

NUCLEAR REGULATORY COMMISSION

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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BRIEFING ON

STATUS OF NUCLEAR REACTOR SAFETY

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Nuclear Regulatory Commission
One White Flint North
Rockville, Maryland
Tuesday,
January 29, 2002

The Commission met in open session, pursuant to notice, at 9:30 a.m., the Honorable RICHARD A. MESERVE, Chairman of the Commission, presiding.

COMMISSIONERS PRESENT:

RICHARD A. MESERVE, Chairman of the Commission

NILS J. DIAZ, Member of the Commission

GRETA J. DICUS, Member of the Commission

JEFFREY S. MERRIFIELD, Member of the Commission

EDWARD McGAFFIGAN, JR., Member of the Commission

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STAFF AND PRESENTERS SEATED AT THE COMMISSION TABLE:

ANNETTE L. VIETTI-COOK, Secretary

STEPHEN BURNS, Deputy General Counsel

STAFF (continued)

DR. CONGEL

GARY HOLAHAN

JON JOHNSON, Deputy Director, NRR

WILLIAM KANE, Deputy EDO

JIM LYONS

ELLIS MERSCHOFF, Region IV Administrator

ASHOK THADANI, Director, RES

WILLIAM TRAVERS, Executive Director

for Operations

JOHN ZWOLINSKI

I-N-D-E-X

Opening Remarks, Chairman Meserve 4

Opening Remarks, Dr. Travers 5

Presentation, Dr. Kane 5

Presentation, Mr. Johnson 7

Presentation, Ashok Thadani 10

Questions of the Board, Chairman Meserve 33

Questions of the Board,

Board Member Merrifield 34

Questions of the Board, Board Member Dicus 55

Questions of the Board, Board Member Diaz 70

Questions of the Board, Board Member

McGaffigan 89

Adjournment 100

P-R-O-C-E-E-D-I-N-G-S

9:30 a.m.

CHAIRMAN MESERVE: Good morning. On behalf of the Commission, I'd like to welcome you to today's briefing on the status of nuclear reactor safety. This briefing is the second in the annual series of briefings on the status of the NRC's work in various strategic arenas. We will this morning from the representatives of the Office of Nuclear Reactor Regulation and the Office of Nuclear Reactor Regulatory Research and I also see from the Regions concerning the accomplishments, future plans and challenges related to nuclear reactor safety oversight and regulation.

As I think everyone in the room knows, this arena is the largest in the Agency in the terms of the commitment of NRC staff in budgetary resources. It is also one, of course, that attracts the greatest attention, publicly and within our Agency.

We very much look forward to the briefing this morning and why don't we get under way?

Dr. Travers?

DR. TRAVERS: Thank you, Chairman, and good morning. As you've indicated this is a broad arena, the reactor safety arena, and we have staff representatives from a number of the offices that you've indicated. Of course, Ellis is here from Region 4. We intend to, as we have in the previous briefing, focus on policy issues that are likely or could come before the Commission in the coming year. I don't think any of the issues that we're going to be talking about today should be viewed as new. Certainly, they're ones in the main that the Commission is familiar with, but certainly ones that are deserving of additional consideration we expect during the on-coming year. They include initiatives such as risk-informed initiatives, new reactor licensing, inspection and assessment program effectiveness, materials engineering issues and licensing issues. Bill Kane is, of course, the reactor safety arena manager and Bill is going to introduce the management team that is with us today.

MR. KANE: Thank you, Mr. Chairman, Commissioners. With us at the table I'd like to introduce Jon Johnson who is the Deputy Director of the Office of Nuclear Reactor Regulation who will be the main presenter. Ashok Thadani, to my right, Director of the Office of Research, who will also present the presentation, and of course, Ellis Merschoff from Region IV who will be here to represent all of our Regions.

While this arena is the principal responsibility of the Offices represented at the table, I would like to acknowledge the broad spectrum of support that we've received from other offices, including the Office of Investigations, the Office

of Enforcement, Incident Response Operations, Office of General Counsel and the Office of Human Resources, all play a significant role in this arena, as well as numerous other support offices.

As requested by the Commission, the briefing is going to primarily cover policy issues that the staff expects the Commission will be engaged in over the next year in this arena. The staff will address technical issues, communications issues, management of human capital and will identify specific challenges and policy issues, as I said we expect to have before the Commission in the near future.

Also, we'll recognize the special challenges that resulted from the events of September 11, how we are responding to those impacts and our core programs as well as future licensing. I'd also like to note that while I believe the staff reacted effectively and comprehensively to the terrorist events of September 11th, we have continued to maintain our emphasis on our important programs. At this point, Jon Johnson will continue the presentation.

MR. JOHNSON: Thank you, Bill. Good morning, Chairman, Commissioners. Similar to the recent materials arena briefing, this briefing will be a revised format from our previous year and we'll focus on policy issues for the Commission and other major challenges for our staff.

Before I begin, I would also like to acknowledge the support that the Office of NRR and the Regions have received from the Offices of Research, Investigations, Incident Response, Enforcement and the General Counsel in maintaining reactor safety and in meeting the strategic safety and performance goals for the key functions of licensing, inspection, assessment and incident response.

In addition, it would not be possible to accomplish these core activities or begin any new initiatives without the support of human resources, administration and the chief information officer.

Could I have slide 2, please?

(Slide change.)

MR. JOHNSON: Today's presentation will include key policy issues and challenges related to the following topics: risk informed initiatives. These will include technical specifications and rule making, new reactor licensing. This will include discussion about schedules and infrastructure. Inspection and assessment program effectiveness, including SDP improvements; performance indicator updates.

We'll also discuss material engineering issues such as stress corrosion cracking. We'll also discuss licensing issues including power uprates, license renewal and prioritization and other challenges including human capital.

Slide three, please.

(Slide change.)

MR. JOHNSON: The use of risk-informed concepts has become a fundamental tool to aid and improving facility technical specifications and the NRC continues to evaluate risk improvements to the current system of standard text specs.

Eight risk-informed initiatives to the standard text specs have been proposed by the industry and are being discussed with the NRC staff in a series of public meetings and reviewed by the NRC as consolidated line item improvements. One proposal, mis-surveillances*, has been approved by the staff and the review for two others should be complete this summer. The remaining concepts are under development and for two of these proposals which represent a fundamental change in approach, configuration risk management and a use of a risk significant scope for technical specifications, the staff plans to bring these to the Commission for a policy decision perhaps this fall.

A wide variety of rule makings are in progress to make greater use of risk information. These include a new 10 CFR 50.69, so called Option 2 and changes to [10 CFR 50.44](#) and [50.46](#). The Commission has supported the staff in releasing draft rule language and this has served to foster enhanced communications with our various stakeholders.

The primary challenge for 50.69 rulemaking is the dual nature of this effort. For example, the rule proposes to risk inform certain special treatment requirements. However, it maintains with some level of assurance the design basis function. That is, defining what level of assurance is still necessary considering the need to maintain the design basis for low risk significant components.

We anticipate providing a proposed rule to the Commission by the middle of this year.

The staff recently received the Commission Staff Requirements Memorandum for [10 CFR 50.44](#), combustible gas control, the first Option 3 rulemaking. We've received favorable ACRS recommendation and we expect to forward the proposed rule to the Commission by April of this year.

Challenges exist for [50.46](#), acceptance criteria for emergency core cooling systems, Option 3, and re-evaluating the

technical basis and in the unbundling of technical issues.

SECY 133  was provided to the Commission in July of this past year with the staff's recommendations for risk-informed changes to 50.46. We're presently awaiting the Commission's policy decision or feedback on this paper.

Mr. Thadani will now discuss the

risk-informed regulation implementation plan, overall.

DIRECTOR THADANI: Thank you, Jon. Good morning. An updated and revised risk-informed implementation plan was provided to the Commission on December 5, 2001. This plan provides for an integrated effort involving all program offices and is consistent with the PRA policy statement and the strategic plan.

Major reactor arena activities, the plan includes, for example, 10 CFR Part 50 Options 2 and 3 and other initiatives such as technical specifications and efforts to develop standards.

The plan provides priorities of activities, identifies necessary resources and tools, addresses how performance-based approaches will be integrated with risk-informed initiatives. The plan also identifies critical path items and cross-cutting issues.

There are significant policy and technical issues embodied there. Some of the examples are the quality PRA, for example, the role of standards and the NEI peer review guidance. We're planning a regulatory guide that we'll submit to the Commission integrating a role of peer reviews as well as the role of standards in an integral fashion.

We're going to have a stakeholder meeting on February 5th, followed by a meeting with the Advisory Committee on February 7th, and we expect to provide a paper to the Commission at the end of March of this year.

There remains a continuing challenge in risk-informed regulation. And that is really to ensure that our focus is not just on unnecessary burden reduction but also to be seeking for areas where safety can be enhanced.

There are a number of issues, some sensitive issues or policy-related issues, but we have been keeping the Commission informed in seeking your guidance on a periodic basis through various SECY papers.

Back to Jon.

MR. JOHNSON: Thank you, Ashok.

Slide 4, please.

(Slide change.)

MR. JOHNSON: In response to the Commission's request, we've provided the Commission in October of last year our future licensing and inspection readiness assessment. This assessment identified several activities that may need to be performed in support of new reactor licensing.

One of our greatest challenges is the uncertainty of plans of potential applicants. Since October, several changes to industry schedules have occurred, making it somewhat of a challenge for our staff to prioritize our work.

The preapplication reviews of AP1000 and the pebble bed modular reactors continue. Westinghouse has reaffirmed its intention to submit the AP1000 design certification application in March or April of this year. Exelon has slipped their planned application for an early site permit by six months and slipped a combined operating license application by one year.

In addition, General Atomics has requested that we prepare to begin the pre-application review of their GTMHR in 2002 which we had not planned to begin until next year.

These and other similar changes are expected to continue as industry makes decisions about new reactor licensing. We will continue to evaluate and reallocate our resources using the normal PBPM process to work on future licensing activities with the highest priority to assure our readiness.

As discussed in our readiness assessment, while the current regulatory infrastructure is adequate to conduct new reactor licensing, there are several improvements that can be made. In addition, industry has identified several areas that, if resolved, could reduce unnecessary regulatory burden and make the licensing process more efficient and effective. We plan to engage the Commission for policy decisions on several of these regulatory infrastructure issues. As an example, some of the policy issues we've identified and when they should be at the Commission include the following: Exelon's regulatory licensing approach, the first quarter of 2002; the legal and financial issues associated with

modular reactors in merchant plants in June of this year.

