

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

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BRIEFING ON STATUS OF OFFICE OF NUCLEAR REACTOR REGULATION (NRR)  
PROGRAMS, PERFORMANCE, AND PLANS

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PUBLIC MEETING

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Nuclear Regulatory Commission

One White Flint North

Rockville, Maryland

Monday

February 10, 2003

The Commission met in open session, pursuant to notice, Richard A. Meserve, Chairman of the Commission, presiding.

COMMISSIONERS PRESENT:

GRETA J. DICUS, Member of the Commission

NILS J. DIAZ, Member of the Commission

EDWARD McGAFFIGAN, JR., Member of the Commission

JEFFREY MERRIFIELD, Member of the Commission

STAFF AND PRESENTERS SEATED AT THE COMMISSION TABLE

SAMUEL COLLINS, Director, NRR

JAMES DYER, Regional Administrator, Region III

JOHN ZWOLINSKI, NRR

MICHAEL CASE, NRR

WILLIAM KANE, DEDO

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

CHAIRMAN RICHARD MESERVE: Good morning.

On behalf of the Commission, I would like to welcome you to today's briefing on the status of the performance and plans of the Office of Nuclear Reactor Regulation.

This is, as of all you in the room know, one of the series of annual meetings we have on the status of work in the NRC's major offices. We will hear from a variety of NRR officials, I'm sure, about their accomplishments, future plans, and challenges.

This has been a particularly challenging year for NRR. We have the Davis-Besse reactor vessel head, which has triggered a wide ranging examination of how we assess nuclear performance and safety. We have had, NRR has also had to continue to deal with the aftermath of the attacks of September 11th, working with the Office of Nuclear Security and Incident Response.

We see as well there is the continuing work on license renewal and power uprates which are highly visible and very important. And we need to have the preparatory work for the receipt of three early site permits and continue with pre-applications and certification reviews for advance reactors.

And all of this is on top of all the normal work which this is a very important part of which the agency has to perform. So you have both challenges that that you have confronted this year and more looming ahead of you. So we very much look forward to this morning's briefing.

WILLIAM KANE: Good morning, Mr. Chairman and Commissioners. As you noted, today we are here to brief the Commission on a variety of NRR programs and issues. To participate in the briefing, we have several key people at the table here from NRR, including Sam Collins, the director; John Zwolinski, the director of division of licensing project management; Michael Case, director of program management, policy development planning staff; and also with us today is James Dyer, the Regional Administrator from Region III.

I believe that NRR performed well during this past year, which included the many difficult challenges and issues. And I think in your remarks you have touched on most, if not all, of those challenges.

I would say that while NRR deserves credit for what we believe is a successful year, it's important to recognize that its success was a direct result of much cooperative hard work and support from the other NRC offices and, of course, all of the regions.

With that introduction, I would like to turn the meeting over to Sam Collins.

SAMUEL COLLINS: Thank you, Bill.

Good morning, Chairman and Commissioners. Thank you for the opportunity to discuss our programs today, our accomplishments as well as our challenges. Bill has introduced us. Let me add that at the table within the ring representatives of the executive team, the leadership team, and the operating level within the organization.

I would particularly like to acknowledge and congratulate John Zwolinski on the recently announced Presidential Distinguished Executive rank award. He clearly represents the leadership, the values and the dedication of the Office of NRR.

We also have representatives of many of our crosscutting program, including Ashok Thadani from research in the area of technical support and user needs in support of the NRR programs. Margaret Federline is here to represent NMSS, particularly in the area of decommissioning which is one of crosscutting product lines. And Mike is here for NSIR. We have a lot of business product lines that crosscut with NSIR, including operational security interfaces, power reactor programs support for security initiatives, and test and research reactor coordination.

This meeting is scheduled for 90 minutes. My definition of success is to use about 40 minutes of that with an overview in the next seven slides and briefly describe the work, the drivers, and the status, including those areas of policy representing the appropriate role for the Commission.

Slide two is an overview of the topics themselves. We intend to talk about fiscal year '02 as

well as the beginning and the plans for fiscal year '03, and in some cases, the cascading requirements and resources necessary to support and plan for '04.

The nuclear reactor safety area encompasses all NRC efforts for civilian nuclear power plants. As you know it's 104 units, one of which is in recovery, one is in extended shut down. They are located in 31 states. We certainly have a number of stakeholders who are involved in these units, both at a state level and also at a participatory level here for non-governmental issues.

We have 36 tests and research reactors that are operated in a manner to ensure that they adequately protect the health and safety of the public and the environment.

How do we measure our work? Well, we measure that by looking at strategic goals which represent the mission of the agency and reflect the broad overall outcomes to be achieved. The performance goals, which we will talk about a little bit today, are key contributors to achieving those strategic goals. And clearly safety is the paramount performance goal.

And we have vectors on the others, which include increasing public confidence, increasing efficiency and effectiveness and reducing unnecessary burden on our stakeholders.

The performance measures, which we will also talk about today, indicate how effectively we are achieving these goals and establish the basis for performance management.

The briefing topics here on slide two are those areas that are selected for discussion amongst the many programs that we are responsible for.

Slide three, getting into the substance of the presentation. I want to talk about program overviews here and reactor oversight. This area is also acknowledged as the Inspector General challenge area number two. We are going to talk about reactor licensing, license renewal, and new area reactor licensing, which is challenge area number seven for the Inspector General.

We are going to talk little bit about process improvements, including regulatory frameworks and those influences on the programs which drive not only the product line but the performance goals in these areas.

In the first area of reactor oversight and as an overview, the fiscal year '03 budget for NRR includes 607 full-time equivalents and \$19 million in program support. We presently have 595 individuals on board.

In the reactor oversight process, we have met our objectives of providing for the baseline inspection program to be complete. That includes responding to many reactor challenges which actually were quite an ordeal for us to complete the baseline inspection programs. And Jim can talk a little bit about that in response to questions, and I will get into some broad areas.

We are meeting the objectives to provide a more objective, scrutable and risk-informed process. It's important to note, however, that the reactor oversight process is designed to be iterative. Every year we expect there to be changes and shifts in the program, as well as identified challenges for the program to continue to be successful.

Three areas I would like to talk about as identified challenges include the OIG audit of the significance determination process and the subsequent review that was conducted and lead by Vic McCree of the significance determination process review group, as well as the effort lead by Art Howell on the Davis-Besse lessons learned task force and the subsequent areas for improvement that the Commission is well aware of and we are currently assessing for schedules, impacts and action plans.

It's also important to note that we have completed the third cycle in the reactor oversight process and are going into the fourth cycle. As a result of that we are accumulating a number of baseline inputs as far as information -- how long does it take to do an inspection, how many resources does it take to do an inspection, and what are we finding as a result of those inspections?

And those are being fed back into the reactor oversight process to provide for efficiencies. And I will talk a little bit about that when I talk about the inspection budget.

We have a task force that are in place and ongoing for revising and reviewing the oversight process. And as I mentioned, we did have significant challenges. Those challenges were caused by staffing issues primarily in turnover in inspector slots and the time it takes to replace those individuals. We will talk a

little bit about that and Jim has some information in that area.

Also inspection resources were diverted to higher priority reviews, including Davis-Besse, Indian Point, increased attention to safeguard issues, and serious resource constraints exist as a result of those areas. Technically, we have been following up on steam generator replacements and reactor vessel head replacements.

Key activities in the reactor oversight process that continue, of course, are the end of cycle meetings for the third cycle of the ROP and the summary meeting, which is to be conducted in mid February, and subsequent to that, of course, we have the agency action review meeting which is scheduled for the last part of April. The regions complete the annual public meetings by the third week of April, and we had the Commission briefing on the results of the AARM, which is scheduled for mid to late May.

In fiscal year '02, we average approximately 5,000 hours per site inspection-related activities. That includes inspection, prep doc and plant status. The attrition rate, as I mentioned earlier, is quite a challenge not only for the regions but also for NRR. The attrition rate ranges from about 6.3 percent to 10 percent for fiscal year '02. Jim can talk about some of the nuisances in those areas and what it means to replace individuals.

Let me move to the second bullet which is reactor licensing. In fiscal year '02 we met or exceeded goals for licensing actions. The goal is 1,500 licensing actions per year. We completed 1,560. We did actually request relief in this area as a result of emergent work. John working with his staff -- and I'm afraid to ask how he got it done, but I think I know. He did actually achieve and exceed the goal.

We do have some challenges in fiscal year 2003. And presently, we are behind what we would call a proportioned amount for the first quarter in fiscal year '03 for licensing actions. We had our leadership and executive team review this past week. We think we understand the reasons for that, but we will monitoring that number as we go forward. We have achieved this number, of course, in the past two years.

The challenge is managing competing priorities particularly emergent work. We have a process for that, including the ranking for work and the add shed process. Primarily, we are competing not

only with the results of 9/11 and the implementation of those initiatives, including the review of orders and proposed rulemaking, but also in the area of the reactor vessel head and in the area of emerging technical issues.

