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Remarks by
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at the
Nuclear Energy Institute
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I am pleased to have the opportunity to speak with you today and to share some of my thoughts with you on several topics that are important to the NRC. This is an interesting time to be in government, an interesting time to be at the NRC, and in the regulated environment in which we operate. Old paradigms are being broken, and new ways of thinking and doing business are emerging. I know that the utilities are undergoing significant transformations in trying to cut costs, without cutting corners, and trying to improve operational performance, while decreasing costs. We at the NRC are engaged in similar activities.

I would like to talk to you today about what is going on in the Federal Government with respect to the budget, and the uncertainties in our future work which could affect the NRC's budget. I also want to provide you with my thoughts on three technical issues that I feel are of importance to the industry - reactor pressure vessel annealing demonstrations, conversion to standard technical specifications, and dry cask storage.

BUDGET CONSIDERATIONS

The news media has kept us informed of the drama unfolding over the past several months concerning the financial issues and downsizing of the Government. The NRC has not been excluded from the Government downsizing effort.

Chart 1.

As you can see on the chart, the agency's budget gradually increased over the period FY 1986 to FY 1993. FY 1993 was the year the budget started its decline. Since then, our budget decreased steadily until this year, which shows a significant

drop. It is also important to note the rather steady state of our budget in terms of FY 1986 constant dollars.

For this fiscal year, 1996, we are currently operating under a Continuing Resolution Authority which expires on November 13. Both the Senate and House have passed our FY 1996 budget and it has been sent to the President for signature. If the President signs the Bill, we will be required to take approximately a 10% reduction (approximately \$50 million) over what we requested.

Because our FY 1996 budget will be below the FY 1995 level, the power industry and other licensees can expect a reduction in their FY 1996 annual fees. The need to accommodate a \$50 million reduction in FY 1996 has caused us to rethink much of the way we do business. Every program was carefully scrutinized to take this large a reduction. Considering that approximately one-half of our budget pays salaries and benefits and taking into consideration our fixed costs (for instance, paying the rent and the electric bill), the impact to our programs is greater than 10%.

The budget outlook for FY 1997 and FY 1998 remains very uncertain. OMB plans to issue FY 1997 guidance after the FY 1996 Appropriation Bills are signed and they are not giving any early signals as to what that guidance will be.

Chart 2.

As you can see from this chart, our FTE strength has been declining since FY 1993. The Presidential Executive Order and the Federal Workforce Restructuring Act will require the agency to reduce its strength by approximately 12% from FY 1993 to FY 1999. This chart also reflects the projected FTE reductions beyond FY 1996.

The agency has previously met or exceeded mandated milestones on achieving planned FTE reductions. (One example of this is the FTE reduction achieved by the Regions IV and V consolidation).

The message is clear - the Federal Government is downsizing. In addition to resource uncertainty, we are faced with a changing external and internal environment that could modify our missions and how we perform them. There are bills before Congress that contain new directions on managing waste, both high level and low level, as well as the possibility of obtaining new missions involving oversight of DOE facilities. There are also many regulatory challenges involving aging reactors, license renewal, decommissioning and deregulation that will impact NRC's regulatory mission.

Let me give you some examples of some of these areas that are causing us to examine what we are doing and why we do it. The first area where we are re-examining the scope of our mission is in the medical uses of isotopes.

MEDICAL USE OF BYPRODUCT MATERIAL/NAS STUDY

Medical uses of isotopes which are subject to NRC regulatory jurisdiction, are divided into two categories:

- **diagnostic uses**, which use small quantities of radioactive material for diagnosis and therapy, and
- **therapy applications**, which use larger quantities, primarily in the form of sealed sources.

Only approximately one-fourth of all radiation therapy treatments in the United States involve the use of NRC regulated material.

The NRC directly regulates the medical use of byproduct material in 21 States, the District of Columbia, the U.S. Territories, and Federal facilities. We do this through regulations, licensing, inspection, and enforcement. We have about 2000 medical use licensees.

The remaining 29 States have agreements with the NRC to regulate the medical use of byproduct material in their States. They have about 5000 licensees.

Several years ago, the NRC began a review to examine whether we are working within our statutory authority with respect to regulation of medical byproducts. In 1992, the Commission decided to accelerate this effort. This plan included both an internal and external review of the program.

- The **internal review** resulted in implementing a dynamic management plan to complete a large number of projects. This included clarification and revision of licensing and inspection guidance.
- In 1993, the NRC requested the National Academy of Science to do an independent evaluation of NRC's medical use program.