We expect to provide the Commission a paper on programmatic ITAC in April of 2002. This is the Inspections Tests and Acceptance Criteria for programmatic issues.

We also plan in April of this year to propose a revision to part 52 including petitions on the use of existing site or facility information. And in April of next year we plan to provide the policy issues from the pre-application review of the pebble bed modular reactors.

In addition, NEI plans to propose in the second quarter of this year a whole new alternative regulatory framework for advance reactor designs.

Our readiness assessment has also identified technical areas where the Agency has limited expert niche in some of the disciplines necessary to conduct the new reactor licensing issues.

These include gas reactor technology, high temperature materials, new fuel designs, also the geotechnical areas for the site safety reviews and nearly all areas of site environmental reviews.

We believe we can retain many of these skills through technical assistance contracts in the short term but our long-term strategy will be to develop our own staff necessary to conduct the reviews in-house.

To assist in our challenge we have engaged in a number of activities with the Department of Energy, as well as with other countries with the use of technical information exchanges and workshops.

These outreaches have included countries such as Germany, Japan, China, South Africa and the United Kingdom as well as international organizations such as OECD and the IAEA. We believe that these have been very helpful in identifying technical issues and resource needs to support our readiness for new reactor licensing.

Slide 5.

(Slide change.)

MR. JOHNSON: As the Commission is aware, key features of the reactor oversight process include a risk-significance determination to evaluate inspection findings as well as licensee reported performance indicator information. These improvements were developed in response to staff assessments, stakeholder comments and Commission direction.

We believe that the SDP, in general, has been successful. We certainly have challenges. We've completed almost two years of use of these and are continuing to make improvements in the SDP tools. We've been challenged by the dual concepts of having an efficient and broad use of workbooks by a large number of resident and region-based inspectors. These are the so-called Phase 2 notebooks. And also, use of more sophisticated risk calculations conducted by small number of risk specialists, two in each region and Headquarters. We're actively engaging in listening to internal and external stakeholders, to reassess our options to accelerate these improvements in the use of these tools.

We appreciate these differing views because they will help us to achieve more effective tools. We also understand the Commission might have additional guidance for us in this area.

This summer, the staff and industry are planning to begin a pilot program for the potential replacement of the safety system unavailability and reliability performance indicators. This pilot program consists of revising four current unavailability PIs and adding four new reliability PIs for the four mitigating safety systems. In addition, the staff is proposing to add two new mitigating safety systems. These are service water and component cooling water, To address issues encountered with cascading support system unavailability.

The purpose of these improvements being piloted is to provide for more risk-informed treatment of unavailability and reliability in a manner consistent among the ROP, the maintenance rule, PRA use and NPO and WANO performance indicators.

The pilot program will run approximately 6 months for data collection, followed by an additional time for analysis.

A workshop is planned for June of this year with pilot plants and NRC representatives to finalize the details.

The staff will maintain stakeholder interface through periodic public meetings with the ROP industry working group.

The second annual Agency Action Review Meeting is scheduled for early April of this year in the Washington, D.C. area. This meeting led by the Executive Director for Operations, provides an opportunity for senior Agency managers to confirm or modify Agency's actions taken in plan to address individual facility performance.

Two other key elements include a discussion of broad industry trends and any plan changes to the ROP as a result of lessons learned from implementation such as a self-assessment of the SDP tools.

A Commission briefing on the AARM results is scheduled for May 1 of this year.

Slide 6.

(Slide change.)

MR. JOHNSON: The industry and the NRC staff have had a number of challenges in the past year related to stress corrosion cracking. These have included, as an example, the Oconee control rod drive mechanism nozzles and other issues. We issued a bulletin in August of this past year to address control rod drive mechanism nozzle cracking. The staff has recently completed an action plan to guide the resolution of the cracking of vessel head penetration nozzles.

In the short term, plants are performing more effective inspections of the piping. The staff is closely monitoring these inspection activities and validating the inspection methods used to ensure they provide meaningful information on the condition of these critical components.

The Commission was kept informed of the potential need to issue orders, however, we were able to resolve these concerns.

We are prepared to address the technical issues and much the same as before, we will keep the Commission informed.

In the longer term, some plants will be replacing reactor vessel heads. The new reactor vessel heads will use improved designs and enhance materials that are more resistant to cracking and licensees will manage the cracking through more effective inspections.

The Office of Research is developing additional data related to crack growth related to critical materials. Research supports international studies such as the Halden Reactor Project which involves material or radiation to evaluate any resulting material degradation.

Research is also involved in cooperative studies with DOE and EPRI on this topic as well as the Materials Reliability Project and the BWR Vessel and Internals Project.

These efforts not only evaluate the current issues, but they're also forward looking in an effort to anticipate material issues of the future.

Long-term resolution of stress corrosion cracking may be addressed through a combination of industry initiatives and changes to the ASME code inspection requirements. Ultimately, the Commission may be engaged in rule making to [10 CFR 50.55A](#).

Several reports are being prepared by our staff; one to describe to licensee response to the bulletin, another to describe the inspection results and a third report regarding the staff's overall technical assessment. This later report is expected this summer.

Mr. Thadani will now discuss issues regarding reactor vessel pressurized thermal shock.

DIRECTOR THADANI: Thanks, Jon. As Jon noted, Research is actively engaged in various phenomena that challenge the integrity of various components both from short term point of view as well as from long term perspective.

I just want to briefly describe one element of our effort that relates to the pressurized thermal shock issue. As you well know, pressurized thermal shock has long been recognized as a potentially significant challenge to pressurized water reactor vessel integrity. Aging of the reactor pressure vessel leads to a reduction in the fracture toughness properties of reactor pressure materials, due to neutron irradiation and the thermal environment. This contributes to an increase in risk of reactor pressure vessel failure, if a severe pressurized thermal shock event were to occur at the PWR facility.

For most pressurized water reactor plants, the current license plant life of 40 years will not be an issue from the PTS perspective, from plant life extension to an additional 20 years. Some plants may be constrained by their ability to meet pressurized thermal shock requirements that are embodied in 5061 of our regulations.

One of the objectives of the pressurized thermal shock research is to ascertain whether the PTS regulation should be revised using current knowledge of fracture mechanics, thermal hydraulics and risk insights which may allow life extension to 60 years without the need for any actions such as annealing of reactor pressure vessel.

Preliminary integrated evaluations conducted on one plant so far indicate the potential for relaxation of the current requirements without any concern for increased risk.

We plan to apply this methodology to three additional pilot plants before finalizing our technical basis for a revised rule.

As part of this effort, a key policy issue for the Commission could be the potential use of an explicit risk metric, that is, the frequency of a through wall crack in a reactor pressure vessel as an option, in the proposed revised rule. We expect the staff to request Commission guidance on this matter during this fall, after we have completed the evaluations of three other pilot plants.

Jon?

MR. JOHNSON: Thank you Ashok. Slide 7.

(Slide change.)

MR. JOHNSON: The Commission has informed us that power uprate license amendments are of high interest and requested us to keep you informed of significant developments in this area. You challenge us to become more effective in our efforts, while maintaining the high quality of our safety reviews.

We've completed 22 power uprate license amendments during calendar year 2001 including 5 extended power uprates. We've undertaken efforts to streamline the measurement uncertainty power uprate reviews. These are the small ones.

A regulatory issue summary has been developed to provide specific guidance to the industry on the content of these measurement uncertainty amendment applications. Our expectation is that this guidance, if followed, should shorten the NRC review time for amendment applications by 2 to 3 months. It currently takes us about 8 months.

A similar effort to streamline the extended power uprate reviews is planned, beginning with a public workshop in March of 2002.

Currently, 11 power uprate amendments, including 4 extended power uprates are under staff review.

The NRC's program for conducting license renewals continues to be of high interest to the Commission. In last year's Commission briefing on the nuclear reactor safety arena, the Chairman reminded us that performance goals and license renewal were of singular importance and that we should promptly notify the Commission if our budget assumptions and resources were not adequate to achieve strategic plan goals of conducting high quality reviews in 25 months without a hearing.

To date, we've completed four license renewals. These reviews were completed between 23 and 17 months. Currently, there are six license renewal applications under staff review.

The next decision on license renewal should be Turkey Point, which is currently on schedule for this summer. With the completion of Turkey Point review, we will have completed reviews on each of the major NSSS vendors, Combustion Engineering, Babcock & Wilcox, General Electric and Westinghouse. And we plan to request the Commission authorize the Director of NRR to approve future license renewal applications, while keeping the Commission informed of any significant issues requiring policy decisions.

We've issued generic guidance to assist NRC and future applicants in improving effectiveness and efficiency of their reviews. We've also completed a demonstration project with industry to pilot the use of generic guidance. The first applicant we expect to fully use this guidance and see significant efficiency gains is Fort Calhoun, the application for which was just received on January 11th.

One of the challenges we face in our licensing review activities is how to address potential initiatives that continue to remain a low priority from the perspective of PBPM review. These give the potential, if accomplished, to provide additional efficiencies to our staff. One example of such a work item is updating of the standard review plan. We're currently reexamining this challenge.

Slide 8.

(Slide change.)

MR. JOHNSON: Response to September 11th attack has been a significant challenge to the Agency and has required a tremendous amount of management and staff time. The Regions, as well as Headquarters staff, are continuing to experience the significant challenge in conducting baseline inspections and in responding to correspondence and public meetings.

Certain inspection and emergency plan exercises have had to be postponed and a significant amount of unplanned resources have had to be expended to respond to Congressional, State and local officials as well as members of the public. The Commission has also had an active role in several of these activities. The staff has also been challenged to

relook at information that is released to stakeholders. This involves a special effort to reevaluate the information on our website and that which is made publicly available in ADAMS. We are coordinating with the EDO and other offices to assure consistent approach. We've already had some licensing matters affected. Examples include daily event information and the license renewal proceedings.

We just recently received the Commission policy directive in the SRM on these matters and we will implement this directive.

I would like to end by saying that perhaps our biggest challenge is in human capital, specifically recruiting, hiring, developing and retaining our staff. We are committed to a high quality, diverse workforce. The Regions and Headquarters all share this challenge and we're working aggressively with the Office of Human Resources to meet this challenge. As an example, in the Office of NRR this year, our staff estimates that we need to hire about 90 new staff to meet our obligations. This is a tremendous challenge.

We've implemented a number of initiatives to improve our management and leadership of the staff. The NRR executive and leadership teams and operating level have made investments in work planning and recruiting for the future with the reactor safety intern program. Additionally, one of our divisions has taken the initiative to reorganize to improve efficiency and effectiveness, eliminating one SES position and adding a first line supervisory position to provide more access to our staff. But these initiatives and others take an investment. We need the support of the Commission to allow offices to take some resources to invest in future efficiencies in order to continue the momentum in this regard.

