 10 CFR 50.59-type criteria, as license conditions, in approving decommissioning plans, which allow the licensees to depart from previous commitments, provided the departures remain within the approved safety and environmental programs (e.g., Cintichem).

The staff recently completed changes to Inspection Manual Chapter 2800, "Materials Inspection Program," and issued an inspection manual for the decommissioning program in May 1995. Both documents were developed on the basis of the staff's experience in identifying problems at decommissioning sites, with an emphasis on measures that are important with respect to ensuring protection of the public and the environment. For example, the inspection manual chapter on decommissioning inspections places a strong emphasis on ensuring the adequacy of control and security measures (e.g., fences, security patrols, postings) at contaminated sites. These measures are significant with respect to protecting the public because until the sites have been remediated in accordance with NRC requirements, the control measures are the primary means for ensuring that doses to the public remain suitably low and that radioactive materials are not removed from the sites without proper authorization. Inspection Manual Chapter 2800 and the inspection manual chapter on decommissioning inspection also address the appropriate nature and scope of inspection documentation so that the primary focus of inspection reports is on problems discovered during the inspections.

However, under the current program structure, most of the licensing for the Site Decommissioning Management Plan (SDMP) sites is the responsibility of NMSS (Divisions of Waste Management and Fuel Cycle Safety and Safeguards), whereas the regional offices are responsible for performing inspections and observing and confirming licensee radiological surveys. This separation of responsibilities introduces some inefficiency to the program (e.g., both the inspector and the license reviewer need to be familiar with the licensed program). In addition, as a result of the proposed termination of NRR support

for the Independent Radiological Measurements Program in FY 1997, NMSS, NRR, and the regional offices are also evaluating the projected need for radioanalytical capabilities and are also considering what is the optimal configuration of these capabilities for NRC in the decommissioning program.

The staff will evaluate changes to the NRC materials decommissioning inspection program that result in--

- Greater or full use of licensee self-assessments and inspection results.
- Broadening the technical expertise of inspectors to broaden the areas they can inspect.
- Consolidating certain inspection activities in NMSS or a region to improve efficiency and consistency, including assessing realignment of inspections by licensee type versus regional boundaries (similar to BPR for materials licensing).
- Having inspectors in the decommissioning area be the same persons who write the license or actively participate in the licensing process.

Uranium Recovery Licensing Program

DISCUSSION:

Of 27 NRC-licensed uranium recovery facilities, there are 19 uranium mills; five in situ leach facilities; one ion-exchange facility; one heap leach; and one mill tailings waste disposal facility. In the uranium recovery licensing program, recent actions have already been taken that are responsive to NPR goals. A major action to promote efficiency in the program was the closure of the Denver Field Office and consolidation of all uranium recovery licensing activities at Headquarters. The program had previously been split between the field office and Headquarters, with similar technical staffs maintained at both locations.

In a May 12, 1993, NRC meeting with licensees and representatives of the uranium recovery industry, the Chairman committed to have the staff explore ways of reducing the regulatory burden of the uranium recovery licensees. On the basis of this meeting, as well as comments from the uranium recovery industry and two affected States, the staff evaluated possible areas that could reduce the regulatory burden. The staff identified four areas in which it believed regulatory reduction can be achieved. Implementing regulatory reduction in the following areas will also have the effect of reducing and possibly eliminating the information and submittals from licensees that NRC needs for making regulatory decisions. The four areas are (1) modifying license conditions to permit licensees to make minor administrative changes without the need for specific license amendments; (2) implementing the use of a Performance-Based License Condition (PBLC) approach that would allow licensees to make changes to their facilities, under certain conditions, without NRC approval; (3) potentially eliminating dual regulation of in situ leach facility well fields; and (4) relying on State reviews regarding cultural artifacts.

ONGOING AND PLANNED INITIATIVES:

The main area in which the staff found regulatory reduction could be achieved was in the preparation of the PBLC. In developing the PBLC, the staff ensured that the proposal was consistent with the Commission's regulations and licenses for other facilities (i.e., nuclear power plants, fuel cycle facilities, and the high-level waste repository). The PBLC was modeled on the provisions of 10 CFR 50.59, which allows reactor licensees to make certain changes to their facilities or programs without prior NRC approval unless the changes involve an unreviewed safety question. The PBLC can achieve a significant reduction in the resources required by both the uranium recovery licensees and NRC staff to address 10 CFR 50.59-type licensing amendments. The staff has worked with two licensees to construct model licenses that would incorporate the PBLC, along with other criteria-based conditions. One model license covers an in situ leach facility well field and the other covers a conventional uranium mill. These models have been provided to all uranium recovery licensees, and some licensees have taken steps toward incorporating this approach into their licenses.

An additional action that will be taken by the staff is development of review guidance for applications for in situ leach facilities. Review guidance is presently in place for applications for conventional uranium mills and for reclamation activities. The in situ leach review guidance will complete the uranium recovery program guidance necessary to focus staff reviews. The licensing program's effectiveness and efficiency will improve by documenting the review criteria and procedures associated with in situ leach reviews. When completed, the review guidance will be made available to licensees to assist their preparation of applications.

Uranium Recovery Inspection Program

DISCUSSION:

The NMSS Division of Waste Management (DWM) recently developed NRC Inspection Manual Chapter 2801, "11e.(2) Byproduct Material Disposal Site and Facility Inspection Program," dated April 15, 1994, outlining the inspection program for these facilities. The purpose of the program is to provide inspection procedures related to all phases of activities at 11e.(2) sites, including construction, pre-operations, operations, and reclamation. The closure of the Uranium Recovery Field Office in Denver in August 1994 resulted in the uranium recovery inspection program responsibility being assigned to Region IV. However, since these inspectors are all health physics-oriented, the engineering staff in DWM are being relied upon to supplement inspections in the reclamation area. DWM is currently developing an inspector qualification program as part of Inspection Manual Chapter 1246, "Materials License Reviewer Qualification," which addresses the training requirements and guidelines for certifying DWM staff to conduct inspections. Under this program, both general and specific training requirements are enumerated.