Let me move on right now to other licensing tasks. Other licensing tasks are composed of those actions which basically do not require NRC approval of a license change. They include 2.206 petitions, topical reports, response to regional requests for assistance, and safety reviews not reaching the threshold of an amendment.

We have met our goals in the past two years including the inventory goals in those areas. The inventory goals are the size of the action inventory as well as the number of tests that remain to be completed per year.

Specifically, our age of licensing actions, 96 percent should be less than one year and 100 percent less than two years old. We have completed those for two years in a row. Inventory should be less than 1,000. It's 765. And the other licensing tasks completed per year should be greater than 350. And the number there is 426.

License renewal, as Bill mentioned, is an emergent area and one for challenges for us. The NRC met or exceeded all established schedules for completing NRC renewals in fiscal year 2002. We are also working with the labor rate to achieve a 33 percent efficiency in license renewal. That labor rate started in fiscal year 2002.

The history here for the product line as far as the schedule is concerned has gone from five years to 22 months and presently there are eight applications under review composed of 16 units. And by 2005 we anticipate 16 applications are expected to be under review. This is based on the potential for license renewal submittals. That's going to be a planning challenge for us. The workload could double in the next three years. We could receive a peak in 2007 to 2009, that would result in an uneven workload between now and 2009 as well as a trail off out into the mid teens of 2000.

And some of the projected numbers are quite significant at FTE. If we were to achieve the

peak that's projected in 2007 through '9, we are looking at about 126 FTE dedicated to license renewal.

We are working with the industry to control some of that, as far as looking at a phased approach to the submittal of license renewal actions. And, of course, we are looking at the efficiencies. But some of that is dependent on working with our stakeholders for the inputs.

We had five renewal applications that have been approved, ten units. And we are working on the infrastructure, including those plans and guidance to the staff as well as rulemaking that's necessary to support license renewal in the future.

We do have a challenge to the 22-month schedule. That's dependent on what I would call, the team would call the bundling of units, particularly unlike technology. It's efficient for the licensees to submit units in bundles because they can keep the team together for the review to the response to the request for additional information. They can hold on to that expertise. But it does result in what we would call bundle submittals. And in some cases they are unlike technology. Nine Mile would be an example of that with the difference with the two boiling water reactor unit. And we also have a fairly unique challenge with TVA in the area of the Browns Ferry units. And we have a meeting this afternoon to discuss that. Of course, the recovery of unit one being the most significant challenge to a dissimilar licensing basis.

Let me move, if I may, to the fourth bullet in this slide, talking about new reactor licensing. In fiscal year '02 we formed the New Reactor Licensing Project Office headed by Jim Lyons. We staffed the office and we established the business product lines. We currently have three design certifications that have been complete: Advanced boiling water reactor, which is operating and being built in Japan and Taiwan; the CE System 80 which forms a basis for the standard plant in South Korea, which is a CE System 80 plus or minus; then we have the AP 600, which is a recent design certification.

The AP 1000 design certification is under review. We received a Westinghouse application for that on March 28th of 2002. That's based, of course, on an, updated, if you will, in size of the certified AP 600. And the schedule is to issue the safety evaluation by June of 2003 -- the draft, excuse me, the final by September of 2004. Design certification rule making complete in December of '05.

And we are working with the Commission, as you know, with ongoing policy issues in this area, including the implementation of the programmatic ITAAC as well as the policy issue of how to consider security reviews and security information in design certification.

Moving on to early site permits. We have regular meetings being conducted with NEI and prospective applicants. We expect applications in 2003, two in June, Exelon and Entergy for Clinton and Grand Gulf; in September of 2003, the Dominion North Anna site. Staff review is scheduled to take 22 months or so, and a mandatory hearing could take up to 12 months.

There's a number of initiatives in this area that the Commission is involved in to provide for infrastructure development, particularly the Part 52 update. We are working as a team, including with the regions, on defining and scoping a construction inspection program development which is fascinating in a way, because there are very different construction techniques that are being anticipated, computerized schedules, integrated schedules, modular design of components and structures. And we are working with the regions on how to inform ourselves in that effort, including international experience.

And in some cases it looks like the shipyards may be the best way to look at some of these modular construction techniques. So it's a very different product line for us.

We are also working with our partners in Research who have the lead for the preapplication design reviews. We had a myriad of design, as you know, from the budget proposals and the budget assumptions for potential applications for design certification based on those issues identified by our partners in research on the preapplication reviews.

A very different technology evolutionary wise, including the ACR 700, which is the advanced CANDU, the simplified boiling water reactor, the ESBWR and the SWR 1000, which is a word that contains about thirteen letters and I can't pronounce it. And we also have the gas cool reactor, the GTMHR. We have the PBMR technology which continues to emerge, and the advanced PWR, the IRIS.

Let me move to the next slide, four, to talk about NRR program resource trends. I know this slide is of interest because of shift in the workload product lines. They do reflect budgeting that took place in

the 2002 time frame. As you know, we formulate our budget well in advance due to the processes that are used agency wide. So they do not, in fact, reflect some of the more recent influences in the budgets that would cause shifts, particularly in the fiscal year 2004 budget that will reflect back into the 2003 area.

Of note in the reactor inspection program, we are talking about the influences of the Davis-Besse lessons learned. We are talking about experience in the revised oversight process in this last cycle, the third cycle, which would include those influences which we are now planning for in the budget for '05 which include an assumption of supplemental inspections in the 9500 series of inspections, as well as assumptions of resources necessary to provide for external events which are driven by stakeholders and external influences such as EP at Indian Point as well as acknowledging plan performance in predictability of a plant event per year.

So those are being built into budget in the outgoing years. And there will be shifts back into the budget in '03 to accommodate that.

It's important to note that the bar chart here for the reactor inspection program includes not just inspection but includes inspection program too. So it's program development and review and ongoing initiatives. That's important because it looks as if we are reducing inspections. And, in fact, the overall number of inspections that have shifted per year is approximately one FTE, which is about 11 hours per reactor site, which is well within the budgeting range and within the amount of discretion.

The most shift here has to do with the infrastructure support. The infrastructure for the revised oversight process was anticipated to be complete. Of course, Davis-Besse has shifted those resources again. And they will probably continue, as well as efficiencies that have been built into the inspection program in the regions in about the 15 FTE range or so.

That's assumed efficiencies in the program that allowed us to build back in FTE to accommodate those areas where we believe more inspections are necessary. Those would include plant specific inspections, supplemental inspections, support for performance assessments. So those have been built back in, in order to direct the FTE within the inspection program where we believe they need to go, and

Michael Case is available to answer specific questions in that regard.

Reactor licensing, the shifts are to accommodate changes in power uprates and license transfers. New reactor licensing is an emerging product line as is license renewal. So that accounts for the graphic shifts.

More specifically, the trends in the reactor inspection program also include the technical challenges that we have, such as reactor vessel head replacement. In '03 we anticipate a total of approximately nine inspections for reactor vessel head replacement. The North Anna 2 has been completed, three other Dominion units and five others.

I did mention the Davis-Besse lessons learned task force. And I would acknowledge that the assumptions for fiscal year 04/06 do include a two-year projection for 95003 inspections of one per year, 95002, which is in the response bans, regulatory response bans of four, 20 95001 inspections and an increase in correspondence as indicated by the trends in '02 and '03.

In reactor licensing the resources have decreased based on the following: Deficiencies, inventory size and reduced number of text spec conversions, fewer multi-plant activities, and regulatory licensing improvements including a decrease in the funds for KI, efforts in the consolidation of process improvements, particularly in the area of centralized work planning and efficiencies assumed in centralized work planning.

New reactor licensing. Increases are based on early site permits, regulatory infrastructure, preparation for combined licenses, and license renewal. We see the licenses increasing as I mentioned at the beginning of this presentation.

I move quickly on to improvement initiatives. I have one or two slides in this area. NRR adheres to the value of continuous improvement. We invest in those areas predominantly as a result of finding efficiencies in our programs.

And the four bullets in the first slide indicate the first areas we would like to discuss. Clearly, the power uprate and early site permit review standards represent the OIG challenge area seven, which is

emerging technologies as driven by our stakeholders.

I talked a little bit about the reactor oversight process before. Let me talk about some improvements in those areas, including performance indicators, inspection techniques, the significance determination process and assessments. And we are working with our partners in Research on risk-based initiatives in those areas. But more particularly in the mitigating system performance indicator we are currently conducting a pilot.

We do have revised inspection procedures. And we have revised the documentation requirements for those inspections. We are continuing to update and develop the new significance determination process. And we have an accelerated review that's been agreed to and proposed by the Commission in order to accelerate these reviews through fiscal year 2003. And that includes a significant amount of resources to achieve that. And that was also confirmed as a right approach by the significance determination review group. We are embarking on that.