The goals of the Academy's study are:

- To examine the broad policy issues underlying regulation of medical uses of isotopes
- To determine the overall risk of the use of ionizing radiation in medicine, and
- To provide recommendations on a uniform national approach to the regulation of ionizing radiation in medical applications; and appropriate criteria for measuring the effectiveness of regulatory programs.

The Academy's report is expected in January 1996. Once we receive and review the report, we will develop recommendations on the need for changes in policy or regulation. The areas that need to be reviewed include: the regulation of patient safety; training and experience for physicians and ancillary personnel; performance based versus prescriptive regulations; and therapy equipment requirements.

POTENTIAL NRC REGULATION OF DOE FACILITIES

Another area of budget and resource uncertainty we face is the possibility that we could be assigned the task of regulating a number of the Department of Energy's nuclear facilities, including some defense facilities.

Congress has long been interested in increasing external oversight of nuclear safety at DOE. For example, the Defense Facilities Nuclear Safety Board was set up by statute a little over five years ago to provide external oversight -- but not regulation -- of DOE defense facilities. Early last year, there were Congressional hearings on a bill that would have required that any new DOE nuclear facility be licensed by the NRC. Two recent House bills dealing with the national laboratories call for external regulation of the labs.

Since early this year, an independent advisory committee at DOE has been looking at the question of whether there should be more external regulation of DOE's nuclear facilities. The Committee is co-chaired by former NRC Chairman- John Ahearne and former head of OSHA-Gerard Scannell. The Committee's report is due by the end of this calendar year. The committee has looked at a lot of possibilities, including continuing the present system, which mixes internal regulation and external regulation. However, right now the Committee seems likely to endorse increased external regulation. I should note that environmental protection at DOE is already externally regulated. The big question before the Committee right now is what body should be recommended to assume the role of external regulator. Although we do not have an answer to whether the NRC should regulate DOE facilities, we do have recent experience, in that we will certify and oversee the U.S. Enrichment Corporation.

We are not seeking extra work right now, particularly when our budget is being cut, and particularly not jurisdiction over defense facilities.

PLUTONIUM DISPOSITION

Another area that may have significant impact on our resources is NRC assistance to DOE on regulatory plans for plutonium disposition alternatives.

Following President Clinton's September 1993 nonproliferation policy statement, an Interagency Working Group was established to conduct a comprehensive review of the alternatives for disposition of surplus plutonium from nuclear weapons activities of the U.S. and the former Soviet Union. This group is considering technical, economic, nonproliferation, scheduling, and environmental aspects in the disposition of surplus plutonium. The Interagency Working Group will be working to reach a Government-wide consensus on the preferred alternatives for plutonium disposition early next year. DOE is the lead agency because it is responsible for management, storage, and disposition of surplus weapons-usable fissile materials from U.S. nuclear weapons dismantlement and production processes.

Early this year, DOE briefed our agency on the Fissile Materials Disposition Program and their strategy for development of regulatory plans for plutonium disposition alternatives. DOE requested our assistance in development of these plans. The Commission directed the staff to establish a reimbursable agreement with DOE and provide the assistance requested by DOE.

At this time, we are meeting with DOE to discuss the regulations that would apply to the facilities needed for each plutonium disposition alternative. We will also discuss licensing issues and schedules associated with each alternative. DOE will use this information in developing their regulatory plans. The next stage will be our review of those plans, which will occur about the second quarter of FY96. Through the agreement, DOE is reimbursing us for the billable assistance being provided.

Our future role in the area of plutonium disposition is very uncertain. Although we are not seeking extra work right now, this is another area where planning for our budget and resources is difficult.

HIGH LEVEL WASTE REPOSITORY

One final area of uncertainty that I would like to discuss is our work on the high level waste repository at Yucca Mountain. As the result of expected budget reductions in this area, DOE recently announced its plans to make significant changes to its High Level Waste Repository program. Further changes are likely as the full extent of the reductions become clear when the Appropriations Bill is enacted.

The goal of DOE's limited program approach will be a management investment analysis prior to the year 2000. This investment analysis will include a site description, reference repository and waste package design, a total system performance assessment,

a license application development plan and schedule, and a repository construction and operation cost and schedule.

A number of the changes to the DOE's program are particularly significant to our high level waste program. DOE is planning to continue only five percent of its current surface-based testing and will terminate its exploratory studies facility (ESF) construction in the Spring of 1996. This means that the site description for the DOE investment analysis will be based largely on information available at this time. DOE is also planning significant reductions to its licensing activities.