ONGOING AND PLANNED INITIATIVES:

The staff will evaluate changes to the NRC uranium recovery inspection program that would result in--

- Focusing on problem identification by greater consideration of--

  - performance measures and
  - risk-important items

- Greater or full use of licensee self-assessments and inspection results.

- Broadening the technical expertise of inspectors to broaden the areas they can inspect.

- Consolidating all uranium recovery activities to improve efficiency and consistency.

- Reassessing the nature and extent of inspection report documentation required (e.g., address only problems discovered during inspection).

Fuel Facility Licensing Program

DISCUSSION:

In August 1991, as a result of a potential criticality incident at the General Electric Nuclear Fuel and Component Manufacturing facility, deficiencies in the materials licensing and inspection process were identified. NMSS appointed a task force to propose an ideal method for regulating unobstructed by existing regulations or resource concerns. Findings and recommendations for improvements were published in February 1992 as NUREG-1324, "Proposed Method for Regulating Major Materials Licensees."

In May 1993, after comments were received on NUREG-1324, the staff briefed the Commission on an action plan designed to enhance the rigor of the regulatory base (SECY-93-128, "Status of Action Plan for Regulating Fuel Cycle Facilities") and ensure that major fuel cycle facilities are operating safely. Among these efforts to clarify and upgrade the regulatory base was the deletion of unnecessary requirements, based on findings and recommendations published in NUREG-1324 and the Regulatory Impact Survey.

ONGOING AND PLANNED INITIATIVES:

As part of this effort, rule changes under consideration would require applicants to prepare an Integrated Safety Analysis (ISA) to identify and evaluate hazards, including chemical and radiological hazards, that could arise from or impact control over nuclear materials and have programs in place to ensure that protective measures are available and reliable. Based on a proposed requirement that a safety program description be made part of the license, licensees would be able to modify their licenses through a 10 CFR 50.59-type process after demonstrating that the safety basis defined by the ISA is not reduced by the proposed change. This approach also supports the

maintenance of a "living-license" concept, which eliminates the need for time-consuming and resource-intensive periodic license renewal efforts. In addition, a new Standard Format and Content Guide (SF&CG) would replace the existing and outdated (November 1986) Regulatory Guide 3.52. The SF&CG would have specific guidance regarding the type and depth of information to include in their submittals. The new Standard Review Plan would give licensees further information on what is required to support a specific license finding. The Commission is currently reviewing alternative approaches for accomplishing these changes, including consideration of a rulemaking approach with more industry involvement.

An NMSS reorganization created the Division of Fuel Cycle Safety and Safeguards in 1993 to improve conduct of the fuel cycle facility program. A licensing branch was formed to concentrate on licensing issues. At the time of the reorganization, there was a significant backlog in the licensing renewal area, with completion scheduled for the year 2003. As a result of initiating a more effective review approach, the schedule for completion is 1997.

Fuel Facility Inspection Program

DISCUSSION:

The 1993 NMSS reorganization created an inspection section to permit increased focus on inspection activities and to provide efficient use of limited technical expertise. The responsibility for performing criticality and chemical safety inspections was transferred to Headquarters. Although the regions continue to perform the routine day-to-day inspections in the areas of physical protection and radiation protection, rather than duplicate expertise in various regions, Headquarters will provide senior technical expertise to address difficult design, integration, and adequacy concerns in the area of criticality and chemical process safety. Emphasis will be placed on developing chemical process safety inspection procedures and refining criticality procedures. After the inspection procedures are in place, enhanced inspections will be performed by Headquarters, with regional support.

The NMSS Fuel Cycle Safety and Safeguards reorganization also allowed a dedicated staff to focus on high priority license renewals, while concurrently being able to share information such as the intent of license commitments with its inspection counterparts.

ONGOING AND PLANNED INITIATIVES:

As discussed in the Fuel Facility Licensing section, another program improvement under consideration is requiring applicants to prepare an ISA. The ISA would identify unique facility processes from an integrated perspective, potential safety vulnerabilities, and appropriate protective measures. The staff developed an action plan that committed to refining the safety inspection program to focus on inspection of implemented protective measures that address vulnerabilities identified while conducting an ISA. The safety inspection program will then have a basis to fully address the topic of problem identification.

In addition to considering an ISA, the NRC staff had proposed to let industry take the lead in developing an industry-wide self-assessment program using standardized performance indicators. This initiative, however, was discontinued based on concerns raised by the fuel facility industry regarding the difficulty of employing generic performance indicators on a non-homogeneous group of licensees.

Another initiative currently under development to increase inspection efficiency is a fuel cycle training program for Headquarters and regional staff that will address the area of broadening and improving the technical capabilities of the staff. This training will be accomplished in a manner such that inspectors would be able to better identify the potential for problems in areas outside their direct areas of expertise. The Technical Training Center has been given the lead in course development for this training program, with support from Headquarters and regional staff. Course development is expected to be completed by about January 1997.

Another issue that was considered to improve efficiency was to reduce the level of documentation required in inspection reports. However, given the broad range of activities at a licensed fuel facility and the need for a systematic assessment of these activities, we determined that the current information in inspection reports is needed to give NRC management a "big picture" of the licensee's overall performance. Since most fuel facility licensed activities are larger in scale and more complex in scope than the typical "materials" license, general inspector observations and assessments are important to the safe regulation of these large facilities.

A-3 Reactor Inspection Program

DISCUSSION:

The NRC continually seeks to improve the effectiveness and efficiency of its reactor inspection programs through activities such as the 1981 and 1989 regulatory impact surveys, the 1993 operating reactor inspection program assessment, and other self-assessments. As a result of the 1993 assessment, the regions revised or placed increased emphasis on planning processes to improve the correlation between plant performance and the allocation of inspection resources. In general, changes made to the inspection program, policies, and practices have resulted in measurable improvements. However, as conveyed in the recent SECY-95-063, "Final Report on NRC Analysis and Response to the Towers Perrin Nuclear Regulatory Review Study," the industry's perceptions indicate that additional program changes are needed.