We do have the upcoming end of cycle agency action review meetings. There we are looking also for statistically significant adverse trends in reactor performance. We are working with our partners in Research on how to better define that. And we are also working with industry on the overall industry performance indicators.

We are looking and we continue to receive feedback from stakeholders. We have a fairly aggressive working group, standing working group that solicits public and industry comments, including those formally submitted through our Federal Register notice as well as those by the participatory working group.

The role of self assessments in the ROP is one area we are looking for efficiencies. You will recall under the previous inspection program we did give credit for industry inspections and audits. We are looking at a similar program that is under development. Although no decision has been made, the Commission has been appraised of the status. And currently we are looking at performing a procedure in guidelines working with industry and our stakeholders that would result in the ability to leverage available inspection resources to look in new areas or to supplement emerging areas by taking credit for industry

reviews as a self-initiative.

Right now we are developing the oversight document. And we will believe we will have a pilot ready in about the second quarter of 2003. And following that we will report those efforts back to the Commission before they are proposed for implementation.

Let me move to power uprate and early site permit reduce standards. The power uprate program has been ongoing essentially since the beginning of the nuclear power industry itself. As of October 1st 2002 we have completed 81 of those reviews in total, comprising approximately 3,800 megawatt electric of recovered power, which is equivalent to about four large units.

In fiscal year 2002 we have completed the reviews for 17 units, equaling about 1,300 megawatts electric. Of course, all of this has to be done in a safe and efficient manner. We do have a number of stakeholders who are involved in this area. I would like to note that Jim's team in Region III, which comprises many of the units that have received some of these very large power uprates, has been working with us. And we did receive a DPV from Region III on the power uprates that helped to inform us on the effects of these. And it actually helped us to improve the program. And we welcome that type of constructive insights into this very important program.

As directed by the staff requirements memo, we are developing a standard review plan in this area. This is being done in conjunction with the ACRS concerns in this area and John's team are reviewing the initiatives. And we are proposing the development of a review standard, which will be part of our integrated quality management system, which actually is a good thing.

And what it does is provide direction and bases for staff reviews as well as guidelines for those reviewed to assure a consistent high quality product and a predictable product. This will help us also in our work planning center in order to balance the workload.

Since the concept of the review standard is new, we have developed a communication plan. And John and his team are working with internal staff and key external stakeholders, and we intend to brief -- we did brief the ACRS in December of 2002. We completed a draft. It's on the NRC web site for a 90-day

comment period. The ACRS has indicated their preference for formal concurrence after the public meeting period.

In the area of early site permit and review standards, the guidance is under development for the review of early site permit applications. We are consolidating the existing guidance, providing information to the stakeholders or the three applicants in this area. Draft standard was released for interim use and public comment December of 2002. And we plan to release the final review standard by the end of 2003. All of those are infrastructure investments.

Bullet three talks about Davis-Besse lessons learned. As you know, on January 3rd of 2003, Bill Travers, Dr. Travers, the EDO, issued a memo to the director of NRR and Research, and Ashok and I are jointly developing an overall plan for the recommendations of the senior management review team. These plans are due to be provided to the EDO February 28th, 2003. But they will clearly reflect back into the budgets of the offices as well as of the region and will shift some of the proposed resources for 2003.

These four action plans are being developed as high priority items. And they will include office responsibility schedules and resource estimates. And we will have to go through the add shed process to accommodate those high priority items.

We also sent the annual status report on these to the Executive Director and they will be incorporated into the action plan.

Davis-Besse itself will continue to provide the opportunity for high workload. Key activities going into the February time frame are proposed fuel load, leak rate test, achievement of mode four, and a normal operating pressure test of the underside of the reactor vessel are currently proposed in the March time frame. And those are challenges for Jim and his staff to accommodate those resources, and we are working in an integrated agency fashion to provide for that.

The fourth bullet is a construction inspection program on slide five. I talked about that briefly. And it's not an area that is in front of us continually. But it is a significant infrastructure issue for us to provide for the construction and inspection program for the proposed resumption of nuclear power plant licensing,

particularly in the area of the combined operating license.

We are continuing to meet with stakeholders. We have a draft framework document for public comment that's proposed for April 2003. We are using contract resources to review and prepare for the inspection test analysis and acceptance criteria known as ITAAC. And we are meeting with vendors and construction companies, particularly in dealing with construction scheduling software in the higher tech side, if you will, of the construction activities for the resumption of any planned construction.

The objective of this work is to develop an inspection program for new reactors as predictable, risk informing to the maximum extent possible and coincides with licensees' construction schedules without an unnecessary regulatory impact.

The ACRS and CRG are briefings to be scheduled in this area and the policy issues will be identified and sent to the Commission in a separate paper.

Slide six which is the second slide of continued initiatives, covers what we would call some of the softer areas, perhaps. Work planning center pilot, which is one of our premier improvements, we have Tim Collins in charge of this. And we have a very good team of innovative people who work in this area. And we have pilots I will describe. I will talk a little bit about human capital, which is one of the OIG challenges, number eight. International programs, which is an area of high interest, particularly in regard to the Davis-Besse lessons learned and the integration of operational data. But we are seeing more challenges in the support area of international programs. And we do have the convention of nuclear safety to prepare for in the 2005 time frame as well as our integrated initiative for roles and responsibilities, which is an internal initiative by NRR to help us and it coincides also with the President's management agenda.

The work planning center has desired outcomes to be more efficient and effective use of resources, better predictability, better quality control and continuous improvement. Our strategy is to clarify and document process steps for each of the product lines which have been benchmarked within NRR, to establish a level of effort standards so we can benchmark the actual work against levels of effort, the plan of work against the standards, and to measure performance against the standards, and also to be able to predict

the types of resources we need to perform the reviews by discipline, which helps with the human capital initiative that the Office of HR has initiated.

Current status is the pilot was initiated in November of 2002. We have about 100 licensing amendments that are currently in the pilot. With four actions being added per day, we have daily planning meetings in this regard. The NRR project managers are the key focal point for this initiative.

We are targeting all licensing actions for inclusion in this process by the end of fiscal year '03. As we hope to have the licensing action standards established in fiscal year '04. We are targeting a 10 percent resource savings in licensing actions in the fiscal year '04 and '05 area as a result of this particular initiative.

This is one of the themes of the Office of NRR where we target efficiencies. We assume those efficiencies in the budget, and we plan our work against those assumed efficiencies in the outgoing years.

We intend to apply the process for standards development to the other product lines in the outgoing years of '04 and '06. I invite you, if you would like to take a tour of that facility. We have had a number of licensees who have come in as well as international visitors who have received presentations in these areas. We did conduct a presentation for the EDO's office about four months ago.

In the area of maintaining human capital, this also was a well recognized agency challenge between the GAO results, the IG challenge, as well as the Chairman's challenge and the President's management agenda. As I mentioned, our fiscal year '03 staffing plan number is approximately 607. We are within about 10 of that as far as bodies in seats. And we are working hard to provide the resources necessary to do our work.

We are relying heavily on the intern program. It's a very successful, very innovative and invigorating program we have. Two classes are underway, the class of 2003 with eight interns and the class of 2004 with twenty-one interns. The years indicate the date of graduation. We have program sponsors for those initiatives.

Tad Marsh is one of those. He's fondly known as Tad the Dad.

The first class graduates in 2003, as I indicated. We have staggered graduations. That's the two full years in the program. The ceremony for that is October 2003.

We are seeing a return on investment in this area. The branches are pleased to receive the interns. They are asking for interns. These individuals come in highly motivated. They are very bright. They have a lot of energy. And they can teach us how to do our work differently. And they are very exciting people to be around.

We have conducted mentor workshops, and we have conducted two site trips to Belafonte -- I want to thank Region II for that -- to look at the shutdown reactor.

In 2005 agency wide we had 34 offers out for that intern class. We have had 12 acceptance so far. And we have a diverse group. Five white males, four Hispanic individuals, two African American, one white female. That's pretty much indicative of the types of individuals we are attracting. That also help us with our diversity initiatives within the NRC.

We had a number of these individuals in last Friday, those who could struggle through the snow. And NRR, Research, NSIR, and NMSS had senior managers giving presentations.

We are using the human capital tools that have been provided. And I want to thank the Commission and the Office of HR for that. We have had two dual compensation waivers out of nine for the agency, two retention allowances out of eight for the agency, one new SLS position out of eight.

Our budget supports 18 interns steady-state. We have 54 people in the flexi-place program. All of the SES candidate development programs for 2001 have been placed. We have three in the 2003 program that's ongoing. We have eight individuals in the leadership potential program. And I think all of those have been placed.

I know we had two placed in September. But I think they have all been placed by now. We have used 30 recruitment bonuses out of the 104. We have used one undergraduate scholarship out of four, and three summer hire offers for permanent positions out of six for the agency. So those human capital tools are very beneficial for us.

The challenges are in maintaining the staffing levels and in providing the regions the tools in order for them to maintain the FTE necessary to do the inspections. We are continuing to chip away. The average age in NRR is 48. The average Commission age is 47, by the way. We have 23 percent less than forty years. And 49 percent is less than 49 years. And the average NRC experience in NRR is 14 years.