Ashok will also discuss some challenges from the Office of Research.

DIRECTOR THADANI: Thanks, Jon. The recent evaluation of research program and direction by the Advisory Committee in Reactor Safeguards and the expert panel have identified many challenges for us to ensure that we have the tools to deal with current challenges as well as prepare the Agency for timely addressing of important safety issues that we are likely to face in the future, for example, from the use of new technology many industry initiatives regarding operating reactors and plants for new designs.

Our efforts are directed towards recruitment and maintenance of in-house quote technical competence as well as domestic and international cooperation to develop the necessary database to support our models that we use that assist us in our safety decisions.

While the cooperation improves our understanding of issues and allows us to leverage our sources, sometimes this cooperation can create delays and generation of data of interest to us.

As Jon noted, we are continuing to face significant challenges in our recruitment efforts and maintaining the key competence that I think is essential for our office and thus, these challenges require continual attention on our part and interaction with the Commission, but I do appreciate the support that you have given us to help address many of these challenges that have been recognized that we need to deal with.

Next, Bill Kane will discuss additional specific challenges.

Bill?

MR. KANE: Next slide.

(Slide change.)

MR. KANE: I'd like to talk about two other challenges that we have that cut across really all of the arenas. These are under the leadership of Dr. Congel in the Office of Enforcement, but include participation again of any of the other offices and the Regions as well.

First is the discrimination task force activity which again is a major policy issue that will be coming before the Commission. The policy issue is whether and how to revise the Agency's enforcement of licensee employment discrimination violations under [10 CFR 50.7](#).

The challenges there are the roles of NRC and the Department of Labor in this area, the maintenance of a safety conscious work environment, which is, of course, in the reactor arena is a major cross-cutting issue in the reactor oversight process, and then actions as related to individuals and hearing rights. At the Commission's direction, we're also exploring the use of alternate dispute resolution in this area. We expect to have a paper before the Commission the first half of this year dealing with this issue.

The second issue that I'll discuss is the alternate dispute resolution. That's a policy issue again as to whether and how to use ADR in the Agency's enforcement policy. What is ADR? It's a term that refers to voluntary processes, for example, mediation facilitation arbitration. *Federal Register* notice was issued in December. The comment period, I believe is just about expired, if it hasn't and we would offer that there are a number of issues in this area that are very important such as confidentiality, of course, the Agency's four goals and infrastructure on how this would be carried out.

The schedule for that will be April of this year coming to the Commission.

Slide 10.

(Slide change.)

MR. KANE: Summary. I'd like to capture, again, if I can in an overview, a summary of the issues. First of all, let me say that I believe and we all believe that the four goals of the Agency obviously are intact and guide us in the conduct of our business: maintain safety, increase public confidence, increase effectiveness and efficiency, and reduce unnecessary regulatory burden. These goals, of course, are very important to us. They guide us on how we go about utilizing EDPM to manage our work, establish priorities and we'll certainly continue to do that.

Under technical issues, the first and we are certainly a technical agency and we have the challenges that have been laid out here today, many material issues that the staff has been dealing with, going forward. The safeguards interface will certainly be a challenge that we will continue to work with going forward. Communications issues are going to be a significant challenge for us in terms of explanation of events, in terms of risk associated with events, communications, as the Commission has talked to us before on this issue.

The events of 9-11 have put a significant challenge on the staff in terms of communications with Congress, with State and local officials and other groups that have asked us to come. We've had to be judicious in our application of -- of course, we obviously have supported Congress, State and local officials and we have had to make some decisions in terms of where we spend the resources, as we have gone beyond that.

The Office of Homeland Security, of course, is an organization that is new and will be an organization that we will have considerable interfaces with, particularly the Incident Response Organization who we look to to interface with Office of Homeland Security, but there are a number of policy issues as I'm sure you've already appreciated that have -- that they are working very important issues such as vertical communications, horizontal communications, threat classification, control of correspondence and so each of these are being worked by the staff and these will continue to come to the Commission for your review and input back into Office of Homeland Security.

Under human capital and it's third on the list, but only because I wanted to end up there, it is so important to us going forward. I think you've heard some of the issues, maintaining a well-qualified and diverse staff is extremely important to us. We are doing, I think, well, in terms of entry level hiring at the 13, GS-13 level, continues to be a challenge that the staff is working very hard on. And finally, the development of our staff who will be our future leaders. And it's important that we devote, along with everything else that we're dealing with in this area, that we devote the time and the effort. It's so important to develop our staff for the future.

DR. TRAVERS: That completes our presentation, Mr. Chairman. I just would note very quickly that as you've heard, there's really no shortage of challenges that we face in this arena. It's a rather broad arena, particularly as Bill has noted in light of 9-11 and the challenges that we have moving forward, keeping the initiatives that we do have in place on track, moving forward in the right direction is going to continue to be a challenge for us, but we think we're up to it and we certainly appreciate the opportunity to give you a briefing today.

One factoid that I might mention and we talked a little bit about power uprates today and your direction to us to keep this as a very high priority issue, thus far, 3200 megawatts of electricity have been attendant to the fleet of existing power reactors as a result of power uprates that have already been approved and another 800 or so megawatts of additional electrical power are under review by the staff.

And with that, I'd like to conclude our presentation.

CHAIRMAN MESERVE: Thank you very much for the sweeping briefing. Let me say on behalf of the Commission how much we appreciate all of the effort that you have put in. I know that 9-11 created burdens that were on top of all of the other things that we do, all of which are important to us. And we very much appreciate the extra effort that the staff has put in over a difficult period.

Let me say that also I am in this briefing really brought home to me in a way that perhaps it hadn't before is just the incredible range of activities that you have underway. It really is a truly impressive array that you've presented to us. You obviously, as you've indicated there are an abundance of challenges that are in front of us, but your aggressiveness with which you are approaching them and the way in which you are sort of systematically working through in a wide variety of areas is really truly impressive.

Thank you very much.

MR. JOHNSON: Thank you.

CHAIRMAN MESERVE: Mr. Merrifield, you are first.

COMMISSIONER MERRIFIELD: Thank you, Mr. Chairman, and I do want to start off by saying that I heartily agree with

your comments. It brings to mind how fortunate we are to have what I believe is a workforce that is not exceeded by any in the Federal Government.

I've got four areas that I want to get into and I want to move through these relatively quickly. In the briefing slides, there was a discussion regarding the programmatic ITACs and a notion that we'll be receiving a paper in the spring relative to those and I'm wondering if you can preview for us how that effort is going. Have we been able to narrow the gap between ourselves and some of the concerns voiced by those outside of the Agency? And are there some specific policy issues that you perceive maybe brought before the Commission when that paper comes to us.

MR. JOHNSON: Yes, there's two kinds of policy issues. One is with programmatic ITAC, this issue basically involves procedures and programs, operational procedures and programs and the question is the extent to which these programs and procedures have to be reviewed and approved by our staff prior to a plant being able to operate.

Certainly, we believe that these procedures have to be in place, so the issue really is a question of the staff and historically in our previous method of licensing a plant, we would conduct pre-inspections, sending individual staff members out, conducting inspections in terms of looking at procedures and so forth. What we're trying to do is put some bounds on this to make this more reliable and predictable.

Jim Lyons is here and he can answer probably any specific question about where we're -- there you are.

There's another issue related to regular ITACs, the technical ITACs and that was recently raised again in terms of what would take probably a threshold to reopen these after they've been inspected and agreed to by the staff, if any new additional information is brought along.

Jim, can you address any questions about how we're closing the gap with the industry on programmatic ITAC?

MR. LYONS: Jim Lyons from NRR. We continue to work with the industry. We've had recent meetings on the ITAC verification program as Jon was saying. We're in the process of preparing the discussion.

I don't know if we've really come much closer to the industry on the actual resolution of programmatic ITAC. I think the staff still believes that we need some sort of programmatic ITAC. Industry does not. So we're still working through that.

COMMISSIONER MERRIFIELD: So the paper to the Commission will be an action-forcing mechanism in that regard?

MR. LYONS: Yes.

COMMISSIONER MERRIFIELD: Thank you. We had received an update a few months ago about our efforts in regards to new reactor licensing and a lot of the activities associated with that. At the time there was, and I don't want to put a pejorative on this, but there seemed to be some disconnect between the myriad of things that we thought we'd be facing as an Agency and perhaps slightly different or different time lists that was provided to us by NEI and its members.

Do you feel at this point that the communication between ourselves and NEI is appropriate at this point so that their timetable is reflective of the resources that we're dedicating to it? And in particular, are we in the right place relative to what appears to be three licensees that are going to be undertaking an effort relative to part 52?

MR. JOHNSON: I think we have very good communications. We have regular meetings with the industry. As you know, we have established a special organization to respond to these concerns and to conduct these communications. We have project managers assigned to each of the major projects and we believe we have the resources devoted to be ready when needed.

COMMISSIONER MERRIFIELD: I did come away a little bit with that impression last time around and I'm glad to hear that the communication is good. The point for asking the question is that obviously from a budgetary standpoint the Commission has got to make the right decisions and given the bounds that we have on these dollars, obviously, we all ought to be putting them where they're going to have the best bang for the buck so to speak.

One of the things in the discussion of risk-informed initiatives in some of the briefing topics. We've had discussions before about the possibility for risk-based performance indicators and I'm wondering what the current status is relative to that and briefly, if you could also touch on discussion between ourselves, WANO and INPO about -- the licensees frequently complain about they have to three different sets of books on performance indicators. Are we making any strides in convincing WANO and INPO to come our direction or not?

MR. JOHNSON: We're making progress on all using the same definition of unavailability. As I indicated, one of the attempts to improve this is to come up with a reliability indicator. As you know, one of the issues is well, in terms of risk, the equipment, the safety equipment availability is one part of the equation and the reliability is the other part. And so we have some issues with out-of-service time. If a piece of equipment is found out of service on a surveillance, as an example, we have to go back and estimate how long it's been out of service and the pilot program that we're starting now with the industry will attempt to resolve that issue by using the reliability.

In terms of risk-based efforts, Ashok could probably address some of the research efforts that are on-going.

DIRECTOR THADANI: Just to pick up on the point that Jon was making, as you know, we have effort under way to try to bring better risk focus to various inspection activities and inspection findings and as you note, the performance indicators sort of round out the information base that the Agency gets for its decision.