Industry Evaluations and Licensee Self-Assessments

The NRC has long recognized the importance of industry evaluations and licensee self-assessments in improving overall plant safety and the performance of the nuclear industry. The inspection program ensures that licensees effectively identify areas of needed improvement through such procedures as Inspection Procedure (IP) 40500, "Effectiveness of Licensee

Controls in Identifying, Resolving, and Preventing Problems," and the newly developed Integrated Performance Assessment Process. Also, the resident inspection staff routinely reviews the results of third-party audits to remain cognizant of the findings.

In August 1993, the NRC established a program to recognize a licensee's good performance and high quality self-assessment in a given area by reducing the scope of the NRC team inspection effort in the same area (e.g., Service Water System Operational Performance Inspections). The scope of this program was broadened in April 1995 to include other major team inspections. This reduced inspection applies to team inspections defined by temporary instructions and inspection procedures which are resource intensive. The revised procedure is intended to reduce the large team inspection effort to 25 percent of the normal inspection effort.

ONGOING AND PLANNED INITIATIVES:

The staff plans to continue to evaluate and implement changes to the Reactor Inspection Program that would result in improved efficiency of inspections.

Integration of Inspection Results

Staff evaluations to gain insights regarding the effectiveness of the inspection program have shown that underlying problem(s) at licensees' facilities were not recognized by NRC as quickly as they might have been because the NRC's inspection findings were not fully integrated with other objective information.

As a result, the staff has initiated activities to improve the ongoing short-term and long-term integration of the results of inspections and other objective performance insights. To improve short-term integration, the staff is conducting a review of its plant performance review (PPR) process to identify ways to better integrate various objective insights regarding licensee performance, including inspection reports, events, performance indicators, and results of licensee self-assessments, in order to redirect future inspection effort.

In early 1994, the staff began development of the Integrated Performance Assessment Process (IPAP). IPAP was developed to provide a periodic, long-term integration of performance information and a subsequent focusing of inspection activities on areas in which performance weakness exist and away from areas in which performance is strong. A public workshop on IPAP was held in April 1995. The staff will provide the results of the feedback obtained and the final implementation plans to the Commission in June 1995.

Cross-Training Inspectors

The staff has recognized that the reduction in resources and improved industry performance has led to a change in the nature of the inspection program. It is now appropriate to broaden the technical expertise of inspectors. The agency's increased focus on allocating inspection resources based on licensee

performance will require that certain specialist inspectors be able to inspect more than one area. This issue is expected to be an area of ongoing review and evaluation by NRC senior management.

Inspection Report Documentation

In February 1995, the staff initiated a review of the guidance provided to inspectors regarding inspection report documentation. The review considers areas within the traditional scope of Inspection Manual Chapter 0610, "Inspection Reports," but will also consider other areas of interest such as increased computerization and specially designed inspection report software. The review will compare and evaluate inspection reports of different types from each region and request input from NRC staff and the public. Following the completion of the review, additional training will be provided to the inspectors.

Consolidating Inspection Activities

The staff is evaluating several proposals to consolidate certain inspection functions at Headquarters to improve efficiency and consistency. In February 1995, a proposal was forwarded to the Commission to consolidate the power reactor physical security inspection and licensing resources at Headquarters. In these cases of relatively small numbers of specialists, the total resources required to perform the agency's program may not warrant the dispersal of these resources in each regional office. This proposal is currently being reviewed by the Labor-Management Partnership Committee. Consolidation of other inspection activities will be reviewed following final agreement on the physical security inspection consolidation. The staff is also evaluating a proposal to consolidate inspection functions for non-power reactors at Headquarters in the existing Non-Power Reactors and Decommissioning Project Directorate. This change would involve improved efficiency for the agency with minimal impact on personnel.

Improve Communication of Management Expectations to Inspectors

A number of recent internal and external assessments of the inspection program have identified the need for improved communication of management expectations and policies to individual inspectors. The staff is preparing to implement a reactor inspection program newsletter to improve communication of current inspection issues and program changes to inspectors. The intent of the newsletter is to serve as a management tool to improve inspector understanding of program direction, management expectations, trends, and lessons learned.

A-4 Enforcement Program

DISCUSSION:

In May 1994, the Executive Director for Operations (EDO) established a review team to assess the NRC enforcement program. The report of this review, NUREG-1525, "Assessment of the NRC Enforcement Program," dated April 5, 1995, provided 27 recommendations. These changes should increase the effectiveness

and efficiency of the NRC enforcement program. The Commission is currently considering revisions to the Enforcement Policy based on the review team's recommendations included in its report.

Several of the recommendations should decrease the time required to process cases and improve the efficiency of the process. These include (1) reducing the number of severity levels (SLs), (2) clarifying that written licensee responses to certain Notices of Violations (NOVs) may not be necessary, (3) modifying the threshold for conducting enforcement conferences, (4) simplifying the civil penalty assessment process, (5) streamlining the enforcement coordination process, and (6) reducing the criteria for Commission consultation. Each of these changes are summarized below.

Deletion of Severity Level V Categorization

Because they are classified as minor, and considering how rarely they are used, the review team recommended modifying the Enforcement Policy by deleting Severity Level V as a category of violation. Under this approach, violations of minor concern would not be the subject of formal enforcement action. Based on the limited significance of these violations, NRC would not normally document such violations in inspection reports, or require licensees to provide written responses, nor would NRC normally monitor corrective action. In those few cases in which a licensee repeatedly or willfully commits a minor violation or does not take corrective action such that a formal response would be needed, the violation would be categorized as SL IV.

Responses to Notices of Violation at SL IV

The NRC normally requires the licensee to respond in writing on the docket for SL IV violations. In some cases, however, the NRC may determine that the information normally required in such a response has already been adequately addressed on the docket (e.g., in a Licensee Event Report), and that no additional response, therefore, is needed. In addition, if the NRC inspection report adequately describes the licensee's corrective actions, the NRC may decide that no additional response is necessary, unless the licensee determines that the inspection report does not accurately characterize the corrective actions taken or planned.