We have about 20 percent of the people who will be eligible for retirement as of September 2002. That number continues to grow. Twenty-three percent in fiscal year '03. That's more than the agency average of 19.

The issue with bringing new people on board is one of the training challenge. And what we are seeing -- I think Jim and the regions would attest to this -- is that it takes about two to three times as long to train an intern or in some cases an entry level, then it does what we would could a journeyman.

We are bringing about 40 percent of our people in at entry level, about 45 at the intermediate level. So that's a significant training challenge for us and for the Office of HR to coordinate.

Our attrition 10 percent, which is higher than we had projected. And about 4 percent is external and about 6 of that is internal. And that's about twice the historical rate for the Office of NRR.

I talked a little about the regional issues which include the changing work force and the promotions and retirements and the continued challenge to retain individuals. I mentioned the heavy investment.

I would like to talk a little bit about the safety culture which is generally positive in the regions and in NRR as a result of the OIG safety culture survey. Page 18 of that has an office comparison. And I think NRR is doing well. But we have more work to do in the safety management area.

We have a new agency allegation advisor, Lisa Marie Jarriel, who was hired from industry. She's working on a program that Bill and I are talking about concerning safety management initiatives and the definition of safety culture within the NRC. And there are some organizational initiatives under consideration in that area.

We received six DPOs in NRR last year. All of them constructive. We tracked them.

Dale Roberts, the NRR technical assistant for the director, is in charge of monitoring that program. We do track those day to day and on a monthly basis provide for a report and continual feedback to the individuals, which is our intent.

We do have the safety conscious work environment discrimination task force paper which is in front of the Commission. And, of course, those issues not only reflect out but they reflect back in to the agency as indicated by some of the stakeholder concerns having to do with Davis-Besse.

In the international arena we have 350 power reactors operating outside of the United States. So if we think about that day to day, we have three times the operational experience outside the United States that we have inside.

The Davis-Besse lessons learned has asked us to focus on operating experience, particularly international operating experience. And we are going through a review within the Office of NRR in that area, as well as how to become more efficient and effective in our international programs, which is a strong component in obtaining safety and regulatory information.

We have some specific challenges in international programs. We are working with the Office of OIP in that area through the strategic planning. That includes increased participation in international activities, increased interest by others in NRC programs which include bilateral agreements and other informal visits.

The Convention on Nuclear Safety, the first meeting, believe it or not, is in the fall of 2003. And we will start to work on the structure of that report including improvements and lessons learned from the last presentation in that area which was a year ago this spring.

And we actually have the Commission on Nuclear Safety which is coming up in the spring of 2005 and the Office of NRR is responsible for that product. I think there will be increased participation by the industry as a result of the lessons learned in that area.

Lastly, let me talk about the roles and responsibilities initiative, which is a multi-level working group, to look at the support for the operating level in the organization, including the definition of roles and

responsibilities at the section level, as well as moving towards a discipline structured organization to a more programmatic type of organization.

All of these are consistent with the President's management agenda, including considerations of levels within the organization. It's meant to optimize existing work processes within NRR as well as provide for the necessary support at the section levels.

We have some very large sections within the Office of NRR, some upwards of 20 people or so. And we need to solve that problem by providing for better support at the section level which, of course, would provide for a shift in supervisory positions within the office.

Let me go to slide seven and talk about the upcoming policy issues.

I have talked about the advance reactor. Risk informed rulemaking is OIG challenge number two. Security issues, you are well familiar that our policy issues in that area are ones of coordination. We do have the lead in the research and test reactor area. We also have challenges in the area of competing resource priorities. We are working now with Bill and the other Deputy Executive Directors on a common prioritization system which will allow us to be more coherent in the add shed work process.

I'm not going to dwell any more on those challenges. I think I have covered those specifically.

I would like to talk a little bit about the risk-informed rulemaking issues. As you know we have the proposal for rulemaking in front of the Commission in the area of 50.69, which is the treatment of structured systems and components. This is referred to as option 2.

Option 3, which is lead by our partners in Research, reflects back into the current programs of NRR. The Commission is in the voting process. And the BWR Owners Group is considering submitting a topical report in this area as providing a basis for exemption to the local loop so-called requirements of the general design criteria 35. So we do have some external stakeholder interests that are driving those areas.

The implementation of option 2, depending on the Commission's policy decisions in that area will also be a significant tasking for the Office of NRR as well as the rulemaking itself.

We have a coherence initiative in the risk-informed rulemaking area. This is partly in response

to the concerns being expressed in the OIG survey, as well as in response to an internal initiative to be sure that we do have coherence between the reactor regulations, the staff programs and the processes. They are all built on the unified safety concept. And they are properly integrated so that we can be coherent not only internally but to our external stakeholders.

In the test and research reactors we are looking for efficiencies in this area. This is one of the areas that are targeted for program review and efficiencies in the outgoing year. We do have business lines in the research and test reactor vulnerability analyses, as well as ongoing compensatory measures for those reactors greater than two megawatts and different compensatory measures for those less than two megawatts.

The area of competing resource priorities. This is an area that is developing. It has to do with competing priorities and continued work associated with ongoing, evolving and emergent work, such as security reviews, enhancements, lessons learned from Davis-Besse, refining the oversight process, continuing power operating licenses renewal reviews. All of those have assumptions for product lines, but those numbers tend to shift.

Our performance management model is adaptable in this area. We do use the PBPM process, the planning, budgeting, performance, and measurement areas. We do go through the add shed work process. I know that's a challenge for the Commission in some areas. We do bump up against some protected work or some work that's mandated by the Commission. But we hope to continue to dialogue in those areas to keep the Commission informed of when that work becomes under risk as a result of emergent work. And we may need some relaxation or at least understanding in some of the program goals in these areas in '03 or '04 as a result of some of this emergent work.

In summary, on slide eight, the ultimate test of the NRC program in the nuclear safety area is continued safe operation of the plants.

The ROP monitors individual plant performance, industry level data looks at the crosscutting industry wide performance. There have been significant improvements in these indicators since 1988 as the

combined effort of the nuclear industry and the NRC.

Licensees had a primary role in ensuring safety. And they are expected to design, maintain and operate their plants in a manner that provides for adequate protection.

The NRC oversees plant operating performance and will not allow plants to operate if a plant's safety performance falls below acceptable levels.

Experience and feedback from operating regulatory experience both domestically and internationally yields improvement information which we intend to apply in the outgoing years.

We will continue to work with internal and external stakeholders to improve these program efficiencies. That's OIG challenge area number five. We have talked about the continuing improvement initiatives as well as the response to challenges themselves.

With that, that completes my presentation. I would like to provide the remainder of the time for Commission questions. And we have not only the panel available, but also in the ring we have other offices who are represented. Thank you.

WILLIAM KANE: That concludes the staff's presentation. We are available to answer questions.

CHAIRMAN RICHARD MESERVE: Thank you very much. It's obvious you have an incredible array of activities that are underway and many of them are absolutely crucial for the agency. We appreciate all of your work.

Commissioner Dicus, I believe it's your turn to go first today.

COMMISSIONER GRETA DICUS: I don't know how you keep up with that, but that's fine. Maybe Annette takes care of it.

Let's go to slide -- well, we don't necessarily have to go to slide three, but I have a question about our resident inspector core.

As you know a few years ago we really reduced the number of resident inspectors we had. I had some reservations when we did that. But I was assured that it would -- the regional inspection core could

cover.

Now what I hear -- and I heard a little bit of it in your presentation, but I hear it from our resident inspectors, many of them, that they are overloaded. And you mentioned the fact we have the turnover in staff and trying to get people trained and up.

Should we reconsider what we have done with reducing our resident inspector core?

SAMUEL COLLINS: Let me talk on a program basis and Jim can talk about the region specific experience.

You are referring to the N plus one policy. And we have, of course, gone to the N policy for multi-units, two individuals at each single unit site. We do not currently have under advisement a shift in the N plus one policy. We do currently have under advisement those resources that the region needs necessary to supplement the on-site resident staff, which would be an increase or a redirection of existing FTE. That's different than your statement, Commissioner, having to do with an increase of on-site inspection resources.

The balance there is the balance between having too many resources on site, which results in the potential for unnecessary burden as opposed to having the right number of inspectors on site and available to provide for the wide spectrum of inspections that are necessary.

The key here in the tension -- and I think the four regional administrators have met -- is to provide consistently for the budget amount of resources to be available. The gaps are in shifts in those resources as a result of emotions, individuals requesting other sites, people leaving the agency. There are gaps in coverage, which has to be supplemented by makeup resources, if you will.

There are proposals by the regional administrators of how to deal with that. We have briefed Bill on those. Some of those involve CFO policy of how to charge your time, how people travel and restrictions in those areas. We are working through those processes now.

Jim, do you want to speak to specifics regional experience?

