

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

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BRIEFING ON STATUS OF NMSS PROGRAMS -  
MATERIALS SAFETY

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Nuclear Regulatory Commission  
One White Flint North  
Rockville, Maryland

Thursday

January 23, 2003

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

COMMISSIONERS PRESENT:

NILS J. DIAZ, Member of the Commission

EDWARD MCGAFFIGAN, JR., Member of the  
Commission

JEFFREY MERRIFIELD, Member of the  
Commission

(The following transcript was produced from electronic caption media and audio and video media provided by the Nuclear Regulatory Commission.)

STAFF AND PRESENTERS SEATED AT THE COMMISSION TABLE:

Secretary

General Counsel

Dr. Donald Cool, Director, Division of  
Industrial & Nuclear Safety, NMSS

Ms. Margaret Federline, Deputy Director,  
NMSS

Dr. Carl Paperiello, Deputy EDO

Mr. Robert Pierson, Director, Division of  
Fuel Cycle Safety & Safeguards, NMSS

Dr. William Travers, EDO

Mr. Martin Virgilio, Director, NMSS

Mr. Michael Weber, Deputy Director, NSIR

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

Chairman Richard Meserve: The Commission is meeting this afternoon to hear from the Office of Nuclear Materials Safeguards on the status of its programs related to materials safety. The materials safety area has been a focus of considerable activity over more than the past year as the NRC has considered the potential for at least some licensed radioactive sources to be used for malevolent purposes and has evaluated security measures to address that threat.

In addition to the security activities, the Commission is aware of the growing workload as NMSS prepares for licensing for several new fuel cycle facilities, including a Mixed Oxide Fuel Fabrication Facility and new enrichment facilities. These new activities are on top of a broad range of routine licensing and rule making activities relating to all sorts of other materials areas.

The materials program is clearly a very important part of the Commission's work. We are interested to hear the status of the activities in

the materials area, what has been accomplished over the past year, and how the staff intends to manage its activities in the future as the workload increases. With that, why don't we get underway.

Dr. Travers?

DR. WILLIAM TRAVERS: Thank you, Mr. Chairman. Good afternoon. As you've indicated today, the staff from NMSS will brief the Commission on its materials activities. These activities, as you've indicated, are broad and diverse, include industrial, medical, and academic licensees, as well as uranium recovery and fuel cycle licensees.

Given this diversity, NMSS faces a variety of challenges in the materials arena. Many of these challenges are complex technically, and they all require experienced staff and managers to ensure that our products are quality and timely.

As you will hear today, the staff is exploring new approaches in the way we do business in the materials arena. And this includes risk informing many of our activities. For example, in the medical area we are implementing a performance based Part 35 and

using risk informed approaches to focus our inspections.

In the fuel cycle area, licensees are performing integrated safety assessments to focus their efforts on the most risk significant aspects of their processes. And finally, in the secure area, NMSS is working in a partnership with NSIR using consequence based approach to focus our security enhancements at materials facilities based on a thorough understanding of potential vulnerabilities.

Carl Paperiello, my Deputy for Materials Research and State and Tribal Programs is going to make a few introductory remarks. Then Martin Virgilio will continue the briefing and introduce the remaining staff at the table. Carl?

Dr. Carl Paperiello: The one area I want to mention is an area that cuts across the entire NRC, and that's the issue of human capital. As Bill mentioned, there is a great diversity of technical issues that have to be addressed by the NMSS staff. And some of the areas that they employ -- criticality has always been a problem in terms of staffing. The

area of radiation protection that I am very familiar with, the number of educational programs around the country has shrunk considerably over the years, at least in my years of experience.

There's further constraint and NMSS took the need to control overhead, and essentially technical support overhead, as the number of licensees shrank as a result of more states becoming agreement states and a need to control costs for all issues that sort of are intertwined. These issues are being addressed. And they're being addressed very successfully by hiring people who are very well educated in the basic sciences and in developing them both with the technical skills that we need and the policy skills. But this takes time. It does need to be watched. And we have to be very careful and skillful in anticipating what skills we are going to need. These are things that need to be kept in mind as we look over the diversity of what NMSS does. Marty?

Mr. Martin Virgilio: Thank you, Carl.

Good afternoon, Commissioners, Chairman. First I would like to introduce the staff with us today at

the table. At my left I have Don Cool, the Director of Our Division of Industrial, Medical, and Nuclear Safety; and then Bob Pierson, the Director of our Division of Fuel Cycle Safety and Safeguards. On the other side of Carl, of course, is Margaret Federline, the Deputy Director of our office; and Michael Weber, the Deputy Director of our Office of Nuclear Security and Incident Response.

I have some slides that I would like to go through with you as part of the presentation. The first slide, actually Slide Number Two, is an overview of the presentation that we'll be doing today.