There are some issues there. An issue that is continuing to be an issue and is being debated has to do with if one goes forward with an expanded set of performance indicators using risk information, what is the ultimate benefit of that? And how could that impact the scope of inspection activities? Could it reduce the level of inspection? And this is an area that we're continuing to work on and in fact, NRR and Research are working on with the industry and we've taken what I would call part of the state in that direction by the four systems that Jon talked about, trying to make sure we have consistent statements about what do we really mean by unavailabilities and so on. But in terms of

full-fledged application of risk-based performance indicators, there are still some issues that need working.

COMMISSIONER MERRIFIELD: In the issue of, the fact that licensees have -- I'm going off of the risk-based, but the issue of having three different sets of indicators that the licensees have to deal with relative to ourselves, WANO and INPO, I know there have been previous discussions on that. What's the status?

MR. JOHNSON: That's included with the pilot program and the workshops. We're having a number of meetings and we're making significant progress on that. We want to have the same definition of unavailability for the oversight program, the maintenance rule program, when we do risk calculations and to conduct interfaces with WANO and INPO.

DIRECTOR THADANI: Commissioner, I would just add that that is really an important issue because until this agreement was reached, the industry had to keep different sets of books, so to speak, for data and its use and that didn't make much sense.

COMMISSIONER MERRIFIELD: I'm going to leave to others in the Commission questions regarding the significance determination process which I imagine will come. I do want to just sort of lay on the table that I do support efforts to accelerate the Phase II notebooks and SPAR models and I'll leave that just as a comment that you don't need to get into.

I was pleased to hear some of your comments relative to power uprates. One of the things that had been identified earlier was the fact that we were taking as long to do the uprate reviews on leading edge flow meters as we were on much more significant power uprates and I'm pleased to see that you had more focus on that and apparently that will resolve in a more risk-informed way the timing of some of our reviews.

I did have a question. We have obviously, we had engaged previously with General Electric on issues associated with extended uprates and that is resulting in, as was mentioned, I think five that we currently have before us right now.

Where are we relative to the Westinghouse effort that mirrors that and our engagement on extended uprates relative to those reactors?

MR. JOHNSON: Let's see, we have John Zwolinski here. John, would you like to --

MR. ZWOLINSKI: This is John Zwolinski. Commissioner, we have met with Westinghouse, but we're really in our infancy as far as Westinghouse committing to provide a generic topical report and we're continuing that dialogue and do not have a report to review as yet.

COMMISSIONER MERRIFIELD: That's one, I think, from my part obviously it could result in significant resource implications, if that were to be followed through which is obviously an important policy consideration, so further updates on that, I think, would be helpful.

Finally, I just want to make sort of two comments. One of them goes to the discrimination task force which Bill Kane spoke to at the end of the presentation. This is one and I know other Commissioners have done this as well, I've met with the task force. I met with stakeholders who have significant interest in this from the interest of the allegeders. I've met with licensees who obviously have significant concerns.

I have to say I was struck in the meetings that I had that the difference between those who support the allegeders and licensees, the difference between them is narrower than the difference between our staff and what was provided in the discrimination task force and those folks, which struck me as rather incongruous to the extent that they can go out and perhaps cut a deal that we can't.

And so I would, when that comes to us later on in the spring, I hope that the task force has had an opportunity to reflect on the various comments it has gotten. And I do want to say there is a significant amount of effort that they've undertaken. I want to compliment both Bill Borchard and Frank Congel and all the members of the task force for a lot of hard work and I think it was a sincere effort that went into that. But I do think that as they come forward to us at the end of the day, we are going to have to engage in a little bit more outside of the box thinking and expand our borders somewhat if we are

to come up with, I think, a resolution to the significant differences between the people that we regulate and the people that we protect in that respect and if you want to make a comment, you're welcome to, but I don't --

DR. TRAVERS: I'll make one and then I'll let Bill. I think the task force is doing an outstanding job in handling a very complex and difficult issue. As we've indicated to the Commission, however, the management team expects to take that report, further evaluate it from a management perspective staff management's perspective, and provide the Commission perhaps, hopefully, with that additional thinking that you would expect in a management review of that as an important element in our roll up of this issue that ultimately, of course, the Commission will have before it for policy

MR. KANE: That's pretty much what I was going to say.

COMMISSIONER MERRIFIELD: And again, I don't want this to be taken the wrong way. I do again compliment all the people involved for significant efforts, and our licensees and other affected parties who are involved with this. But I think if we are resolve what is a very difficult issue in a variety of factors, we're going to have to put a lot of hard thought into it.

Final comment, I want to direct to the staff and the Chairman as well, we've gone back and forth on these presentations -- I thank the staff for a very useful presentation. I know a tremendous amount of work goes in to preparing for these. We have gone back and forth previously about slides and so forth. Without castigating anyone, I found it somewhat difficult, I had a variety of questions that I had prepared even based on some of the more detailed backup slides that the staff had given us. Many of those questions I had to sort of throw out the window, given the fact that you filled in a lot of the blanks and I think in terms of preparing for these meetings, Mr. Chairman, we as a group, should engage more to make sure that we're getting as much of this information up front so that in getting the questions, really get some issues on the table, I think the five of us shouldn't be needlessly exploring in areas that are obviously going to be covered by the presentation.

Thank you, Mr Chairman.

CHAIRMAN MESERVE: Let me say that the structuring of the arena briefings this year is obviously an experiment to try to take us away from the sort of the past history, which was sort of an examination of a lot of accomplishments, most of which we know about or have read to try to have a revelation of some of the policy issues and matters that are going to be pending before the Commission and this is obviously a work in progress and we can continue to work with this and improve the utility of these meetings.

I have a couple of questions. I appreciate the comments that Jon had made about the importance of maintaining our progress on license renewal. As I look at the statistics, we may have as many as 15 license renewal applications that are pending simultaneously in fiscal year 2003. And I just wanted to inquire as to whether you have the resources and the capacity to be able to handle all of that.

MR. JOHNSON: First of all, I think the answer should be yes. I think it is yes. Chris Grimes has done a tremendous job setting up a framework for future license renewals. The license renewal staff project managers, use of milestones, there's a lot of good management techniques being used. We have significant amount of effort going into planning and budgeting and we meet frequently with the licensee representatives.

We had quite a few surprises. I would say last year and the number of surprises has almost dwindled down. Licensees feel they can submit information in confidence to us and we plan for that and call it unannounced and we keep a line item for that without announcing the name of the facility if they choose so.

We have resources planned and budgeted for these activities and we do expect to realize the 30 percent efficiencies that we had planned a year ago. This amount of efficiencies will go over a couple of years. As I indicated, the first plant that we expect to really make use of GALL and the demonstration project is Fort Calhoun and we just received that, but our plan is to use lesser number of resources on those future applications. We think we're in good shape.

CHAIRMAN MESERVE: Let me again urge you, if you sense at any time this is going off the track to make sure you keep the Commission fully informed and we want to be available to help you.

MR. JOHNSON: Yes sir.

MR. KANE: I wanted to follow up on Jon's comment and one he closed with. I think in order to gain some of these efficiencies that we're talking about, we're going to have to invest some resources in learning how to achieve these and so when we come forward with our budgets, you'll see that kind of information in there and it's -- I recognize that we're going to be spending some resources in a particular year, but it's going to be really, if we do it the right way and I think we have a good record of gaining efficiencies, it's going to extend to the out years. That's a very important part of the way we're doing business.

CHAIRMAN MESERVE: That really ties to another question that I think Jon's presentation raised. When he got to management challenges, you made a particular point about asking for the Commission to be solicitous of your requests for investments and resources. Is there some area where you think we've fallen short in giving you the assistance you need?

MR. JOHNSON: Let me just use one example. In the area of recruiting and hiring staff, the leadership team met and decided that we wanted to invest some resources in our budget into hiring and recruiting. And the way we displayed it in the budget documents to some people may have looked like it was duplicating the efforts of human resources and it really wasn't. It was our own staff. It was the efforts we were going to have to put into this work. We worked with the Office of HR, but for a number of years, let's say over a 10 year period, our staffing levels were continuing to go down and now with the new reactor licensing efforts, the budgets have been authorized to increase the staff, but it's actually a tremendous change in approach for our staff, just to add all these extra high quality people we want to hire, the amount of interviews we have to conduct, the amount of background checks we have to conduct, the tracking, the assignment of supervisors, mentors and the technical training center is going to have to spend an enormous amount of time and effort training these people too.

So what we did was we took a couple of resources and devoted them to this effort of recruiting and hiring people and then they did I think got dropped off, but I think not just recruiting and hiring, but I think if we want to invest in new efficiencies or new processes to make things better, we want to take a couple of those resources and describe them as initiatives.

MR. KANE: I don't think the Commission should take anything that we're saying as a complaint.

I think what I'm trying to -- well let me try to -- I think we have to do a good job of packaging and explaining this as we come forward and I think that's the major message that we'll be coming forward with these initiatives to gain efficiencies and we'll have to put it in the right kind of context for what it's about and what we expect to achieve and certainly the Commission needs to evaluate that and determine whether we are really doing the right thing.

That's the message.

DR. TRAVERS: I won't spin, I don't think, but I think there are elements to our classic budgetary approach that don't lend themselves all that well to sort of making the argument, sort of argument that Jon made in a timely way so that the Commission would have the benefit of the information that we think ought to sway. Ultimately, you'll decide, but I think we're looking for a means in the current PVPD process of putting before you a product that's a better communication vehicle for this sort of thing.

CHAIRMAN MESERVE: I would urge you to do that. Let me speak for myself and reviewing the budget we see we have human capital. I think all of us share the view that this is one of the greatest and most important challenges we confront as an agency. We see this as an Agency problem and not one that's unique to NRR. Obviously, we heard today from Research talking about problem. We've tried to assure that there would be a comprehensive strategy and if there are unique features with regard to NRR that need to be considered, I think it should be in the context of an overall Agency effort and obviously we try to accommodate the specific needs of any particular group in that as we go forward on that.

One of the other areas that has been flagged and appropriately flagged is one that the Commission has urged you to devote special attention to, has to do with power uprates. The ACRS has advised us to be wary of synergistic effects associated with power uprates and extended burnup and so forth and I know that your studies related to the Appendix K codes, have sort of -- also bear on this.

I wonder if you could say something about the potential impact of the work you're doing on the 50.46 on your power uprates activities.

MR. JOHNSON: Ashok, would you like to address that one?

DIRECTOR THADANI: Let me sort of break down what I would call power uprates in the range of a few percent, 5 percent or so, versus power uprates in the range of 20 percent or so.