JAMES DYER: Commissioner, I believe Sam summarized it pretty well. It is the transitional period which recently we are finding ourselves in a lot more frequently with the number of turnover that is

going on. Particularly Region I has the largest of turnover of any of the regions. And it's that gap when you lose a resident inspector and there's 120 days when an individual is moving. It's about a 90-day to a 120-day period to go through the selection process. So essentially, you have got a gap at a resident site.

And I am going through -- right now I have 9 residents out of 32 that are in some sort of transition. So when it's that kind of a number moving around and looking for coverage, that creates quite a challenge for a region.

WILLIAM KANE: I think it's important to note that turnover may not be -- and it's not largely turnover from the region to outside the agency. Much of that turnover may be invisible because it's going to staff positions here in headquarters. But that creates a process by which you have to roll down and refill.

COMMISSIONER GRETA DICUS: Yes. It does create the issue with the resident inspectors.

WILLIAM KANE: And the Region I experience with turnover, I think, is principally in that direction.

JAMES DYER: In Region III over the last three years for every inspector we have lost where they have either left the agency or transferred to another region or headquarters, we have had three moves. So it's roughly a three to one ratio internally when somebody exits a region.

SAMUEL COLLINS: The Region III turnover is about a little over 6 percent. I think it's up since the end of fiscal year '02. About half of that is internal and half is external, as an example.

COMMISSIONER GRETA DICUS: Is this affecting our ROP? It has to be affecting it.

SAMUEL COLLINS: The answer to that is yes. It's giving us what I would call a hard and fast challenge to complete the baseline inspection program, along with the emergent challenges, which the program office did not budget for in our budget model for '02. We shifted resources within the regions and to the regions to accommodate for that emergent work. That's part of the lessons learned from the third cycle.

We will working with the regions in those areas. And the budget in the outgoing years provides for those resources. So we are in that interim period of information assessment and moving forward. But clearly, the regions have a challenge in this area.

COMMISSIONER NILS DIAZ: Can I find out something?

The issue of the backup pool, is that what one of the issues that you really need to manage to take care of this problem, sir?

SAMUEL COLLINS: Back up pool, or surge volume, if you will, of individuals who are in the training pipeline or have completed the training pipeline who are available to accommodate these gaps in coverage, as well as some relaxation of existing rules of when a person can be at a site.

There's challenges in providing people to a new site. There's a requirement of how long you can be at your new duty station and not, what we charge to when we are at the site.

So there are a number of infrastructure issues also that we are working within the agency to address in this area. The challenge is ensuring that we have a balance between coverage and that unintended consequence of unnecessary burden. We are leaning, of course, towards coverage because that's our safety mandate. But we wanted to try to round off the edges on any area that we can as far as burden is concerned.

COMMISSIONER GRETA DICUS: Let's go to slide five on the construction inspection program. And you probably don't have to worry about that for a while. But you clearly have put it down as something to think about.

My question goes to whether or not you plan to actually hire some people to start looking at this or just use contractors? Are we even there yet to even consider it?

SAMUEL COLLINS: I'm going to let Jim Lyons speak to that.

JIM LYONS: Jim Lyons, Director of New Reactor Licensing Project Office.

We have resources here in headquarters and we are using resources in the regions to help us develop this program. We are also supplementing that with contractors to go through the certified designs that already have ITAAC with them to pull those things out. So it's a combination of both NRC staff and contractors.

COMMISSIONER GRETA DICUS: Thank you.

SAMUEL COLLINS: To be sure I understand your question, the implementation of this program is clearly in the out years. Our challenge is to have it prepared and ready.

When we start to implement the program, your question would also be applicable, in that do we have individuals who are trained and ready to conduct the inspection program? Because we have a history of not having to use that expertise over a period of time.

So we are coordinating with Region II who's looking at the construction of some facilities, particularly in the NMSS arena. We are looking at international practices. And we may very well rely, in the interim period, on some contract resources to retain that expertise, both for training and implementation should it be in the short term.

JAMES DYER: Part of my turnover is due to that in the construction program.

I had a branch chief volunteer to step down to take the lead for Region III with the Clinton early site permit and he was an original construction inspector when he first came to the agency years ago. And so he wanted to get involved with the new construction program. He started out working with Jim Lyons on the construction program. Then Davis-Besse occurred and we used him for the AIT team leader.

So we had to pull him back for the higher priority. So it addresses Sam's concern. We started off that way but he was one of the redirected resources.

COMMISSIONER GRETA DICUS: Thank you again.

Slide six, I just have a question on international programs, which I consider our international programs be vitally important to us, particularly, and in some cases to other governments. And particularly since most of the expertise may be outside the United States, given the number of operating reactors around the world compared to what we are here.

What my question goes to, are you comfortable that we have a balance to a flow from information we provide, the information and help we receive, and the exchange of personnel resources? Are we pretty balanced or are we getting more than we are giving? Or are we giving more than we are getting?

SAMUEL COLLINS: That's a good issue.

In the outgoing years in the strategic sense, I believe there's going to be a recognition of what we would call support for State Department or international agreement initiatives where we are really lending our expertise and our programs to developing nations or to those nations which are developing programs similar to ours. That can be a fairly significant workload.

Some of that, we do have reimbursable from DOE. But most is through the Office of International Programs and we budget expenditures for that.

We are seeing more and more where the NRC is in the receiving end of operational information.

You mention expertise. I really was talking about operational experience. I continue to believe that the NRC and NRR has world renowned expertise. And I think that's recognized in many cases.

COMMISSIONER GRETA DICUS: Fair enough explanation.

SAMUEL COLLINS: What we are gathering is the application of international standards. We have to be careful because the regulatory programs are all different, if you will. But in many areas they are implementing programs that are either under consideration or may be under consideration in the future by the NRC, such as safety management, safety conscious work environment, the impact of industry consolidation or deregulation.

And, of course, there's a lot of interesting proposals going on within the European union community as far as basic standards. So we participate in those standards. We help formulate those standards We have to be educated on the application of them in order to continue to have leverage in those forms.

I agree with you that they should be looked at differently as far as budgeting. And we have to be able to attain value from these initiatives in order to protect that work. And that's our challenge in the future.

COMMISSIONER GRETA DICUS: Thank you.

I was also a little concerned about the exchange of people. I know we have many people

come here for training which I think is really great. And we get requests to send some of our FTE's somewhere else. And we can't always meet those simply because of the resource issue. But we have been meeting some of them, I think, on a short term basis.

SAMUEL COLLINS: Right. Between ourselves and the Office of Research and NMSS, the three program officers have initiatives. Scott Newberry spent some time in Sweden. Within the past two we have a program actively under consideration for France and Spain at this time for an NRR person of up to six months.

COMMISSIONER JEFFREY MERRIFIELD: Was that Switzerland or Sweden, Scott Newberry?

SAMUEL COLLINS: The correct name is Switzerland. Did I say Sweden? I'm sorry. Switzerland.

COMMISSIONER GRETA DICUS: One quick question. I have run out of time, I'm sure. On slide seven you said you were using the PBPM process on competing with source priorities. I am sure that may be something of a challenge. But is it reasonably working to use that process?

SAMUEL COLLINS: John.

JOHN ZWOLINSKI: Yes. We believe the process works very well.

COMMISSIONER GRETA DICUS: Thank you, Mr. Chairman.

CHAIRMAN RICHARD MESERVE: Commissioner Diaz?

COMMISSIONER NILS DIAZ: Thank you, Mr. Chairman.

First I would like to take the opportunity to welcome to this meeting a distinguished visitor from Spain, Commissioner Barcelo, a member from our sister agency who actually, in many ways, processes look very familiar to our processes. So it's a pleasure to have you.

Let me go back to slide number five and the bullet on construction inspection program. And support and information we talk about the staff has been working in determining when operational program if any other than emergency planning requires ITAAC.

And that depends on the response of -- could you give me an update on are you making any progress on this issue? We have a direction that the Commission gave the staff. I'm sure you are carefully looking at it. But I would like know how you are progressing in that area.

JIM LYONS: Jim Lyons again from new reactor licensing.

We are starting to engage industry on discussing this issue, the whole issue of developing what the ITAAC will look like, what the combined license process will be. And, in fact, next week NEI is coming in. We are having our first, kind of a kick-off meeting to define those issues, so that we will be able to respond to the SRM.

COMMISSIONER NILS DIAZ: Any developments?

JIM LYONS: We really haven't -- we have been trying to engage industry on this. And to be honest, we have been focusing more in those areas on the early site permits because they are coming up the end of this summer.

COMMISSIONER NILS DIAZ: On slide six you are trying to emphasize the capabilities in development of the work planning center. Of course I will be interested in seeing what they are. I think that's very significant.

One of the things is that you're trying to establish some savings, like a 10 percent savings due to the processes. Of course, you are making investments in all of this processes at a time that your resources are being tasked. I'm sure you're looking at the balance sheet to determine whether, you know, in every case whether that is an appropriate level of effort.