Threshold and Criteria for Enforcement Conferences

The review team concluded that enforcement conferences should be considered only when it is reasonably expected that escalated enforcement action will be subsequently issued. Enforcement conferences should not be conducted to address issues that would not reasonably be categorized at SL III or higher. Similarly, the practice of conducting enforcement conferences for repetitive SL IV violations should be discontinued unless they likely represent a significant regulatory concern (i.e., the agency believes they will likely rise to SL III).

Enforcement conferences represent a substantial resource effort for both the licensee and the NRC. To justify that effort, the review team concluded that enforcement conferences, rather than being held as a matter of standard

practice for escalated actions, should be conducted only when necessary to obtain information to make enforcement decisions. Enforcement conferences should also be held if the licensee requests one.

Streamlined Civil Penalty Assessment Process

The current Enforcement Policy provides six factors to be used in assessing the amounts of civil penalties (CPs) for a given severity level. Each factor is assessed separately, with a possible escalating and/or mitigating CP adjustment of up to 50 percent or 100 percent and is subsequently combined resulting in a multitude of possible CP outcomes. In addition, discretion is allowed to further adjust the penalty amount, to ensure that the resulting action reflects the level of NRC concern regarding the violation at issue, and to convey the appropriate regulatory message to the licensee.

The review team recommended that the CP assessment process be streamlined such that it consist, at most, of four basic decisional points: (1) whether the licensee has had a previous escalated enforcement action during the past 2 years or past two inspections, whichever is longer; (2) whether the licensee should be given credit for actions related to identification of the violation; (3) whether the licensee's corrective actions may reasonably be considered prompt and comprehensive; and (4) whether, in view of all the circumstances, the case in question requires the exercise of discretion. While each of these decisional points may have several associated considerations for any given case, the outcome of that case, absent the exercise of discretion, should be limited to three outcomes: no civil penalty, a base penalty, or a penalty at twice the base amount.

Enforcement Coordination and Oversight

Currently, the Office of Enforcement (OE) is responsible for managing the enforcement program, the regions issue non-escalated enforcement actions without prior OE review, and the regions have been delegated authority to issue some escalated actions without prior OE review.

The review team concluded that the delegation for the routine cases involving materials should not be changed. With the new proposed enforcement strategy, which simplifies the CP assessment process, the review team recommended that the process for OE's formal review and coordination of non-delegated escalated cases be changed. The team recommended that OE oversight be preserved, but that it be focused on the enforcement strategy, severity levels, the violations, and enforcement policy. In most cases, OE should focus the Headquarters review on the inspection report and the draft NOV, leaving the actual correspondence to the regions. After the action has been issued, OE should, in its audit and appeal role, review the actual correspondence.

The review team concluded that this approach will provide the necessary oversight to achieve a relatively consistent enforcement program, while obtaining the benefits of the streamlined approach.

Commission Consultation

The Enforcement Policy currently describes 10 situations in which the staff must consult with the Commission prior to making an enforcement decision. As currently administered, the staff has had substantial experience in implementing the objectives of the Enforcement Policy, and it is relatively rare that the Commission determines the recommended staff approach should be changed. OE is positioned to closely coprdinate enforcement action reviews with senior regional and program office management, as well as with the EDO and Deputy EDOs, when necessary.

Based on these factors, and considering the significant effort currently expended in obtaining Commission consultation on enforcement matters, the review team recommended that the staff be given more flexibility to decide what enforcement issues should be brought to the Commission's attention because of policy significance or level of controversy.

The review team also recommended that an annual report be prepared for the Commission summarizing enforcement data and that this report replace the monthly and quarterly timeliness reports currently provided to the Commission.

ONGOING AND PLANNED INITIATIVES:

Assuming Commission approval of the changes proposed in NUREG-1525, after an appropriate trial period (1 year) measure the success of the changes in NUREG-1525 and determine if additional changes are warranted in the coordination and oversight process to improve the efficiency of the enforcement program. Although data comparison has its limitations as an evaluation method (e.g., the number and types of enforcement actions taken in any period of time are a function of the number of licensees and the licensees' performance, and the time and the number of people required to process an escalated action are a function of the complexity of the case), the evaluation will compare the revised program to the previous program in several areas, such as--

- the time required to process an escalated enforcement action,
- the number of enforcement conferences conducted,
- the number of escalated actions (without civil penalties) issued,
- the number of civil penalty actions issued,
- the number of orders issued,
- the ease of implementation (e.g. resources, decisional process, use of discretion, extent of involvement of other offices, etc.),
- the quality of communications,
- the need for review of enforcement actions by other offices, such as OGC, and
- the delegation of additional authority to the regions.

A-5 Rulemaking

DISCUSSION:

In January 1995, a new management directive (M.D. 6.3) on the rulemaking process was published. M.D. 6.3 reflects extensive staff thinking on ways to improve the rulemaking process, documented in SECY-94-141, "Improvement of the Rulemaking Process," May 23, 1994, modified somewhat by the Commission in an SRM dated June 28, 1994. Under the new process--

- For rulemaking initiated by offices reporting to the EDO, a rulemaking plan for each new rulemaking under consideration will be developed by the Office of Nuclear Regulatory Research (RES) (and its requesting office) and approved by the EDO, with negative consent by the Commission. The development of the plan will facilitate early attention to, and resolution of, key rulemaking issues, such as legal sufficiency, implementation issues, and cost/effectiveness by the agency's top management.

- Management Steering Committees with authority to provide office concurrence are to be used for rulemaking involving matters of urgency or complex and controversial issues.

- RES will arrange for contractor assistance to be provided for development of supporting information needed in the planning and conduct of rulemaking, within budget constraints.

- The concurrence process has been revised for efficiency.