First, in terms of the Appendix K models, we're pretty confident that the analyses for small power uprates are not going to lead to any concerns whatsoever. There is an issue there under 50.46 as the Chairman as noted, having to do with the petition that would like the industry would propose modifying that the decayed heat issue which is part of the Appendix K models. As we have indicated in our report to the Commission under 50.46, that there are some parts of the Appendix K model which have some nonconservative elements to them and they need to be worked in an integral fashion.

We've had discussions with the industry and I believe we have a pathway that we can move forward on and we intend to provide Commission with a paper.

For larger uprates, there is the issue, if one were to go to significantly higher burnup levels and as plants age, corrosion rates increase, velocities change. There may be some interdependencies and they may have some implications for safety. Not that we know that there is a problem, but there are some issues that need to be investigated and that's the program that we have initiated in the Office of Research this year to try and take a look at various independent issues and see collectively if they have an implications. We don't know of any specific safety problems. We'll know better once we complete our evaluation.

CHAIRMAN MESERVE: Did I understand you to say, Ashok, that there's going to be a paper that will be coming to

the Commission on this, the connection with the power uprates, Appendix K?

DIRECTOR THADANI: Appendix K, yes. There will be a paper coming up. On the issue of synergistic effects and the work we're doing, I don't know of a plan to send a paper up, but let me get back to you on that issue.

MR. HOLAHAN: Gary Holahan, NRR. I'd just like to add what Mr. Thadani has mentioned. The research effort with respect to synergistic effect is as he described it, sort of exploratory to make sure that we are covering issues appropriately. I didn't want to leave the impression that our current reviews are not very thorough. When we do look at power uprates, we look at the effect on fuel. We look at burnup, we look at thermal hydraulic codes and most importantly for the larger power uprates, the industry has been doing probabilistic risk assessment which is a very powerful synergistic tool and the staff has been reviewing those.

So I think we have a comprehensive program, but we also have sort of a complementary research program to make sure that our efforts are thorough.

CHAIRMAN MESERVE: My final question is to explore another issue that's been important to the Commission which is the efforts we've all been trying to undertake to risk-inform our regulatory system. What are your plans with regard to Option 3 after 50.46?

DIRECTOR THADANI: Chairman, as you recall, we had developed criteria up front as to where do we go after 50.46. Currently, we're risk-informing under Option 2 and there's combustible control 50.44, 50.46, ECCS and 50.61, pressurized thermal shock.

Industry had indicated significant interest but these regulations needed to get priority in terms of moving forward more quickly.

Our next step is to use the criteria that we had identified to see what additional parts of part 50 should be risk-informed and we would be considering that as part of our PBPM process for 2004 budget planning, see what additional regulations should be risk-informed. As part of that, we will be meeting with the industry to make sure we seek their input in this process.

CHAIRMAN MESERVE: So that's a work in progress at the moment?

DIRECTOR THADANI: Yes.

MR. JOHNSON: Chairman, just one additional point. In terms of existing plants, one of the primary efforts right now we see from the industry is the issue on revising technical specifications, as I discussed, and also for advance reactors. As I indicated, we expect a proposal for a complete new structure for our regulations, kind of arranged around the cornerstones we have in terms of the safety function. So I think we're going to expect to see from the industry a whole new proposal for our regulations for advanced reactors.

CHAIRMAN MESERVE: That's the second quarter of this year that you mentioned?

MR. JOHNSON: Yes. And the expectation is that they'll want us to focus on that.

CHAIRMAN MESERVE: I see. Good. Thank you very much.

Commissioner Dicus?

COMMISSIONER DICUS: Thank you. I want to pursue some questions on 50.46, obviously already under discussion. We clearly have the paper before us and as we you well know, the Commission hasn't finalized any action on that paper yet. So I have a two-part question on 50.46. The first part, it's my understanding that perhaps in the works is not a separate paper, which I think you mentioned perhaps, but a supplement to SECY 133  that's going to perhaps address the nonconservatism. That's the first part of the question. The second part of the question which you've partially answered, just clearly some work on 50.46 is on-going. Are there other activities on-going up to the point that you can't go any further until you have Commission feedback?

Anyone?

DIRECTOR THADANI: I think so far we have been able to move forward as we indicated in that paper. We'll continue with our technical evaluations for the two options that we had discussed in the paper.

I must note, though, that there have been some impacts as a result of September 11th activities. I expect an impact of between 2 and 3 months on completing those milestones.

COMMISSIONER DICUS: Okay.

DIRECTOR THADANI: As the Commission has agreed that we could go forward and interact with the stakeholders on some of the issues before the Commission had reached any decisions, so it really has not impacted us in any important way. We have moved forward with these interactions. I briefly touched on one having to do with the decay heat issue. We are engaging the industry on the other options that were discussed in the paper, so we're moving forward. We owe you, I believe, that once we give you a paper that will get into the issues of models and the path, then I think you'll have the total picture for you to vote on the issues.

COMMISSIONER DICUS: Okay. Now I want to go to new reactor licensing. As you mentioned, as we all know, the schedules have changed, they've slipped on the potential for an application for a new reactor and you've also indicated that you have the troops standing at the starting gate ready to pursue. Now when the schedule slips, clearly there's got to be some sort of reallocation of those resources ready to do one thing. How is that going? Are you doing that? Are they still at the starting gate waiting for the application for the early site approvals?

MR. JOHNSON: I asked our staff that same question, if these, some of these activities get postponed and the answer I got was we have more work than we have staff. So I don't think we'll have a problem of having staff assigned to certain things without being fully engaged. So we have a primary project office that will handle the main contacts and the meetings and so forth and then a lot of the technical work will be done by our technical divisions, Jack Strosnider and Gary Holahan's division, so they have the ability to shift work on other projects too.

And the General Atomics project did move up, as I indicated. They moved up a year early.

DIRECTOR THADANI: Commissioner, as Jon noted, when we went through on the basis of the best available information systematically which resources would be needed as we move forward to try and meet the expectations of the industry, we came up short and that's still, that situation remains in spite of the six month delay that Exelon has talked about. We do have to start investing in particularly long-lead items. For these new technologies we would need to make sure we have appropriate evaluation models and the initial schedule that Exelon had proposed was I think very, very tight.

COMMISSIONER DICUS: It was.

DIRECTOR THADANI: So six month delay helps a little bit.

COMMISSIONER DICUS: Okay, thank you. We notice, of course, that in the annual performance plans, there are no performance measures or generally in some of the critical areas including new reactor licensing. Now clearly it might be premature to be able to really develop performance measures at this point, but there's got to be a point in time when they do come in, particularly with early site permits and approvals. So what's your plan for when in the performance plan we might see measures, performance measures?

MR. JOHNSON: Our leadership team is reviewing the budget and the budget process and Sam and I and the other executive team members have been engaged in giving expectations for the future in terms of as we go forward for the budget.

One of the things that we think is important is to be able to be predictable. If we indicate that we can meet a schedule, so I think some of the ideas that we're throwing around in terms of performance measures are to be able to meet our commitments. We don't have any specific, as you indicated, we don't have any specific measures set up for that area --

DR. TRAVERS: I think the attention here is going to be very similar to the attention that still is put on license renewal. So I think in a scheduler sense, our ability to lay out schedules that are ones that are realistic and ones that we think with strong management attention we can meet. We'll provide even the Commission a real time opportunity to assess how well we're doing.

Beyond that, I think we owe it to you to continue to report on just how well it's working, as it's working through the system, whether or not any new issues, unanticipated or otherwise are encountered so that we have a good dialogue and complete -- you have a complete understanding where we stand on these issues. We'll do that.

DIRECTOR THADANI: Commissioner, we are developing a research plan on new reactor designs. This includes the PBMR, GTMHR, the AP1000 and the Iris designs which the industry has come and talked to us about.

The scope of this, of course, will include not only the technical issues, but also the need to make sure we have appropriate regulations or regulatory structure in place. We expect to develop this draft plan in March. We expect to meet with the Advisory Committee in April. Depending on, and as part of this, we'll be interacting with other stakeholders as well. Depending on the feedback we get, we will revise the research plan. We expect to send it to the Commission this coming, this year, that plan. That plan, while it will be a living document, nevertheless, will be a measure for us to see how well we're doing and included in that plan would be an area that the Commission has asked us to move on more aggressively. It's the international cooperation. And we'll be discussing that as well.

MR. KANE: I think just to reinforce. I think the early site permits would be particularly amenable to the kind of controls apparatus that we set up relative to license renewal. I think that's a good area we need to look at.

COMMISSIONER DICUS: Okay, we'll be looking forward to seeing it.

Finally, with respect to -- one final question, at least on new reactor licensing, with respect to it, you've got a lot going on with this. There is research activities, clearly, discuss policy and policy development that must occur. There is the issue of resources and how we deal with that and then there's regulatory infrastructure and all the activities that are related to new reactor licensing. And I guess my question is you've got a lot on the table which we've all, I think, recognized today.

How are you balancing all of this? How is the balance working? Are there any issues with it that you want to make the Commission aware of or is this pretty well under control? Give me a feel for how all of these issues are meshing?

MR. JOHNSON: I think Ashok in Office of Research and NRR are working very well and cooperatively. One example is some of the meetings we hold. We even know Research may have the lead in the pebble bed reactor. Our staff attends, so that we're fully engaged. And the same thing with AP1000. Our leadership teams between both offices, Research and NRR are holding meetings together to make sure that we agree and we're cooperating on user needs, the requests that we ask for research, that we agree on what's requested and when do we need it.

So I think, in general, we're very -- the two offices are working very well together on projects that are related.

I think you're right. We do have a lot. I think the fact that we have created a specific organization to monitor this and manage our work products and the people that we've selected, we've just completed permanent selection in NRR for our staff. We had been working with some interim staff, but we've just gone through -- Jim Lyons has just gone through a lot of interviews and we have permanent staff assigned, so I think you'll see some stability in that project.

COMMISSIONER DICUS: Okay, that's good to hear. If at any point you feel that something is not going right, I'm sure you'll let the Commission know.

Now I want to go inspection assessment program effectiveness and you've discussed your interactions with internal as well as external stakeholders; there seem to be no particular questions with that. But how do you evaluate how those interactions are going and to know where there might need to be a course adjustment?

MR. JOHNSON: Again, we have workshops. We do have feedback from the workshops from the public and our other stakeholders. Certainly, if one of our employees disagrees with our programs, we get feedback from the field, from the Regions. Ellis could probably discuss some of those. So I think we get -- we do get feedback from various --

DR. TRAVERS: And if I could add, we view that sort of feedback as vital to a program that has its origin, really, in a rather broad stakeholder involvement. When we started out to assess this new oversight approach it was a direction that sought out actively input from stakeholders, industry and otherwise and it's vitally important as we progress in this early implementation across the full scope of nuclear power facilities across the country that we continue that, we think, and we have a variety of mechanisms to continue to do that.