In response to expected DOE program changes, as well as a cut by half in our own high level waste funding request, we are planning a reduced program. This reduced program will still allow us to meet our prelicensing statutory responsibilities. We will also be working cooperatively with EPA to develop standards and NRC requirements specific for a Yucca Mountain site.

In summary, in the area of high level waste repository program, we expect a significant reduction in our activities in this area. We will, however, due to the importance of this issue to the power reactor industry, maintain a minimal program.

STRATEGIC ASSESSMENT AND RE-BASELINING

I now turn to a very important aspect of our plans to deal with the uncertainties in our resources, and the external and internal environment changes. The Chairman requested that we examine and review our programs in a way that will put the NRC in a position to confront more readily future challenges. The strategic assessment and rebaselining effort that the Chairman requested will shape how we do business, and how we use our financial, human, and information resources in the years ahead.

A Strategic Assessment and Planning Committee has been established, which is mainly comprised of Deputy Office Directors under the co-leadership of my Deputy for Nuclear Reactor Regulation, Regional Operations and Research, James Milhoan, and James Johnson from the Chairman's office.

What do we hope to accomplish with this effort?

- A critical bottoms-up reevaluation of our regulatory and support requirements, processes, procedures, programs and resources.
- Answers to the questions what is it we are doing; what is it we "must" do and why, and what is it we "should" be doing.

- The development of a strategic plan and rebaselining effort that is responsive to a changing environment and produces a new set of assumptions, goals and strategies for the agency.
- Development of strategic issues that will require Commission decision and direction and the bases for them to make informed decisions.

This effort has been divided up into four phases.

The first, "strategic assessment," is essentially a review, categorization and assessment phase. It involves analyzing the 4,000 to 5,000 activities the agency performs and organizing them into functional groupings. It includes a process of looking at agency activities to determine whether they are being conducted in response to a specific mandate or whether these activities have some other rationale for their existence, and whether there are areas where we should have ongoing programs to implement a specific mission, but do not. This first phase will be completed by the end of the year. Strategic issues will surface in this phase and will become an integral part of all the phases.

The next two phases "Rebaselining" and "Strategic Planning" consider agency priorities and whether some programs should continue or new programs should be initiated. During these phases, we will rigorously screen agency activities to produce (or rebaseline) a new set of assumptions, goals and strategies.

The fourth phase, "Budget and Human Resources," should provide guidance for future budgets as well as human resource planning and organizational structure.

It is anticipated that all four phases will be completed by the Fall of 1996.

ANNEALING OF NUCLEAR REACTOR PRESSURE VESSELS

Another issue I would like to talk to you about this morning is reactor vessel annealing. The NRC is in the process of issuing a final rule and supporting regulatory guide to address thermal annealing. The rule has been affirmed for issuance by the Commission, and will be issued shortly.

While we have defined a regulatory process for thermal annealing, the questions about the engineering feasibility for U.S. designs have yet to be addressed. The industry is actively addressing the engineering feasibility of thermal annealing through annealing demonstration projects, which are jointly funded by DOE, the nuclear industry and international groups. Presently, two demonstration projects are being implemented using cancelled plants. These plants are Marble Hill in Indiana, a typical Westinghouse design, and Midland in Michigan, a typical B&W

design. The heat source for Marble Hill is an indirect gas-fired heater, while the heat source for Midland is an electric radiant heater. Both plants will be instrumented and detailed analyses will be performed for comparison to the measurements. It is expected that these demonstrations will answer key questions regarding the engineering feasibility of thermal annealing for U.S. designs, and provide validation of the analytical methods used to predict temperatures and deformations in the overall system. Currently, the demonstrations are scheduled to be completed by mid to late 1996.

The NRC, through our Office of Research, is working closely with DOE in observing the annealing demonstration projects. We are performing independent analyses and evaluations of the demonstration projects. Through this close observation and evaluation, we expect to develop our independent assessment of the engineering feasibility of thermal annealing for U.S. designs, and to develop information that will be directly relevant to our review of submitted annealing reports. This project has the goals of reducing technical uncertainty and validating NRC's rule and regulatory guide on thermal annealing.

I firmly believe that the power reactor industry should have a collective interest in ensuring that technical issues about reactor pressure vessel annealing are identified and resolved.

IMPROVED STANDARD TECHNICAL SPECIFICATIONS

Another area that I would like to speak to you about is improved standard technical specifications.