You might comment on that.

SAMUEL COLLINS: Yes. The efficiencies are goals. We subscribe to a phased approach toward process improvement. The largest efficiencies are gained by stabilizing and defining a process and having an integrated management approach, including integrated quality approach.

Once that's complete, then you go through the other two to three stages, depending on the investment. We believe the initial investment is a critical one. And that's consistent with our goal of providing

for a stable infrastructure for consistent standards. And that's consistent with our role at the leadership and executive level of providing access to the staff, giving them the tools they need to be successful. You can't hold the staff accountable until you give them the tools that they need to be successful.

So the investment in this area is commensurate with those efficiencies we have achieved to date. The accountability is in working towards those efficiencies. They are not make or break or hard line type of goals. We track those through the quarterly reports. And we have been fairly successful in achieving those.

And it's the staff who does it. We provide the tools. The staff provides for those efficiencies.

At any time where we see that they are affecting the product line, or are not able to reach our goals either in quality or in number, then we would back off of those efficiencies, stabilize the process and then move forward again.

COMMISSIONER NILS DIAZ: Of course, when you try to become very efficient some of the issues that you will be facing are the fact that the technical capabilities of the staff have to be matched to the task. And I'm sure that's one of the main efforts of the program.

Sometimes I get worried that we also don't put the communications capabilities of the staff in parallel there. And I think that it becomes important as we are more and more dependent on the way that communications go from level to level and their disposition of it that that issue is also considered as a major issue.

Do you care to comment on that?

SAMUEL COLLINS: That was identified in the roles and responsibilities initiatives.

Do you want to talk to that, Mike?

MICHAEL CASE: Sure. Change management is really one of the hardest challenges for us as we move some of these processes, as Sam alluded to it was identified in the roles and responsibilities report.

And then even as we do the work planning center initiative, it requires people to change their

role. That's one of the most difficult barriers that we need to get around as we make improvements.

COMMISSIONER NILS DIAZ: Thank you so much.

JOHN ZWOLINSKI: Commissioner, if I may comment on centralized work planning. We have already in our pilot identified examples where the staff has taken a look at a license amendment change. And in so many words, we need three branches to review it, not four or five. That may have been the case in days past but that's a learning that we have already taken away.

That also helped us with scope and depth of the review.

COMMISSIONER NILS DIAZ: Thank you.

And then as we look at some of our rules and regulations and we try to move forward, I keep getting concerned with the use of the design basis as a, you know, as a basis.

And then taking a look at what I call the interface with severe accidents. This is an issue that I think it has to come more and more to the forefront. Is there any efforts in trying to get a better established working relationship between the design basis and the severe accidents base?

SAMUEL COLLINS: That's a good question for Gary Holahan not for me.

GARY HOLAHAN: Thank you, Sam.

Gary Holahan, Director of the Division of Systems Safety and Analysis in NRR.

I think this is an important question. And Sam, early on in his presentation, mentioned in the risk-informed area we have a coherence program going on, working together with Office of Research.

Basically, the idea is to reflect risk-informed issues which go to severe accidents more than to design basis, and to reflect those in your regulations, in your practices, in your oversight process.

We have moved a certain direction. We moved a certain step in that direction already. The reactor oversight process reflects severe accident concern. When we talk about significance determination process, those are severe accident concerns. Even the performance indicators in the ROP are really severe accident performance indicators. They are not design basis performance indicators. So I think this is at the heart of the coherence issue.

A licensing basis is largely a design basis. And many of our programs, rulemakings and ROP process, are more severe accident programs. So the clearance process is supposed to bring those two closer together. And I think it's probably the design basis that needs to move and reflect the severe accidents better.

COMMISSIONER NILS DIAZ: I agree. I'm just trying to make sure that the staff has a clear understanding, certainly better than I do, regarding how these issues interact and when do they interact, what gives.

Thank you, Mr. Chairman.

CHAIRMAN RICHARD MESERVE: Thank you.

Commissioner McGaffigan?

COMMISSIONER EDWARD MCGAFFIGAN: Thank you, Mr. Chairman.

I'm going to follow up just on Commissioner Dicus' questions with regard to resident inspectors. I do think there's a potential problem. Clearly, we had a lot more defense in depth when we had an N plus one policy. N plus one versus N costs us maybe \$3 million a year. It's 30-odd sites, about \$100,000 per person. It's not a big budget item if we wanted to go to N plus one.

It isn't so much that you necessarily need three people at a two-unit site or four people at a three-unit site. But it's tolerating long periods where you have one person at a two-unit site or two people at a three-unit site that I worry about, especially in the case of Davis-Besse. It's a single site, but we had one resident there, as we talked last week, who, for much of the period, wasn't even a fully qualified resident.

So I think there's some defense in depth you get. The churning was there when we had the N plus one policy. The churning is still there when we are at N. It's just that we don't have much margin.

And Commissioner Dicus correctly pursued with you the issue of whether this regional core that was supposed to fill in -- and I was at D.C. Cook this summer. We had one resident at the time. It was getting filled in. It was a two-unit site with one resident and it was getting a lot of help from Chicago.

So I think there's a potential issue there. I would be very interested in preparing for the annual

meeting coming up in May if you can tell us what the real facts are. We get a reactor demographics report each year. And the facts are the trends, in terms of training, have improved in recent years. We had -- a couple of years ago there was a report, I don't remember the exact statistics, but we had a whole bunch of residents, in one of the Regions, with an average of 13 months total experience in the agency, some early experience. And that's improving.

But we don't have data on how long we have gaps as, you know -- how many people really are at these sites at any given time and how long the gaps are. And if we really do have unexpected vacancies, whether they are internally driven or not, and it takes us 120 days to fill the position and 90 days to move the person there, then that's a good part of a year we have the site uncovered.

So I hope that you can get us some data about what the real facts are at these sites in preparation for May.

SAMUEL COLLINS: We intend to do so.

COMMISSIONER EDWARD MCGAFFIGAN: The STP process. You mentioned Victor McCree's working group. Could you tell us where it's turning, coming out? I know it's been working. I think it's finished. I saw Victor at the lunch line checking out a week or two ago, and I think he is largely finished with what he had to do. It's probably in some sort of concurrence process now.

Where did you guys end up or where did his group end up on issues like greater than green, the timeliness issue for more complex cases, those sorts of things? Can you tell us today or is this again something you want us to delay until the May meeting as to where the fundamental conclusions on the STP process are turning out?

SAMUEL COLLINS: Bruce Boger, division director for the inspection program.

BRUCE BOGER: Like Sam said, we are considering those things. And I think the way we were headed, probably, in describing issues that are elevated in risk importance, characterizing them as greater than green.

COMMISSIONER EDWARD MCGAFFIGAN: You're headed toward that?

BRUCE BOGER: Yes.

COMMISSIONER EDWARD MCGAFFIGAN: Is that something that now you will try out with stakeholders and present to us formally in the May time frame.

BRUCE BOGER: Right. Typically we have a process where we have to engage the stakeholders. We developed the process up to a point using folks. We need to get them back on board as well.

COMMISSIONER EDWARD MCGAFFIGAN: In terms of timeliness, you have set yourself this goal of 90 days for getting the initial determination. If you go to greater than green, does that help you meet that timeliness goal, or do you still need more time for more complex cases?

BRUCE BOGER: I think we would like to stay with the time frames that we have. We haven't been able to achieve them. We are trying to work out ways to become more efficient in getting to the end of the story, reaching the conclusion.

So we would like to try and meet the current time lines. I realize some are more complex and very hard for us to get to the answer. But we need to try to impose the discipline on ourselves to get there.

SAMUEL COLLINS: Part of the recommendation was to have a preset sequence of events for each site, which would have been run through the significance determination process which is available to the site team and to the regions prior to the most likely events taking place based on operating experience.

We think that would help not only in the timeliness, but also help in the understanding of the use of the STP.

The greater than green may reduce some challenges by licensees. That has yet to move forward through the process with experience and find out if that's really the case.

We also have, as you know an associated OIG audit in this area which we are in the process of responding to.

COMMISSIONER EDWARD MCGAFFIGAN: On the greater than green and timeliness, they are sort of connected in my mind. I don't think you have a lot of problem with timeliness on relatively

straightforward calls. I hope you don't. I haven't seen the data. It's the complex calls where you have been challenged. And I think on the complex calls you are almost -- I don't know what percentage of the time you meet the 90-day goal of making an initial determination. And that oftentimes is it yellow, white, or red that you spend a lot of time on. So greater than green could help you there.

What does the data show with regard to making calls on greater than green things? How often have you in the past met the timeliness goal?

BRUCE BOGER: I think it's in the 60 percent range.

COMMISSIONER EDWARD MCGAFFIGAN: Sixty percent of the time you meet the goal.

Okay.

As I said, greater than green may well get you a long ways toward meeting the goal. I'm all for timeliness goals, as you well know in most things. But I don't want to give you impossible tasks where you end setting yourself up for failure.