COMMISSIONER DICUS: Have course adjustments been made as a result of the feedback?

MR. JOHNSON: Certainly. Yes. We also have -- periodically, we have the Division Directors from the Regions, both the Division of Reactor Projects and the Division of Reactor Safety come in for counterpart meetings, as well in the overall program, we had two independent evaluation panels, one for the initial oversight program and then this past year we had a second panel that also had outside stakeholders. They had representatives from the States, the industry and the general public. So we've had various types of forums to receive feedback.

COMMISSIONER DICUS: Okay, that's good.

MR. MERSCHOFF: I can add a thought, as well, from the Regions. I think the communication is pretty good in the fact that there are differing views that we're all not of one mind is a good sign, that the communication lines are open throughout the spectrum of the organization. Just last week or so Sam had a meeting with the Regional Administrators to solicit thoughts and inputs, so I think the process is working.

COMMISSIONER DICUS: Good. That's what I wanted to hear. That's good.

Now with licensing issues. The ACRS has suggested that for the power uprates that you consider formulating a standard review plan. I know in today's briefing you were somewhat silent on that. Would anyone care to comment on whether or not there is an interest in doing a standard review plan as suggested by ACRS on power uprates?

MR. JOHNSON: We believe that the safety evaluations, like Gary indicated, have been very thorough. We did have a meeting with the ACRS and we learned that their concern after talking to our staff, they agreed that our reviews were very thorough and we hadn't missed anything. There were a couple of comments that they made in terms of the SER that they couldn't see some of the detail in the SER, so in some cases one of their concerns was one of documentation, but

I think after we explained the depth of our reviews, they are satisfied.

I think it would make the reviews maybe a little easier and it's a trade off. I've talked to Brian about this and it's a trade off between taking the resources now away from the reviews themselves to generate a new standard review plan.

DR. TRAVERS: I think that's exactly what it is. It's an era where resources -- it seems like it's always the case, when resources are finite and perhaps things of this sort fall relatively low when we're faced with actually conducting the reviews and other important activities and I think that's what's happened here. We would certainly love to have the benefit of the time and resources necessary to put on an effort to develop the SRP.

Nevertheless, we think we've been thorough in carrying out those sorts of reviews and we'll --

COMMISSIONER DICUS: Okay, so the short answer is no, we're not going to do it, but we have a pretty good reason why not to.

All right, and final question has to do with the challenges that were suggested that exist and we noted that Research has quite a list of challenges and Research clearly is part of this reactor arena as it is parts of the other arenas as well.

Where there is a part of the arena that has listed significant challenges, that part of the arena is dealing with, how does that impact the entire arena and how you move forward and how you work with what you have to accomplish with the challenges that part of the arena has? Anyone?

MR. JOHNSON: Bill, do you want to?

MR. KANE: Sure.

COMMISSIONER DICUS: Or does it impact?

MR. KANE: I'm not sure I fully understand the question, but I think we --

COMMISSIONER DICUS: Well, you have a part that's very challenged or at least they've listed quite a few challenges. Does that impact? How does that affect your going forward?

MR. KANE: Well, we have to look at what they're confronted with. We have to look at how that affects our overall programs or ability to meet our goals and if there's a need to adjust resources or schedules, we have to work that --

DR. TRAVERS: I think a good example of that is you take gas technology, that's a good issue of how in the reactor safety arena new licensing, there's going to have to be good understanding and integration and understanding between the two offices, understanding and being in a position to carry out the technical review for an application of gas technology is going to require an identification early on and this is just the sort of process that's going on. What are the issues that are going to be important that today perhaps we either think we may need research for or we think we do need research for, to put ourselves in a position. So I think the integration starting between the offices and what the reactor safety arena direct are critical to being able to say to you that we've got a plan in place to be ready on the schedule that we understand we're going to be seeing these applications to actually be able to carry them out effectively. So we've got to understand that relationship fundamentally and carry it out in a way that's relatively seamless.

DIRECTOR THADANI: Just to comment, as you know, Commissioner, we do go through the -- the PRC goes through a review process, challenges that each of the offices has. Some tough decisions have to be made constrained by the availability of resources. Within Research, we go through fairly careful prioritization process and assign value to each activity that we embark upon. And then depending on the constraints, resource constraints, we do use that prioritization process to either defer work or just say we just can't address some of those issues. But it is based on consideration of the four goals that Bill Kane talked about and value judgments and these are done in I think in reasonably systematic way, although the ACRS thinks that we can improve upon that process and it is our goal to improve on that process. From the Research side, this is what I would call some sort of full mechanism for the decisions that we make in the Office of Research.

And some of the criticisms to share with you related to prioritization process is perhaps not appropriately dealing with different arenas, that is the waste arena was perhaps not being given as much relative importance in the scheme as it should have. So we're making some changes this year to the prioritization process to be responsive to those issues, but in the end your constant probing is important, I think, because one has to make a lot of decisions, sometimes long term efforts get a little less attention up front than one might want. So there are times when I can speak for myself. I wish we had resources to do certain things, but some practical considerations, sometimes --

MR. KANE: But certainly just to make sure you understand, we don't -- we don't look at it as stovepipes. We look at it on an arena basis if we have to make some adjustments across the arena, again, using the -- what we think is a discipline process of PBPM, then we'll do that and make the adjustments.

COMMISSIONER DICUS: Thank you. Thank you, Mr. Chairman.

CHAIRMAN MESERVE: Mr. Diaz.

COMMISSIONER DIAZ: Thank you, Mr. Chairman, good morning, gentlemen. I just realized that I have been so quiet on risk-informed regulations you might be thinking that I have forgotten about it, but I have not.

First, I wanted to tell you how gratified I am that some changes in the way we call this program have taken place. I really was very concerned last year on the way that the risk-informed program was called RIP and now we call it RIRIP, from Rest in Peace to Risk-Informed and Rest in Peace. And that certainly is progress in the right direction.

There are a series of things, of course, that have taken place and I think they're very important. We have addressed some of the -- or maybe even some of the cultural issues to risk-inform or not to risk-inform within the Commission. I think the staff has been facing up to that fact and the things that have taken place, obviously, have been probably the most difficult because they do involve the issue of how do we do special treatment requirements, do we do them or don't we do them and so those are basic and fundamental issues.

I still am concerned with the fact that there is a gap between what I call process and what I call regulation and that keeps being there. We have, of course, risk-informed the reactor oversight program. We have Reg 1.174. We inform some of the licensing processes and all of these structures require some sophisticated analyses and they are actually being implemented, the rubber is meeting the road and then going on. At the same time we seem to be lagging as far as from my viewpoint on how all of these processes are supported by a risk-informed regulation process. And so the question that I have is are we really having a plan that will make some convergence in a reasonable period of time between all of these processes that we're using and the regulations that support them and if so, when is this plan going to be in effect, what is it, how do we address it? A major issue, we call this a

risk-informed agency. Everybody from anybody in Congress to GAO, say we are risk-informed, and yes, we have risk-informed lot of processes, but we're lagging in risk-informed in the regulations. How do they converge? How do we make a plan that says hey, this is supported by a regulation that says you do this? Simple question?

Anybody?

MR. JOHNSON: I think Ashok might want to address the overall approach, but I think what we are working on are those activities where we believe while still can maintain safety will reduce unnecessary regulatory burden in terms of Option 2 and [50.44](#).

We have other rules that we have addressed, performance-based or risk-informed. We've worked on a rule for part 20 in terms of how to evaluate the risk of exposure to small particles.

COMMISSIONER DIAZ: That's not the question. That's not the answer to my question. Let me rephrase the question. The question is we have a lot of processes that are on-going. They're called risk-informed. They require a certain amount of regulatory infrastructure. Those are going on. Okay? And then over here we have regulations that are trying to catch up to those processes. I think we did the right thing in saying we cannot wait to have all of these things done and we need to go ahead and implement a series of processes that would allow us to be at least in issues that come every day to be

risk-informed, but eventually we need to risk-inform the structure and they need to converge. And what I'm saying is is there a plan for convergence?

DIRECTOR THADANI: Let me see if I can at least partially respond to what you're suggesting, Commissioner. That was, as you know, we've been working in this area for many years. We started out by using these methods to discipline ourselves when it came to imposing any backfits on the industry and the NRC was obligated to use risk-information and costs and benefits in making its decisions and the Commission's policy and safety goals was the guidance that played an important part in that.

Like any new technologies take a little bit of time and that's basically what we have been doing over the years, increasing our involvement and application of this technology and you have correctly noted, revised oversight program and you've seen Reg. Guide 1174 in terms of specific license amendments and so on.

Do we have a good hierarchical structure that would start at the top from fundamental requirements, the Agency, rules, regulations, general design criteria which are risk-informed and so on? The answer the no. We've done that, as you know, issue at a time, depending on what the greatest interest and potential return was.

So while there isn't a grand scheme, I would say there is good communication within individual activities and the processes that we go through to make sure that we are, in fact, being consistent, consistent in terms of risk implications. You've seen the criterion in Reg. Guide 1174, the consistent with the backfit rule considerations, so internal consistency I believe is there.

We were hoping and we're still hoping that as there's interest in new designs, that we will, in fact, pursue this idea of first perhaps a set of what I would call high level principles, which have embedded in them the concept of risk

and acceptance of certain level of risk. And then if the Commission would approve that high level set of principles, then one would go down to start apply in a systematic way the subsidiary elements of what the work that we do and the industry would be doing.

Our thinking right now certainly in that area is with the new designs, was not in the sense of operating reactors because we have gone part of the way. There, our intention was to follow the criteria we laid out under Option 3 to move forward and select the next set of pieces. So there is, I don't believe there is this grand hierarchical arrangement --

DR. TRAVERS: Except to the extent that that is our plan. In fact, it's one that thus far at least, the Commission has supported that has recognized this cherry picking, Option 2, Option 3, as a practical approach of utilizing risk within the existing regulatory framework to the maximum -- what I call practical extent and I think we've done that rather deliberately. It's been a question of resource. It's been a question of communicating with our stakeholders as to what sort of direction they would see as most beneficial for the Agency. So I think I would characterize it as an approach that we've entered in rather deliberately to make a practical level use of risk expanding it as we go, based on the experience that we've had in moving forward at the pace we've been one.

Could we go faster? We certainly could, but I think the pace that we've been on has been one that has been supportive based on the experience that we've gotten in tech specs, in-service inspection and service testing, the 1174 guidance that we've been using, the 50.46, Option 2. So is it debatable the pace that the Agency has been on. I'd say it is, but I wouldn't say it's one that hasn't recognized an overall approach. I think we have.