The ultimate goal of regulatory effectiveness is to maintain safety while improving efficiency. We expect that as we become more effective, the need to compensate for outdated, unnecessarily restrictive requirements will be virtually eliminated. To assist in this effort, we have implemented the improved standard technical specifications program, which eliminates unnecessary license constraints, and, therefore, substantially reduces the regulatory burden on licensees. The improved standard technical specifications reduce the number of limiting conditions for operation and, more importantly, present the retained requirements in a simple, consistent, and operator-friendly format. The format improvements include added clarity, and resolution of several long-standing concerns related to operability, surveillance practices, and completion times. These improvements also added substantial detail to the Bases which should reduce ambiguity and the need for interpretations.

Eight percent of operating units have converted to the improved standard technical specifications. Although there is substantial

up-front cost associated with conversion, savings for licensees that have converted are estimated to be between \$150,000 to \$1,000,000 per unit per year, allowing cost recovery in a reasonably short time. As of October 1 of this year, more than half of the operating units have converted or intend to convert to the improved standard technical specifications. I would encourage those nuclear operators that have not decided to convert to improved standard technical specifications to seriously consider doing so.

DRY CASK STORAGE

The last topic I would like to discuss with you is an area of great importance to the industry, and an area of concern to me - that of dry cask storage.

To deal with the issues associated with the storage of spent fuel, we created a new organization within the Office of NMSS - the Spent Fuel Project Office. This new project office is responsible for the review of casks used for the transport and storage of spent fuel within the U.S. They are also responsible for licensing activities associated with any proposed Multi-Purpose Canister (MPC) system and any application for an interim centralized high-level waste storage facility.

What this means to you is that our project office has the responsibility for the regulation and certification of transport canisters; package designs; and interim storage of spent fuel, whether at reactor sites or at separate consolidated sites.

The Project Office staff reviewed recent experiences related to the design, fabrication, construction and operation of Independent Spent Fuel Storage Installations (ISFSIs) at reactor sites. One of the recommendations resulting from that review was that communications with reactor licensees on dry cask issues should be improved. In August, we met with NEI to discuss a number of issues identified by our reviews, including how communications between NRC and the nuclear industry should be enhanced.

Since then, representatives of NRR and NMSS have met with the NEI dry cask storage working group to discuss generic issues related to ISFSIs. They also met to discuss NRC observations of industry performance in the area of dry cask storage. I'll return to these observations shortly. I understand that periodic meetings are planned for the foreseeable future.

You should know that we are considering holding an industry workshop early next year to discuss dry cask storage issues such as observations of licensee performance and the inspection procedures which are currently in preparation for NRC oversight

of the design, fabrication, construction and operation of ISFSIs. It is important that all parties - utilities, cask vendors, and others - understand NRC's expectations for dry cask storage activities. These expectations are achievable, realistic and clearly defined. We expect that a workshop will provide us with a better perspective prior to finalizing these inspection procedures.

Meetings and workshops like these are positive examples of how we can better identify and resolve generic regulatory issues, and I believe that this type of information exchange will do a lot to facilitate the licensing process for both our organizations.

I would like to share with you the results of my staff's observations regarding industry performance in the area of dry cask storage. A common issue was identified through recent inspections of cask fabrication and pre-operational testing which I think needs to be considered by any utility planning to construct and operate an ISFSI.

That issue is the need for recognition by utilities that they are responsible for ensuring that cask components are fabricated to the specifications defined in the Certificate of Compliance for that particular cask. We have been disappointed to find that a number of licensees have not provided aggressive oversight of fabricator activities.

I would note that the acceptability of specific cask components has been questioned, not only by my staff, but also by interested members of the public. We frequently receive inquiries regarding the acceptability of cask components along with concerns regarding the ability of utilities to oversee these activities.

We have observed that most of the companies that fabricate cask components do not have the benefit of operating for 20 years in the quality culture of the nuclear industry. Utilities must take a proactive role in providing guidance and oversight over fabrication activities. I cannot stress this point strongly enough. As the reactor licensee, you are responsible for proactively ensuring that dry cask components are fabricated in conformance with the cask specifications.

I urge each of you to seriously consider the level of oversight and quality assurance that you apply to dry cask storage activities. I believe that application of an aggressive and appropriate quality assurance program is critical to the acceptable, efficient, and timely storage of spent fuel in dry cask storage.

Finally, I want to conclude my remarks with an important message.

During the last decade, we've seen the performance of the nuclear industry improve. It is also true that today, many more plants have a record of superior safety performance. More importantly, there are fewer plants with poor safety performance.

Even with all of the gains in safety performance made over the past decade, all of us must continue to focus on our primary mission - that of ensuring the plants are operated in a safe manner. Even in these uncertain times, we must keep our focus on safety. I urge you to stay vigilant - the NRC will too.

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