WILLIAM KANE: If I can just make a few points. We clearly do intend to retain the phase II process. And we, I think, have in a recent SRM, have been told to take a look at the timeliness goals for the complex cases. And we clearly intend to do that.

COMMISSIONER EDWARD MCGAFFIGAN: I too support the phase II notebooks. I think there's a little bit of confusion -- as well as getting the SPAR models up-to-date. The phase II notebooks, as Ellis Merschhoff has said, are great in all areas except for mitigating systems cornerstone. And we are trying to improve them there as well. But they are the only tool available. The SPAR models help you in mitigating systems, but they don't help you for many of the other STP processes.

So the phase II notebooks, I think, are important. And I support that.

I'm going to just make one last statement and keep us on schedule. Mr. Collins, I'm going to use this opportunity to say I think you are doing an excellent job. There's something in today's Inside NRC that I regret, whoever leaked some of the information, but I will tell you that I think you are doing an excellent job.

If I look over the recent years -- I just made a list here of things that we have done successfully. License renewal, of course, comes to mind. License transfers, we have not been an impediment to the industry restructuring. Power uprates, tritium production, getting Sequoia and Watts Bar in a very timely way ready to produce tritium for the nation, which is something that was very important to two administrations. The 50.59 rulemaking, the 50.65 A4 rulemaking, the Y2K transition, the STP exemption, the reactor oversight process getting initiated and implemented, and I could go on.

You know, there's -- you have done an excellent job. Unfortunately, you have become the target of these folks who make a life of criticizing us. And unfortunately in the case of Davis-Besse we have given them something to criticize. Not your initial decision to grant the extra 46 days, but the decisions made all through the '90's, indeed antedating you to not pursue the same approach as the French, not thinking as deeply about this boric acid control issue as perhaps other countries. But that's one flaw in an otherwise exemplary record.

And I do regret -- and you would be the first to say that's based on your entire team's work, that it's not you. But I think you have done an incredible job. Occasionally we argue about STP and resident inspectors and stuff like that. That's part of our process. But I have very, very great confidence in you. And I reiterate that publicly today. Thank you.

COMMISSIONER GRETA DICUS: And I completely support everything Commissioner McGaffigan has just said.

CHAIRMAN RICHARD MESERVE: I think that that goes forth as unanimous decisions made that were unfortunately recorded in today's Inside NRC.

Commissioner Merrifield?

COMMISSIONER JEFFREY MERRIFIELD: Thank you, Mr. Chairman.

As I said, I wholeheartedly support that statement of Commissioner McGaffigan.

I would also add, too, there have been a lot of things going on this year, many of the things that Commissioner McGaffigan has mentioned. And I would also commend the NRC management staff as a

whole for their work as well. Sam has done a terrific job, but he's got a good team to back him up, too.

From the time when I first came on board four years ago, we were at the point where we were undergoing a significant amount of industry consolidation. That has abated itself from where it was.

We had a number of plants that were converting to improve standard technical specifications. At this point I think it's 70 units, thereabout. One would think that as more plants were converting to improved standard text specs, that the number of licensing actions would decrease, aside from things such as work associated with power uprate reviews. What are the other major drivers in this area? And, in fact, have you seen a reduction as a result of the savings we thought we may get as a result from improving standard text specs?

SAMUEL COLLINS: John.

JOHN ZWOLINSKI: I think in the early days we did anticipate a significant reduction in the amount of licensing action work. What we did not foresee was the strong emphasis on economic change. And vendors are marketing equipment which is, in short, much more economical for plants to use, requires licensing action and staff review to approve those.

Also, reducing burden. And while the number of licensing actions is decreasing over the last three years from 1,600 down to an estimated 1,300 this year, we really did believe the number would be significantly less, Commissioner.

SAMUEL COLLINS: The other factor, Commissioner Merrifield, which has an influence will be the risk-informed text specs and the phased in implementation of those risk-informed text specs, including the initiatives by the industry will help, I believe, in the reduction of those areas, once there's a run-in period and there's some experience in its implementation.

Would you agree, John?

JOHN ZWOLINSKI: Yes. We have already seen this with our ISI reviews.

COMMISSIONER JEFFREY MERRIFIELD: On an associated issue of resources, you mentioned earlier -- I think it was related to slide four -- regarding the amount of inspections associated with

reactor head vessel replacements.

And I'm wondering, has this sort of snowball effect in terms of people ordering those over the course of the last year, has that had an impact on resources going forward for your staff? Are you going to have to make some changes as a result of that?

SAMUEL COLLINS: There are two aspects of that. I will let Brian speak to the technical aspect. One is the reviews that are ongoing for the reactor vessel heads themselves. Many of them are being done under 5059, with some exceptions like North Anna because it was an overseas purchase, and the conversion of the Midland head. There's associated cuts in containment to provide for this support.

There's also the potential for upgrades in conjunction with the reactor vessel head which would constitute major modifications. We are comprising -- we have it now, a proposed temporary instruction that was used by Region II for the North Anna 2 head replacement.

In fact, Luis mentioned to me the other day that he would like to see that issued in draft so it could be used on the subsequent Dominion heads. That would require not only inspection time but also specific expertise in the future.

BRIAN SHERON: Brian Sheron, Associate Director, NRR.

I think Sam really covered it. Basically, most of the plants if they are purchasing a head to ASME standards and so forth, would do it under 5059, which would not involve a staff review here. For heads like North Anna which were purchased from France, we have to go through a reconciliation process between standards that the head was built to versus the ASME code. But I think the biggest impact is probably going to just be on the regional inspections that accompany the replacement of the heads.

SAMUEL COLLINS: The other factor is that the need to perform inspections of the head post installation continue. Their categorization would change based on the amount of effective full power years on the component itself, but there are still requirements for the inspection of the head that would move through the life of the plant.

COMMISSIONER JEFFREY MERRIFIELD: On the issue of inspections -- I do want to get

back to an issue that both Commissioner Dicus and Commissioner McGaffigan touched upon, and that's the issue of the N plus one program or a movement to N.

I come at it a little differently, perhaps, because I supported the suggestion of the staff in that regard. I guess I'm sort of grappling for a couple things. Obviously, there's an issue of resources in making sure that we have the appropriate folks at the site. And so I have got a sort of a two-part question.

The first part is, is that really associated with getting more people who are sort of living on the site, or does that incorporate thinking outside of the box of trying to find ways in which you can backfill that, whether it's on deploying people from the regions more aggressively or cross training individuals so that they could back up individuals at the sites? Has the staff thought about that issue?

So that's question number one.

Question number two is, is there any belief among either the Regional Administrators or the senior staff that we should reverse that decision, to go to N?

SAMUEL COLLINS: I will let Jim speak for the region. Presently there is no program reconsideration for N plus one by the program office.

The challenge that we have, from an understanding of a recent meeting of the Regional Administrators, is in the filling the gap issue. That in concert with providing the resources to the regions for those demands which cycle III of the ROP has indicated require additional inspection resources for a emergent events.

So it's a combination. You have to balance that with the burden of additional resident inspectors on site, recognizing that those are generalists. They are good people. But they are not quite as flexible in a specialized area as the regional programs could be. And those are at the discretion of the regional administrator.

So there are really two to three aspects of this: Continual site coverage including qualified individuals, providing for turnover, which is somewhat of a training, double incumbency infrastructure issue having to do with rules and regulations and reporting of time, and then providing overall the resources

necessary to accommodate for emergent events, supplemental inspections, external drivers by stakeholders, and three types of shifts, if you would, in regulatory responsibility from the industry back to the NRC in the 9500 series of inspections.

Jim?

JAMES DYER: Commissioner, I think Sam summarized it well. We had a call working up as we started going into this year's budget cycle in discussing among the Regional Administrators. No Regional Administrator is proposing that we need to go back to N plus one.

COMMISSIONER JEFFREY MERRIFIELD: You don't believe we need to?

JAMES DYER: I do not believe we need to.

We believe we need to figure out a way to pre-deploy so we avoid the gap time period. N plus one is a way of doing that. We don't believe that that's the only way. It is a more efficient way.

And it is, as Sam described, the challenge is one of getting the inspection done and coverage from the region. The second aspect of it is also site coverage. If you only have one inspector, that really limits his or her ability to go someplace on a weekend. Or you're going to be deploying a regional asset for a weekend for coverage which is not good for morale.

COMMISSIONER JEFFREY

MERRIFIELD: Just to put the fine point on this, has senior management accepted that recommendation of the Regional Administrators not to go?

SAMUEL COLLINS: It will be discussed at the agency action review meeting. But the Office of NRR has accepted that. Yes. But it will be discussed in concert with the annual review of the ROP.

And the reason is that our role as the program office is to make the regions successful. I mean, if there is a way to solve this problem that balances the four performance goals, we will go to that solution. We do not have a mind set that prevents consideration of N plus one. We are looking for the balance to the solution. And we need the Regional Administrators' input for that. Those are the individuals who are accountable for the inspection program performance.