MR. KANE: And I think the input from our stakeholders has been to expend our energies in the area of the new regulatory framework.

COMMISSIONER DIAZ: I understand that there are cultural issues, both in the industry and the Agency in how fast we go and that's an issue that needs to be reckoned with. I really think that some of these issues, and it's something that you should answer is should we really not look at a very sophisticated overall hierarchical plan as a first step, but should we look at where is it that all of this processes actually converge and are supported by the regulations. And I think that that is not something so complex that cannot be addressed. And I think it will give the Commission the opportunity to say, yes, we want to go in this arena.

I mean it has been three year, almost four years in a little while, that we visited these areas from the policy making issue. And it might be that some time in the near future it will be important to see what is a plan for making convergence rather than just this very important basis. You know Shuch said there was consistency. Well, that might be okay. Is there synergism between the ROPs and what we're doing?

We're looking at actually how we're implementing, you know, safety requirements as far as the inspection process, how do they hierarchically actually go down and how do those reflect into the regulatory process? And that is an important fact in supporting this process. I think I have over extended my welcome on that so I'll stop.

Let me just, following on the same vein though, now that everybody agrees that there is some potential benefits from new approaches to new construction, are we doing anything regarding inspection programs for new construction that actually will be able to meet a new state of the art of regulatory infrastructure and licensing applications?

DR. TRAVERS: Yes we are. Jon.

MR. JOHNSON: Yes. Commissioner, we have that planned. It's one of our line items, separately budgeted.

And we have plans to go back and take a look at the lessons we've learned from the last sites that have undergone construction, some of the quality issues. Also it's related to the ITAC program and we also need to look at how we manage this and staff it.

We, historically, had one or two resident inspectors on a site. And if we have a construction site that we're going to be interfacing with, sign as you go type concepts, then we need to look at the availability of having staff on site around the clock so that we don't miss any important tests.

So we do have this as a specific line item budgeted. We have people assigned to start working on this. And we'll be engaging with the industry on this.

COMMISSIONER DIAZ: Merrifield reminds me that there's also the issue of restarts like TVA and how we're going to proceed --

MR. JOHNSON: That's one significant issue that we do not have currently budgeted.

For TVA we expect to hear from them the first of April, their efforts to relook at their facilities. We have estimated how much money and FTE that it took to recover some of the previous sites and we're prepared with that estimate although we have not budgeted for that yet. We do have expertise in the agency that have gone through those programs.

COMMISSIONER DIAZ: Which brings me back to the original question of, you know, new construction. It's this processes, are they going to be risk informed to a level that will be consistent with this millennium? What are we doing? Are we really putting forward thinking into how we're going to inspect if there is an application for license and construction.

MR. KANE: Well, I think the question of how we do inspections, again going back to what Jon said, I think we've taken a major look at that some time ago. The question is really just broader than the reactor safety arena. There is other construction associated with NMSS activity. But the basic premise of how we would go about conducting that program would be fundamentally different from the way we did it before. We would be looking at, as Jon said, looking at steps at which we could give approval is probably the wrong choice.

But the fact that we've completed our inspection, as you move up the -- as more and more construction is completed, look at interim approvals, if you wish. That's the fundamental approach, the way we do this. This has been looked at and worked in connection with other potential construction applications.

As far as new designs, new issues, I think we would have to, we would have to take a look at whether there's anything that we see at an early stage that would fundamentally affect our inspection program or some unique aspect of what was there, what was in the design, compare that to our standard inspection program, if you will, and see if we have to make any adjustments which we would then have to identify, schedule, and make whatever changes are necessary.

DR. TRAVERS: There's an element to new construction, though, that I don't want to lose sight of. And that is that the part 52 process of providing for ITAAC in advance forces you to do some of this thinking very early on. And certainly we've seen that in connection with the approvals of design certifications that the Commission has already seen for ABWR and System 80 plus and AP 600.

So relatively early we are forced and we have been spending a lot of time, actually, sort of laying out those areas that we would in fact have to -- in fact principally, the only ones that we would have to carry out inspections of and sign off on during the process of constructing a facility. So this is a good thing, I believe, it forces early consideration of just the sort of thing that I think you're driving at.

MR. JOHNSON: If I can add a thought on that people's side, the agency, in general, and the regions, in particular, are doing skill inventories to assure we understand what skills that will be needed for a construction inspection program we still have, which ones we don't and then we can tune the recruiting effort to fill those gaps.

COMMISSIONER DIAZ: I think all my fellow Commissioners that addressed the issue of power uprates which obviously points out the fact that the Commission considers this to be a priority.

So let me cut down to the chase. When is the power uprate program have the same effectiveness and efficiencies of the license renewal program?

MR. JOHNSON: Well, we have not achieved, let's put it this way, the 30% efficiency that we planned to assume on license renewal. We have not achieved that yet. But as I indicated, we have issued a regulatory issue summary to the industry to provide guidance on the measurement uncertainty uprates. And we intend to conduct a workshop to get input from industry on the other power uprates.

One of the things we see though, in some of the applications, is an attempt by the industry to add additional amendments onto the request for power uprates. And so sometimes when we quote statistics we'll see some that take a little bit longer. And it's because they are not just confined their amendment request to a power uprate. So, I think, that's an area we don't see in license renewal of course but that's hard to compare, the exact efficiencies and effectiveness. But we're working on that process and we're making improvements.

MR. KANE: I don't think we've answered your question of when. We'll acknowledge that we haven't done that. But I think that is our goal, clearly, to gain the same kinds of efficiencies. And we're going to work very hard at that. I think we would have to say that we can't give you that date right now.

MR. JOHNSON: John has a comment.

MR. ZWOLINSKI: John Zwolinski. If I can just add a little bit to the discussion.

We are reviewing the GE topical report on power uprate. And once that review is completed, licensees will be able to reference that topical report. The amount of plant specific technical review will decrease significantly. And I don't want to estimate today that it's 20, 30, or 40 percent, but it will dramatically reduce the amount of staff time. So there's an efficiency in that particular program that I think is on the horizon in the next year.

The uncertainty flow measurement risk that is underway, essentially in the process of being issued, provides essentially a standard format for industry to use. Those reviews were costing us on the order of 1,000 hours. We estimate a reduction of at least 50% improvement, once that's adopted by the industry.

Should we get into a review of a PWR as we did with Arkansas, and it's before ACRS, we do not have right now a template

we could speak to in the future. As Commissioner Merrifield questioned earlier, is Westinghouse considering that? Yes they are. In the context of will it provide the staff and industry a more efficient way to provide amendment requests for a PWR. And I'm sure they're being driven by this goal of less hours for staff review and a more focused application by the licensees. So I think in the various arenas there are initiatives underway that we would perceive benefit to be attained. The metrics that we use for the power uprate are found in our licensing action inventory goals, specifically. We do not have a separate metric for power uprates.

COMMISSIONER MERRIFIELD: Commissioner Diaz, obviously you've led the way on this with the comment you had some time back. I appreciate your focusing on it. As you were asking the question it struck me, I think one of the reasons for efficiency in the license renewal program is that our staff has a good understanding of the timing of when we are going to receive a lot of these.

And I wonder, it's not necessary for them to comment, but I wonder if there's some benefit for us as an agency to engage more appropriately with the licensees as a whole through NEI to get a better idea what's out there for power uprates, because I don't think there's necessarily as great a sensitivity among individual licensees as to how many of these things we have versus a lot of understanding about how many license renewals we have.

MR. KANE: I think we certainly try to get that kind of a forecast, but as part of our budgeting process.

I think the aspect that Jon mentioned is important. When you get a license renewal application, you know kind of what you're getting. If you get a power uprate application, you may also have a few other requests associated with it. So -- and we're obligated to take those on and deal with them.

COMMISSIONER DIAZ: I understand. But again I always think there is a policy issue of implementation. And all I'm saying is that the commission really, in the SRM, specifically asked the staff what improvements, changes need to be made to make the process better. And I'm just trying to find out what have you done to make the process better and is it coming in a timely matter. And so if that is not being determined, I think you owe the commission an explanation.

And let me go to the very last question which, obviously, everybody talks about it and the issue of public communications. And I think many times we are concerned about that the communication is out there, that we get involved, and all of those things are good. I think sometimes we need to really stop and think about the quality of communications and what we tell people. And I would like to have Mr. Merschhoff to address this issue. At the regions, is there a very clear effort and a very clear understanding of the staff of the importance to communicate properly with quality to our stakeholders.

Let me give you one example and you might be able to address it. For many years, when there is an issue, we used to go to say, there's no serious health consequences. And people out there say, what does that mean? You know, are they less serious? What is less serious? Or sometimes we say there were no significant health consequences from this issue.

And very seldom do we say that there are insignificant health consequences or that they are essentially none. It is in this area where I believe the regions have a particular responsibility to address it with clarity and with quality.

Your comments please?

MR. MERSCHOFF: I agree. And we'll never be finished learning how to communicate better and more effectively with the public. Every meeting we have is another lesson in doing that better. Nonetheless the new revised oversight process has given us a framework to communicate within. It's better than we had before.

We know every year we're going to have a public meeting at each site. Those meetings are chaired at the appropriate level depending on the risk significance and performance of the plant. We've instituted training within the region, too, the branch chiefs throughout, in conducting public meetings to enhance our ability to communicate. So all told, the first round of meetings were okay.

But we learned from that first round. We're tuning the agenda. We're training the people that chair those meetings. We get good help from Chip Cameron and others when we really have high-risk meetings to help mediate those meetings. And I think we're better at conducting those meetings than we were one or two years ago but we've got a long way to go.

COMMISSIONER DIAZ: Do you believe that enough effort and resources and attention is focused on this area, a very key area of our role in this nation.

MR. MERSCHOFF: I believe it is. The new oversight process, moving the chair of those meetings down to the branch chiefs in the region is a good way to do that. In the past division directors and regional administrators conducted the meetings. Now that it's at the branch chief level we are devoting more time, more people and more training to do those. So we're enhancing our staff and we're enhancing our ability to answer questions and communicate with the public. So I believe it is.

COMMISSIONER DIAZ: Other comments?

MR. KANE: Well, I think the key to this area, as you've talked to us before about these issues, I think the key to this area is making sure that we do a thorough job up front, anticipating what the questions are going to be before any major meeting that we go to.

I think the agency is -- and we continue to improve over the years. We've done a much better job of anticipating questions, having the answers thought out in advance and trying to deal specifically with the issues that you raise. Is there any language that we're using that's just going to create further confusion.