- The EDO has implemented a system to review and prioritize rulemaking efforts on a continuing basis, with special emphasis on approval of initiation of rulemaking. This overall plan for rulemaking activities will be updated every 6 months, synchronous with the 6-month update and input interval required for the OMB Regulatory Agenda for major agency rulemakings and for the more detailed NRC Regulatory Agenda, published as NUREG-0936.

- Direct final rulemaking will be used for a limited number of non-controversial rules, under the Office of General Counsel (OGC) guidance.

- RES will provide for an external electronic rulemaking bulletin board to be used for interaction with Agreement States and the public on rulemakings.

- RES will provide for an internal electronic bulletin board to be used to facilitate communication and concurrence among NRC offices.

The objective of the new rulemaking process is to achieve better coordination among offices in the development of rulemakings and to make more efficient use of staff resources.

ONGOING AND PLANNED INITIATIVES:

Along with these above initiatives, several others are underway to streamline the rulemaking process. Changes to 10 CFR Part 2 are being proposed that are aimed at allowing the NRC to respond faster to certain petitions for rulemaking. If a petition contains adequate technical information to allow the NRC to make an evaluation, it will eliminate the need for the NRC to develop this information, reducing the time and resources needed for the NRC to act on the petition.

A revised version of the guidelines for conducting regulatory impact analyses (a regulatory analysis must be done for all rulemakings) is in the process of being approved. The revisions reflect NRC's accumulated experience with implementing the previous guidelines, changes in NRC regulations and procedures since 1984 especially for the backfit rule (10 CFR 50.109) and the Policy Statement on Safety Goals for the Operation of Nuclear Power Plants (51 FR 30028), advances and refinements in regulatory analysis techniques, regulatory guidance for Federal agencies issued by the Administrative Conference of the United States and OMB, and procedural changes designed to enhance NRC's regulatory effectiveness. These new guidelines will help to ensure that rulemakings are developed with greater attention to cost/effectiveness, consistency with the Commission's safety goals, and minimizing the burden of regulation on licensees.

The staff plans to evaluate, after an appropriate trial period (1 year), the recent changes to the rulemaking process and determine if any modifications are needed. Experience with using the new process may point to additional changes to further improve the process. Some potential improvements involve how NRC interacts with other agencies and OMB. An example is the process of obtaining OMB approval (required by the Paperwork Reduction Act) of the information collection aspects of rulemakings. The staff plans to explore opportunities for improved efficiency in this area. The staff will also cooperate with OMB and the Administrative Conference on any initiatives coming from them, such as risk assessment standardization across agencies.

Additional items to be included in the evaluation are--

- assess the split of rulemaking activities among the program offices and RES to determine if the current split is the most efficient,
- assess expanding the requirement for all non-EDO offices to prepare rulemaking plans, and
- assess using the Regulatory Agenda as the vehicle to obtain Commission approval of agency rulemaking activity.

A-6 Independent Review Committees

DISCUSSION:

The NRC currently has five Federal Advisory Committees. They include one statutory committee, the Advisory Committee on Reactor Safeguards (ACRS) and four discretionary committees, the Advisory Committee on Nuclear Waste (ACNW), the Advisory Committee on the Medical Uses of Isotopes (ACMUI), the Nuclear Safety Research Review Committee (NSRRC) and the Licensing Support System Advisory Review Panel (LSSARP). Each committee provides consensus advice and recommendations to the Commission and staff about specific aspects of the NRC's programs.

The Advisory Committee on Reactor Safeguards, established by statute in 1957, provides advice to the Commission on potential hazards of proposed or existing reactor facilities and the adequacy of proposed safety standards. Under the Atomic Energy Act of 1954, as amended, this committee's charter is to review safety studies and facilities license applications referred to it and submit reports thereon to the NRC; to advise the NRC on the hazards of proposed or existing reactor facilities and the adequacy of proposed reactor safety standards; and to perform such other duties as the NRC may request. Upon request from the Department of Energy (DOE), the ACRS may perform reviews; provide reports; perform U.S. Navy reactor reviews; and advise DOE with regard to the hazards of DOE nuclear activities and facilities consistent with the Energy Reorganization Act of 1974, as amended. The ACRS, on its own initiative, may conduct reviews of specific generic matters or nuclear facility safety-related items. Also, pursuant to Public Law 95-209, the ACRS is required to submit a report to Congress annually describing the results of studies on reactor safety research. Consistent with the statutory charter of the Committee, ACRS reports, except for classified reports, are made part of the public record. The ACRS membership, which is drawn from scientific and engineering disciplines, includes individuals experienced in reactor operations, nuclear reactor systems design, electrical engineering, chemical engineering, civil engineering, materials engineering, mechanical engineering, nuclear engineering, reactor design, heat transfer, and fluid flow thermodynamics, reactor physics, and probabilistic risk analysis.

The Advisory Committee on Nuclear Waste was established by the U.S. Nuclear Regulatory Commission in June 1988. The ACNW is tasked in its charter to "... report to and advise the Nuclear Regulatory Commission on nuclear waste disposal facilities, as directed by the Commission." This includes 10 CFR Parts 60 and 61 and other applicable regulations and legislative mandates such as the Nuclear Waste Policy Act, the Low-Level Radioactive Waste Policy Act, and the Uranium Mill Tailings Radiation Control Act, as amended. Its primary emphasis being on disposal facilities. In performing its work, the Committee examines and report on those areas of concern referred to it by the Commission or its designated representatives, and undertakes other studies and activities related to those issues as directed by the Commission. The Committee interacts with representatives of NRC, ACRS, other Federal agencies, State and local agencies, Indian Tribes, private organizations, etc., as appropriate. ACNW reports (except any that contain classified material) are made part of

the public record. The ACNW membership, which is drawn from scientific and engineering disciplines, includes individuals experienced in geosciences, radioactive waste treatment, environmental engineering, nuclear engineering, chemistry, research, technical management, and operations support.