So to a large extent we are relying on their input to make these decisions.

COMMISSIONER JEFFREY MERRIFIELD: I have got a couple other things I would ask. But I can hold those.

I do want to end with one comment that I picked up on. As you were making your initial presentation relative to the reactor oversight process, you talked about providing a more objective, scrutable and risk-informed process. Our former chairman, Shirley Jackson, was very famous for liking and using the word, "scrutable." When I first came to the agency, I sort of had to think about scrutable. It wasn't exactly a commonly used term.

COMMISSIONER MERRIFIELD: He came from the inscrutable Congress.

COMMISSIONER JEFFREY MERRIFIELD: Scrutable is defined by Webster's dictionary as capable of being understood or comprehensible. In light of our continuing efforts to use plain English, perhaps I would suggest that we use understandable rather than scrutable, because I think that's more understandable to the average person.

CHAIRMAN RICHARD MESERVE: I don't know how to build on that one.

If I tallied this correctly, it looks to me as if in fiscal year 2005 you are going to have three early site permit reviews, four design certifications, a preapplication review, preparation of a final rule for the AP 1000, up to 16 license renewals that will be under review at that time, and perhaps as you have just indicated in response to Commissioner Merrifield, a series of issues associated with reactor head replacement.

If looks, if I tallied it correctly, it looks as if there's going to be a huge surge in work that you are going to have to deal with. I mean, should we be preparing for that reality now in more aggressive ways than we are doing? Are we going to see a much bigger budget for NRR in 2005 that we need to start preparing for?

I recognize that 2005 may seem like a long time away, but, in fact, it's right around the corner.

SAMUEL COLLINS: Bill, did you want to speak based on the PRC budget?

WILLIAM KANE: Well, as you know, we are in the process of going through the budget assumptions right now for the 2005 budget. And my view is that it certainly looks that way. I would just add

another -- in other words, an increase.

And I would just add another to that, which is the inspection program itself. And looking at -- I think Sam may have touched of this earlier. But looking at some very real assumptions about some emergent work we certainly had this issue with the Davis-Besse plant which we had to sift a number of resources around.

And in NRR's case, security has also caused us to make some adjustments. We have had to go to the program officers to assist NSIR in doing some of their work while they had been bringing staff on board. Hopefully NSIR will get fully staffed here soon. But that has been an impact.

But I think we see the same things. I think we do see a change of resources for 2005 in the upward direction for NRR.

SAMUEL COLLINS: Our value is to challenge the work and challenge the way we do the work. We will be doing that also. So clearly there are shifts in the workload in order to maintain some of the core product lines. We would have to look at the amount of resources as necessary because of the increase in the incoming.

But in all cases, bigger is not better just for getting work done. You really have to look at improving the processes and maybe even shifting some of the goals and expectations to try to flatten that curve.

WILLIAM KANE: That's why the word "planning center" is a really big effort, a significant effort if we can get the kind of resource savings that are envisioned from that effort. And that should help out.

SAMUEL COLLINS: These big swings in staffing are not easy, as far as hiring, training people, getting them- into the process, and actually prodding them to tools to be as productive as they could be and then have to tail off for work right after that.

It's not good for the challenge to the individuals. It's not good to the challenge to the management system. So it's best to try to flatten that workload by other means if it's possible.

CHAIRMAN RICHARD MESERVE: If you are unable to flatten the work that comes in, you are

going to have to do it, are there contractor resources that you can use to help get through the staffing problem? You are building that capacity now?

SAMUEL COLLINS: Yes. We have \$19 million of contract funds available for 2003. John, you want to speak to the use?

JOHN ZWOLINSKI: We have been successful in the past in building a cadre of experts in wide variety of fields through our contract resources. And we would think that the levelization of our staff supplemented with additional resources, would be probably the best way to take on this particular hill in 2005-2006.

SAMUEL COLLINS: And depending on the workload in Research, the technical assistance which is different than the use and need process, but technical assistance from Research has been very beneficial in helping to level some of the workloads in the past also, depending on the availability of the staff through Ashok.

CHAIRMAN RICHARD MESERVE: I know in your presentation and you averted just now that one of your ways of trying to do this is to be more efficient. That's obviously hugely important, not only for NRR, but for the entire agency. We have to continually strive to achieve greater efficiency.

But I understood the way you planned to do that is that in the budget process you have assumed 10 percent efficiencies in various areas. And then you figure out how to do it later. It's laudable to have those kinds of aspirations but at some stage I think we do need to worry when we are cutting too deeply into muscle in that area, and maybe we are nowhere close.

You want to comment on that?

SAMUEL COLLINS: I don't disagree with your premise. I would say, however, that what we try to do -- and John and others can hold me accountable -- is to invest at the front end and assume the efficiencies after we look at the results of the investment. And the investment would be in the processes, or in the training, or in the programs.

Once they start to take hold, then using the model, the management model that we use, then

we assume the efficiencies.

For example, we didn't assume the efficiencies in license renewal until we started to see the results of the infrastructure.

CHAIRMAN RICHARD MESERVE: So my premise is wrong. You have some foundation for saying --

SAMUEL COLLINS: We should. We should be doing it that way. That's correct.

There's a line between using a budget assumption as a forcing mechanism to help you in change management. But clearly, our value is to provide access to the staff. That means not just create a deadline or a product line which causes tension, but before that to provide the tools for success. If we are not doing that, then we are not playing our role in the executive leadership team.

JOHN ZWOLINSKI: In our development of the review standard for extended power uprate, we really believe the implementation of that should reduce the amount of staff hours. That number has fluctuated. And we believe that we can reduce the amount of time.

We have seen that occur with the measurement uncertainty power uprates, the small 1.4 percent. And those are data points that we make use of in going forward.

MICHAEL CASE: Mr. Chairman, the key efficiency that we have as far as going forward is the efficiency that Sam talked about in the licensing action area. We think between the work planning center and the work we have been doing with power uprates that it is very achievable.

CHAIRMAN RICHARD MESERVE: One of the other areas in which you indicated you hope to have some efficiencies is greater reliance on industries self assessments as a vehicle perhaps, if I understood you correctly, for backing off some of our inspection activities.

It seems to me that there are going to be some issues that you are going to have to confront and the Commission is going to have to confront in that area. On the other hand, one of the premises for the reactor oversight process, as you know far better than I, is that everyone gets the same baseline inspection. And I think, particularly in the aftermath of Davis-Besse, there are going to be questions about the

appropriateness of our relying on industry self assessments of status of things.

You want to comment on that?

SAMUEL COLLINS: Yes. I first want to correct the impression that I might have given because of the shorthand way I approached that issue. The baseline inspection program will remain in tact. The credit for industry initiatives is in the supplemental area for those licensees which are high performing that meet a criteria yet to be developed and provide for audits or program reviews that would be equivalent -- some would say better -- than the NRC's functions, or licensees that demonstrate already that they are performing well in that area. This is not unlike a similar program that we had before the ROP which was used selectively. It wasn't universal. But it did require our review of the audit plan, our participation in oversight of the audit itself, publishing other results, and clear selection criteria for its use.

We believe it has opportunities for us to free up some of existing inspection resources to target towards other emergent issues, perhaps even in areas we don't currently look, while providing for commensurate level of assurance of those plants that perform at a high level.

Again, this is a pilot. It's to be proposed. Clearly, the industry is enthused about it because they see the unnecessary regulatory burden. But I can tell you from my recent experience of going to the resident counterpart meetings that the residents are yet to be convinced, which is good. You know, they are hesitant in this area, which I think is constructive. So we have to work through those barriers.

CHAIRMAN RICHARD MESERVE: You intend to make it a transparent, disciplined, and understandable process?

SAMUEL COLLINS: Correct.

COMMISSIONER JEFFREY MERRIFIELD: Thank you, Mr. Chairman. I appreciate that.

CHAIRMAN RICHARD MESERVE: I would like to thank you very much.

WILLIAM KANE: I would just like to make one comment. I would like to thank the Commission for its comments about Samuel Collins and his importance to this agency.

COMMISSIONER NILS DIAZ: Could I add something?

I think Sam showed today his commendable ability to delegate up and down the ladder.

COMMISSIONER EDWARD MCGAFFIGAN: Particularly to Gary Holohan on risk informed regulation.

SAMUEL COLLINS: We work as a team. We are a team.

COMMISSIONER JEFFREY MERRIFIELD: Also I would like to compliment for a content-filled briefing, although the slides weren't content filled, but the briefing itself was very content filled. Very useful.

CHAIRMAN RICHARD MESERVE: Background information made that very helpful.

SAMUEL COLLINS: Darrell Roberts did that.

CHAIRMAN RICHARD MESERVE: I think this has been a very productive time. We have learned a lot about your programs. These are obviously central programs for the agency and they are well managed. And they give credit to all those who are involved in them.

With that, we are adjourned.

(The briefing was adjourned.)