So that's an activity that we work between the regions and headquarters, to make sure we do the best job that we can.

I would support Alice's comment that if you ever get there, in terms of communications, maybe there's no there there. But we have to continue to do a better job in this area going forward. And that's a comment that I try today address on that last slide.

DR. TRAVERS: Very briefly, increasing public confidence, one of our four top goals in the agency, sort of focuses our continued attention to this. And whether or not we're currently, adequately, in terms of resources and effort I don't know. But I think we need to continue to re-examine that question moving forward.

We have been doing a number of things that have, I think, acted to enhance our position in this area, communication plans, dialoguing with the Commission on a strategy, we had a use for holding public meetings, the Internet, how should we construct the sort of principle means that we interact with our stakeholders external of the agency. It's a never ending task. And I suspect it will be a continued level of policy engagement from the commission from just the appropriate level of resources that we ought to be applying in this issue.

COMMISSIONER DIAZ: I hope so. Thank you Mr. Chairman.

CHAIRMAN MESERVE: Commissioner McGaffigan.

COMMISSIONER MCGAFFIGAN: I'm going to pick up on a comment that was made by the chairman and others, I believe. I do think you all face some very significant challenges. I think you've done an awful lot in recent years. And what we tend to do is say thank you very much and here's more. And we expect that to be done well. And I think that's the nature of the business.

I do want to say that, I think, the Congress has been very generous with us in financial resources. We got our budget last year plus \$10 million that reflected additional information that we had in the advance reactor area that we didn't have at the time we put our budget together.

And then with regard to September 11th the Congress has given us an additional \$36 million outside the fee base, in the general fund to address the myriad challenges that we face there.

I think you're all right to make the point that we have lots of financial resources. But the human capital that we're going to have to get in place to do everything is probably our biggest challenge. It's an entirely different situation from what we had previously where you were slowly being widdled away year by year.

Now having done a good job in several areas, and with the expectation we are going to do a good in other areas, we have lots of resources and NRR alone has to hire 90 new people for new activities, plus to replace the people we're losing. It's an enormous challenge. And I think we just have to stay on top of it. But I appreciate it.

I'm going to just try to go through a series of questions. Let me go back to the risk-informed tech spec initiative. You mention that one had been approved, the missed surveillance one. And you mentioned that another is soon to be approved. How does this work in licensee space?

We've gone through, most people have improved standard tech specs at the moment. We had a tidal wave of them in the late 90's. We're still processing them. The staff processes them very rapidly at the moment and well. But if I'm a licensee who has improved standard tech specs in place, do I have to hit you guys with a license amendment one by one, as each of these is approved. So is it 8 times 103 license amendments, which is 824, that I have to expect if all of these are ultimately approved? Or is there some more efficient way to do it?

MR. JOHNSON: Well, right now we handle them like a topical report. And the one that we have approved we conducted our own review and safety assessment on that and once our staff did a comprehensive review and decided that it was acceptable we published a Federal Register notice to inform our stakeholders that this is available. But yes, you're correct. They do have to come in for a separate license amendment.

COMMISSIONER MCGAFFIGAN: You might think about it. Maybe they will find ways to make it efficient by adding it to something they would have come in on anyways. But it strikes me as a way, it's a good thing we're doing. But it does lead to a lot of churning after the in fact. And I'm not quite sure how to reduce it at all. It's just the nature of our licensing process.

I wanted to turn to the communication, the webpage and really, with regard to the revised oversight process. We haven't had the performance indicators up for a while or a inspection findings. Hopefully they will be up soon. Have we been keeping up? I mean, even on our internal webpage available only to the commission, I have not seen any update of the last quarter's PI's. And since September 11th have we been continuing to enter in some webpages that I just don't see, the inspection findings and the performance indicators, so that when this pops back up, it will be up-to-date? And will it pop up soon?

MR. JOHNSON: I think we just put it up. I have not looked myself in the external web. But it should be up. It should be the performance indicators and inspection findings.

COMMISSIONER McGAFFIGAN: And they're up to date?

MR. JOHNSON: Should be up to date.

COMMISSIONER McGAFFIGAN: Okay. That's a good answer. I'll go back to my office and look. That's a good answer.

One other point I'll make, with regard to the point that Mr. Johnson made, I hope that the guidance the commission issued last Friday which will help you save resources with regard to all of these reviews that were being done for security matters --

MR. JOHNSON: I think it will.

COMMISSIONER McGAFFIGAN: Another good answer. I'm going to get right through this.

One issue I'm going to mention, I mentioned it last year. There's an activity in NRR. It may not be in this arena. It may be in the waste arena. I'm not sure which arena it's in. But it got mentioned neither place last year. And you are working on this update of the decommissioning, reactor decommissioning environmental impact statement. And I think it has an awful lot of stakeholder interest. And it's dealing with a bunch of important issues.

I believe you've put it out recently and you're about to launch into stakeholder meetings around the country, is my recollection of where we stand. I just think among all the activities, all the challenges you face, I think that is an important one and one to, you know, I guess you haven't done the waste arena briefing yet so maybe it's a hint to add a view graph or something. But there's nothing much to talk about at the moment except that there are some important issues there. There is a lot of interest. And it could potentially be a very important document when we're finished with it.

DR. TRAVERS: I think we did conduct all of those stakeholder meetings across the country as you've indicated, Commissioner.

COMMISSIONER McGAFFIGAN: They've already been conducted?

DR. TRAVERS: Yes.

COMMISSIONER McGAFFIGAN: So we're now processing the comments. The comment period has ended on the draft?

DR. TRAVERS: Yes.

COMMISSIONER McGAFFIGAN: Commissioner Diaz, mentioned the good communication. I'm going to mention something that I saw this morning just as I was coming down here. I think it's an example, luckily non-American, of not particularly good public communication.

According to an article carried by Tass, Russia ranked second in terms of nuclear power plant safety according to the classification of the International Atomic Energy Agency. This quote, it comes from Alexander Agapov, who is head of the MINATOM's department of safety and emergency situations.

Does anybody in this room have a clue -- by the way, Japan according to him ranks first with Russia second.

I didn't realize IAEA went around evaluating countries' nuclear reactor programs and placing them in categories.

Does anybody in this room have a clue what this Russian is talking about? Well, let that be noted.

He also, in another element of wonderful communication that we just absolutely wouldn't get away with in this country, according to Agapov, "Russia's radiation safety and security requirements are one of the most stringent in the world. Years of transportation, storage, and processing of irradiated nuclear fuel show that such technologies are quote, absolutely harmless for the health of the Russian people."

I would hate to see what would happen to us if we used words like absolutely harmless in this country. But we're not.

50.46. My sense is that you all have done very, very well. The reason I'm doing this in bullet form is that the one disadvantage of going last is that, although I'm only eight minutes in, the patience of my colleagues may grow short.

50.46, you all have not made much progress. I think the reason the commission hasn't been anxious to vote on that paper is that I think we sense that there's a total lack of industry enthusiasm with regard to the staff position, with regard to 50.46.

And the predicate for moving forward on many over these other area, on 5069 or 50.44 is that there is a good synergy between what we want to do and what the industry sees as an appropriate path forward. Are we at the point where we need to think about just saying, 50.46, put on the back burner, there are better things to worry about and just go on to the next item where we look for synergy?

Because there's no sense expending a lot of resources if we're going to get precisely zero licensing amendments to implement it.

DIRECTOR THADANI: Commissioner, I think that there's significant interest on the part of the industry that we move forward. There are some differences of views in some selected area.

The last steering committee meeting we had with the industry's steering group, about six, seven weeks ago, there was considerable interest on the part of the senior management from certain utilities that we do go forward with 50.46.

COMMISSIONER McGAFFIGAN: With the staff's policy position?

DIRECTOR THADANI: Yes. And in fact the meeting that was held on the issue of decay heat just last month was a very constructive meeting between the staff and the industry.

I think an area where there's some disagreement on the part of the industry with us is that they would like for us to move much faster on the redefinition of the size break that should be considered within the design basis.

COMMISSIONER McGAFFIGAN: Your recollection under the 50.46 paper you were going to get to that in about half a decade.

DIRECTOR THADANI: We said three year effort.

But the other two options the industry is interested in moving forward on.

COMMISSIONER McGAFFIGAN: Well, I think, to be honest at this point, Commissioner Dicus asked the question over whether we're going to get upgraded. 50.46, the paper is in some sense out of date. And we need some sort over mechanism for conveying to us where you think you are in the moment in light of these months of discussions that have occurred.

I think we did a good thing when we told you all back last year sometime to go forth and have discussions with folks on the pre-proposed rules without necessarily having total Commission buy-in in order to advance the discussion.

But I think we need to understand where you are and also to get some sense from the industry as to whether they agree with where you think you are. I get a sense we've expended a lot of resources. And based on what I read in the trade press, I don't see a lot of convergence occurring.

DIRECTOR THADANI: Clearly, Commissioner, you're correct. And that's what I meant to say earlier, if I didn't, that we do owe you a paper that reflects on the discussions that have gone on over the last six months, roughly. And that would update the paper that is in front of you.

COMMISSIONER McGAFFIGAN: The last question that I'll ask, I think, is when we were dealing with 50.44 we also had this generic safety issue. I believe it's 193.

DIRECTOR THADANI: 189.

COMMISSIONER McGAFFIGAN: 189, I forget the number. It deals with ice condenser and BWR Mark IV containments and whether there's a need, in the loss of off site power event, for some additional regulatory requirements. How soon do you see that GSI 189 resolution moving forward?

DIRECTOR THADANI: We expect to finish the evaluation this summer and go to the advisory committee this summer.

COMMISSIONER McGAFFIGAN: Is that something you're discussing, your potential resolution of that with the industry. My sense is that what you're going to come up with in the way of modest additional requirements may be quite acceptable and there really could be a very constructive path forward there. But I may be wrong.

Have you previewed what you're likely to do in that area with the industry and gotten any sort of sense of convergence?

DIRECTOR THADANI: That is really part of what the process we would go through. Once we finish our initial technical assessment -- which I think we're fairly close to that, we would begin interactions with various stakeholders and then go to the advisory committee with our recommendation on resolution of the issue. And we hope to do that this summer.

COMMISSIONER McGAFFIGAN: Thank you. Thank you Mr. Chairman.

CHAIRMAN MESERVE: I would like to express appreciation to the staff for a very informative briefing, helpful response to our questions. It's clear that we have a huge number of initiatives before us and a lot of work to do. I very much appreciate insights you provided us this morning. With that, we're adjourned.

(End of proceedings.)