The Advisory Committee on the Medical Uses of Isotopes is composed of physicians; hospital administrators; Agreement States representatives; patients rights-and-care advocates; radiopharmacies representatives; and nuclear physicists. ACMUI provides advice to the staff on medical issues and meets semiannually, although the Commission may request the Committee to brief the Commission annually.

The Licensing Support System Advisory Review Panel provides advice on the Licensing Support System (LSS) program, including review and comment on NRC's guidelines for the document content of the LSS; advice on whether DOE should be allowed to be operator of the system with NRC oversight; and review of NRC's audit plan to ensure proper content and operation of the LSS. As a direct result of the Panel's views, the NRC has proposed strengthening NRC's oversight of the LSS operation by designating the LSS Administrator as the Contract Officer Technical Reviewer on the DOE contract for operation and maintenance of the system. The Panel has also recommended the revision of guidelines for the document content of the LSS to include the topics of environmental and transportation information. The members of the Panel are representatives of the core of potential parties to the formal licensing proceeding for a high-level radioactive waste repository. The Panel meets three or four times during each year.

The Nuclear Safety Research Review Committee holds approximately two full committee and three subcommittee meetings each year. Nuclear regulatory research is a continuing essential and integral function of the NRC, as mandated by statute. The NSRRC's independent review is used as a continuing contribution to assuring appropriate and effective response of the NRC's research efforts to evolving regulatory needs. The 12 members of the Committee represent the range of key technical disciplines and specialties involved in NRC's research mission including: reactors; nuclear waste; nuclear engineering; thermal-hydraulics; mechanical components; structures; earth sciences; nuclear plant operation; instrumentation and control; and human factors. They have experience and accomplishments in conduct and management of research in universities, industry, and research institutions. This range of expertise and views is applied to the development of advice to the Director, RES, and through him to the Commission on matters of overall management importance in the direction of NRC's program of nuclear safety research.

ONGOING AND PLANNED INITIATIVES:

In response to OMB Circular A-135 "Management of Federal Advisory Committees," the Commission reviewed the need for each of the current advisory committees and in a January 4, 1995, letter advised the Director, OMB, that the Commission needed to maintain the five existing committees (one statutory and

four discretionary). In an April 19, 1995, letter to the Chairman, the Director, OMB placed a ceiling of three discretionary committees on the NRC to be achieved by September 30, 1995. The Commission is currently considering a response.

B. ADMINISTRATIVE EFFICIENCY INITIATIVES

B-1 Document Management and Distribution

DISCUSSION:

Although certain types of agency information are available electronically, most of the agency's official records are kept in paper format. Images of these documents are stored on microfiche, which is indexed by the computer-based system called the Nuclear Documents System (NUDOCS). NUDOCS stores bibliographic data for nearly two million reports, correspondence, and other issuances related to the NRC's regulatory, licensing, safety, research, and enforcement programs. The NUDOCS database contains records for documents received or written by NRC after September 1978 and includes abstracts and full-text for a limited set of these documents.

Approximately 5,000 items of official correspondence are received each month. Each item is copied, collated, and distributed to individuals identified within 425 categories. On average, 12 copies of each incoming document are made and distributed, adding nearly 60,000 copies of official documents to more than one million items of mail distributed each month within the agency.

ONGOING AND PLANNED INITIATIVES:

Utilization of advanced information technology will greatly enhance the agency's document management system.. The staff is currently developing an agency-wide document management system that will replace NUDOCS, as well as the local text-retrieval systems that have evolved within the agency. Issues to be addressed include the following:

- What should be stored electronically or in hard copy?
- The appropriate level and means for public access.
- The means for user friendly access and retrieval.
- The appropriate consistency, coordination, and linkage among offices and regions.
- How to best distribute documents to those who need them within NRC.
- How to manage agency records in a way that meets both agency needs and the requirements of the General Services Administration and the National Archives and Records Administration.

During 1995, pilot systems will be developed that demonstrate the various document management processes such as workflow, document creation (including commenting, version control and concurring), distribution, document and attribute capture, records management, and full text search and retrieval on

document text. By early Fiscal Year 1996, the staff plans to have a concept of operations, the working model, and the system performance specifications for the new document management system. Full development of this agency-wide system is planned to begin in FY 1996.

As indicated in the National Performance Review, government information is expected to become readily available to the public via electronic methods. Although computer-based tools may be the only practical way to access very large collections of information, the Chairman has noted that not all members of the public have computers. In recognition of the need for public access, the Office of Management and Budget (OMB Circular A-130) requires that public access be considered for all major information system development activities by the Federal Government. Within NRC, the need for improved information resources must be satisfied within the limits of the agency's fiscal resources. The NRC's budget review process will consider how the agency's resources will or can provide information to the public.

B-2 Information Technology

DISCUSSION:

The effective application of NRC's information resources, including both information and information technology, is recognized as a strategic issue. In FY 1993, the current Information Technology (IT) Strategic Plan was developed by two separate groups representing a broad spectrum of agency interests. The information technology strategy was documented in NUREG-1487 and submitted to the Commission (SECY-93-198). Following Commission approval, the NRC's Office of Information Resources Management (IRM) rewrote its goals and objectives in the NRC Five-Year Plan to conform to the new IT Strategic Plan. IRM's component operating plans also conform to the IT Strategic Plan.

The original plan has been updated twice to coincide with advancement in the fiscal planning process. The changes were briefed to the Commission (SECY-94-120) and incorporated directly into the goals and objectives of the NRC Five-Year Plan. The first update focused on customer service, document management, and electronic workflow processing, while the second dealt with public responsiveness and the changing roles of IRM and the offices in IT programs.

In SECY-95-022, the staff proposed, and the Commission subsequently approved, a revised process for incorporating Commission guidance into the IT Strategic Plan based on Commission guidance in COMSECY-94-044. Many of the original initiatives have been completed or are well under way since the original IT strategic planning process began in July 1992. Moreover, much has changed since the original plan was formulated. The National Performance Review emphasizes public responsiveness, elimination of nonessential government functions, and streamlining essential government functions. IT is often cited as a key enabler for achieving these objectives. Other significant changes

include maturation of networking and office systems technology, a huge increase in worldwide information communication brought about by the Internet, and new IRM legislation. The original IT strategic plan should be revised to reflect these changes.

Additionally, as part of the NPR-II review, IRM identified systems development as one of its most resource-intensive processes. Both IRM and other offices allocate significant resources to this area, and the product (new applications systems) is critical for future agency streamlining efforts. The process for prioritizing and committing agency system development resources (both IRM-owned and office-owned resources) needs improvement. Systems development efforts should focus on core agency business processes and to ensure that these processes are reengineered before new automated systems are designed.

Top-down planning and senior management guidance is needed to ensure that reengineering and systems development resources are directed at the most important agency needs. The issue of planning and management of BPR and automation of core business processes should be addressed as part of the next IT Strategic plan.

ONGOING AND PLANNED INITIATIVES:

The staff plans during the next year to complete a revision to the Information Technology Strategic Plan (NUREG-1487) that updates plans for using NRC's information resources (information and information technology) to improve the agency's efficiency and effectiveness. This revision will involve the agency's IT Council, senior agency executives, and the Commission in shaping the revised strategy, and the updated plan will--

- Address--
  - NRC interfaces with the public and industry,
  - Electronic recordkeeping,
  - Continuation of electronic forms and electronic workflow initiatives,
  - Agency-wide planning and budgeting for business process engineering and development of systems to automate core business processes,
  - IT competencies and training needs associated with increased use of technology by all employees, and
  - On-going update of the NRC's hardware, software, and telecommunications infrastructure.
- Propose a permanent role for senior managers (office directors and above) in agency IT planning and resource decisions, particularly those involving the reengineering and automation of core business processes.

- Develop and communicate a clear vision of the electronic capabilities that the staff intends to implement.

- Develop an aggressive timetable for actions on the highest priority programs.

B-3 Improving Support Service

DISCUSSION:

In response to an Executive Order requiring all Federal agencies to create customer service programs, NRC launched a comprehensive review of agency business activities to identify those which involve significant interaction with the public. As a result, NRC has developed and implemented plans for improving responsiveness to the public in its licensing activities, State programs, contracting process, FOIA process and other technical programs and support services. Improvement plans under this initiative include quality and timeliness standards and performance measures for improving a full range of NRC technical and administrative activities.

ONGOING AND PLANNED INITIATIVES:

Concurrent with this responsiveness initiative, the staff has continued to examine internal processes and procedures. In the administrative support area, noteworthy initiatives underway or planned to improve operational efficiency include--

- developing and implementing a streamlined, fully-automated inventory program,
- plans to distribute a "customer support survey" to determine the Agency's perception of how IRM provides services in the areas of microcomputer, telecommunications, network hardware and software support,
- plans for an on-line expert system, call tracking, problem resolution, requisition tracking, configuration management, asset tracking and remote access capabilities, and
- an ongoing initiative to combine the travel authorization and fund certification functions in headquarters to reduce the number of stops for travelers and will reduce the workload for the program office support staff (effective October 1, 1995).

While these improvements will help achieve NPR objectives, it appears that more can be done in the area of customer feedback and follow-up. For example, customer surveys appear to be narrowly focused on a particular area or function. This approach provides useful feedback for that function and should be continued. However, a broader, more fully integrated survey approach may yield results that have agency-wide significance in terms of opportunities for improving administrative support services.

Therefore, the staff plans to conduct a customer service survey of NRC's offices and regions with the objective of identifying areas and suggestions for improved efficiency and service from the support offices. The survey will elicit open and candid feedback on all agency support activities and include plans for follow-up with the offices and regions to ensure necessary improvements are implemented in a timely and effective manner and satisfy identified service needs.

B-4 Contracting Out

DISCUSSION:

There are almost 600 administrative positions agency-wide. Included in this number are positions in procurement, duplicating, facilities and property management, transportation, security, printing, publication services, mail and distribution services, responding to Freedom of Information Act requests, privacy protection, rulemaking support, local public document rooms, information resource management, personnel, training, facilities, secretaries, and office assistants.

Additionally, the agency is currently contracting out a variety of administrative support tasks, including computer support and service, data entry services, switchboard duties and mail and file duties. There is no uniformity of contracted-out duties in the various offices and regions. For example, the position of regional receptionist is established in each of the four regional offices. Each regional office has tailored the duties of the receptionist to its specific needs. In Region I, the receptionist does typing, performs certain tasks relating to building security, and performs time and attendance. On the other hand, in Region III, the pure receptionist/switchboard duties have been isolated and successfully contracted out, and other support duties traditionally performed by the receptionist in Region III have been assigned to other regional staff.

ONGOING AND PLANNED INITIATIVES:

The staff plans to conduct a general evaluation to determine if additional administrative services can be contracted out so that additional FTE could be utilized for safety-related work.

B-5 Appraisal Process

DISCUSSION:

The Civil Service Reform Act of 1978 required major changes in performance appraisal systems in the Federal government, mandating that appraisals be used as the basis for decisions to train, reward, assign, promote, demote, retain, or remove employees. Most agencies, including NRC, designed systems with five rating levels, critical job elements and performance standards written at the fully successful level. In 1981, the NRC set up two systems; one for SES employees and one for all other employees. In 1993, a system similar to the SES system was designed for employees in the Senior Level Service (SLS).

ONGOING AND PLANNED INITIATIVES:

In January 1995 the Supervisory Development Program participants explored ways to improve the performance appraisal process at the NRC. They made the following recommendations:

- Reinforce the need for supervisors to assess the performance of their subordinates continually and to provide feedback routinely,
- Use a job-based criterion approach that relies on a job and task analysis for defining performance standards,
- Minimize the use of performance appraisal results in other personnel systems such as promotions and awards,
- Allow supervisors to spread out the due dates for submitting performance appraisals over the entire year,
- Reduce the number of rating levels from five to three, and
- Streamline the written performance appraisal form by minimizing written justifications.

Currently proposed changes to performance management regulations issued by the Office of Personnel Management (OPM) are out for comment. These regulations make major changes to performance appraisals in the Federal government. The provisions allow the use of a two-level (pass/fail) system; broader basis for appraising (i.e., appraising employees on accomplishment of organizational and team goals as well as individual goals); involvement of employees and their representatives in the development of appraisal systems; de-linking of appraisals and awards; and increased agency flexibility in many specific aspects of the appraisal system. On May 5, 1995, OPM issued draft legislation, "Federal Human Resource Management Act of 1995," which has three major provisions. One of these provisions is, "Agencies should be allowed to design their own performance management and reward systems, with the objective of improving the performance of individuals and organizations." The performance appraisal system is one of the articles the NRC and the union must renegotiate this year through traditional labor-management negotiations.

B-6 Procurement

DISCUSSION:

Contracting can be made more timely and efficient by continuing to expand use of procurement innovations under the NRC's Procurement Reinvention Laboratory (established to streamline the process for contracting with commercial firms, non-profit organizations and universities). As a result of various streamlining initiatives under the laboratory, NRC has experienced improvement in both procurement lead time and savings of staff effort.

ONGOING AND PLANNED INITIATIVES

- Ongoing effort to reduce the lead time and staff resources necessary to (1) conduct procurements, (2) maximize both technical and cost competition, and (3) increase the award of contracts to small businesses, as a result of special waivers of regulatory requirements obtained form OFPP, SBA, and GSA.

- Ongoing effort to obtain greater participation in the BankCard program, implemented in July 1994, as a means of streamlining the acquisition process for small purchases below $25,000. Currently, NRC has 74 BankCard holders. Use of the BankCard has increased from 36 transactions totalling $27,680.32 in the first month of the program to a high of 184 transactions totalling $112,109.16 in April 1995,

- Ongoing effort to issue a specification to acquire electronic commerce software that will enable the Agency to gain access to the government-wide Federal Acquisition Computer Network (FACNET), and thus allow the NRC to conduct its simplified purchases in a paperless environment, and

- Plans to increase the threshold for simplified purchases to $100,000, in accordance with the Federal Acquisition Streamlining Act of 1994, after NRC becomes certified as having an electronic commerce capability. Thus, greater numbers of NRC procurement actions can be accomplished using electronic commerce. When the capability is available, NRC also plans to link our automated procurement and finance systems to allow for electronic invoicing and electronic payment.

Expanding Reinvention Concepts

The current scope of NRC's procurement reinvention laboratory focuses on improving procurement lead times for competitive awards. Because DOE laboratory agreements are awarded and managed by the program offices under special statutory authority, the procurement regulations governing competitive contract awards do not apply. Therefore, procurement innovations under the reinvention laboratory have not been extended to DOE laboratory agreements.

NRC recently issued a new Management Directive 11.7 to strengthen contract management for work placed with the DOE laboratories. While this Directive has helped to ensure necessary cost controls and to create a more business-like relationship with the laboratories, NRC will look at ways to streamline the laboratory process in concert with DOE actions in response to NPR initiatives and planned downsizing. In this regard, applying procurement reinvention concepts should result in new and innovative approaches to eliminate redundancies and improve efficiency.

NRC also has its own FFRDC, the Center for Nuclear Waste Regulatory Analysis, established under a competitive contract awarded to Southwest Research Institute in 1987. The mission of the Center is to provide long-term technical assistance and research in disciplines required to support the NRC in fulfilling responsibilities under the Nuclear Waste Policy Act, as amended. The contract was renewed in 1992 at an estimated cost of $90,000,000 for the

five-year renewal period. NRC has continued to examine ways to balance streamlining measures with the need for administrative controls and accountability under this contract. As NRC approaches renewal of the FFRDC, further consideration will be given to applying reinvention concepts to the placement and management of work under this contract.

To ensure agency personnel are aware of the latest procurement and alternatives, the staff will periodically (quarterly) communicate the status and results of NRC's Procurement Reinvention Laboratory to the NRC staff so that maximum use can be made of innovations and NRC can achieve further improvements in efficiency.

B-7 Concurrence

DISCUSSION:

The concurrence issue has been a continuing concern over the years and has been the subject of discussion at various management meetings. The concurrence and review procedure is contained in Management Directive 3.57, Correspondence Management. Nevertheless, concurrence continues to be a concern and it continues to hamper the expeditious review and dispatch of correspondence. The NRC NPR Steering Committee conducted interviews with offices and found that concurrence was raised numerous times as an issue that was a candidate for administrative efficiency improvements.

ONGOING AND PLANNED INITIATIVES

As a result, the Executive Director for Operations has an initiative underway to develop more stringent guidelines for office concurrences.

The approach will include looking at the current office-specific and general guidance that has been issued, looking at a sampling of correspondence for the number of concurrences and the length of time it takes to get a document concurred in or signed by the office director or regional administrator. Also, input will be obtained from offices on how best to improve the concurrence process. After considering all of the above potential initiatives, revised guidance will be issued.

Since the current process, in most cases, is lengthy and inefficient, the staff anticipates significant improvements as the number of concurrences is reduced and more communication takes place during the developmental stage of documents.

APPENDIX B

LIST OF STEERING COMMITTEE MEMBERS

Jack Roe*, NRR, (Director)
Tom King*, RES, (Deputy Director)
Lidia Roche*, NMSS (Technical Assistant)
Jeff Sharkey*, NRR (Technical Assistant)
Toni Harris*, NRR (Administrative Assistant)
Stuart Rubin, AEOD
Tim Hagan, ADM
John Voglewede, IRM
Jacqueline Silber, OC
Paul Lohaus, OSP
Mabel Lee, OP
Linda Portner, OCA
John Surmeier, NMSS
Wayne Lanning, Region I
Irene Little, Region III
Sam Collins, Region IV
Bill Olmstead, OGC
Peter Hearn, NTEU
Tom Barchi, IG (Ex-offico)

*Full Time Member