In terms of the introduction, several offices besides NMSS and the regions conduct activities for the materials program. In particular, we have the Office of State and Tribal Programs, and they continue to play a very key role in safety and security of radioactive materials.

We now have a new, very active, partnership with the Office of Nuclear Security and Incident Response on materials security safety matters.

Further, we have the Office of Research. They're continuing to support our efforts in risk informing the materials program. And we are also very highly reliant on support from our Office of General Counsel for rulemaking, licensing actions, and other activities.

In addition to NMSS, we continue to work very closely with the Office of International Programs in furthering the U.S. agenda in the area of radioactive materials safety. Note that due to the efforts of these offices and other NRC offices, NMSS met all of its 2002 strategic and performance goals as well as its 2002 performance plan output measures.

Today's meeting purpose is basically to inform the Commission about the status of some of the high profile material activities within NMSS, their objectives, and some of the upcoming milestones, particularly those that will involve the Commission in some of the decision making that we're going to have to make.

Our objective for today's meeting is just to have an open discussion with the Commission on the

materials activities. And as far as the process goes, what I would like to do is just present a few of the high profile issues to you and allow you the maximum opportunity to ask us questions and for us to provide answers on any of the activities that we're dealing with in the materials arena.

As far as the high profile items, that comes up on Slide Number Three, just a few of the things that I wanted to showcase and start the discussion on today.

And starting with Slide Four then, as we get into these high profile items is how we're going about improving the safety and security of radioactive materials. Again, much of this work is being coordinated with Michael Weber and Roy Zimmerman and the staff of the Nuclear Safety and Incident Response Organization.

We believe that the nuclear safety and security matters are very closely intertwined in the materials arena. And we've got a number of on-going regulatory activities that provide protection to the public. And you can group these, I think, into three

logical areas. And you think about this as the way we do risk informing our activities. What actions can we take today to lower the probability of safety or security events in the first place? Secondly, what actions can we take then to limit consequences if any event should occur? And then third we've got a number of overarching issues that we're addressing.

Our efforts to lower the probability of any events occurring include today, identifying radioactive materials and quantities that could do the most harm to humans in the environment in the event of a terrorist activity.

Then second, we want to secure or ensure the integrity and responsibility of the people who have access to or who may attempt to acquire these materials. We want to make sure that we're protecting security information related to materials. We want to minimize loss or theft of the materials. We want to identify, collect, and dispose of orphaned and unwanted radioactive materials. And we want to assess and use intelligence information about threats and terrorist activities involving radioactive

materials. That sort of deals with the probability side.

And then you think about actions we can take to limit consequences. We're taking steps to limit the health affects and environmental impacts and psychological impacts that could occur from a radioactive dispersal device or radioactive exposure device through preplanned actions coordinating our emergency response activities with licensees and local authorities.

The final category is the overarching issues. Here we're thinking about how we can work more effectively internationally, especially through IAEA to enhance safety and security in other countries. Secondly, how we can clarify roles and responsibilities of other federal entities, the states and local authorities. And finally, how can we communicate with the public on risk and risk management issues?

We have a number of challenges in this area. Just to mention a few are clarifying the roles and responsibilities of the federal, state, and local

authorities, and working toward integrated responses to any events that could occur.

Another challenge we face is how best to assess and utilize intelligence information about threats and terrorist activities. And by being more risk informed. Again, what can happen and how likely is it to happen.

Another area where we have challenges to face is ensuring the integrity and responsibility of all the people that have access to radioactive materials.

The last challenge I want to mention among many is the fact that we need to do better at communicating with all the stakeholders, particularly the media and members of the public on risk and risk management activities. We have a number of policy issues that will be coming before the Commission, some of which include how best to involve the states in the federal efforts to enhance Homeland Security. Other issues will be dealing with achieving consensus on protection goals. These will all be policy matters that we'll be discussing with the Commission.

The next area I want to move to is shown on Slides Five and Six, and that has to do with the Mixed Oxide Fuel Fabrication Facility. Today the staff is reviewing the Mixed Oxide Fuel Fabrication Facility, and the review is on schedule. We expect to issue our revised draft SER in April of 2003 and have our final SER ready in September of 2003. That will be proceeded by having our final environmental impact statement in about the August time frame.

In December we learned that Russia has decided to adopt the Duke Cogema Stone and Webster design that we're currently reviewing in this country for the Russian MOX Fuel Fabrication facility. One of the most important factors in the success of the U.S. Russian Plutonium Disposition Program is assuring that Russia maintains a schedule which is on par with the schedule that the U.S. has for licensing and construction and ultimately the operation of a MOX facility. And in order to ensure the success of the U.S. Russian Plutonium Disposition Program, NRC is providing some limited support to Russia and their regulatory authority, GAN, in the

licensing of the MOX facility for Russia. And we're also assisting GAN in developing a licensing infrastructure to support the fuel cycle facility operation.

The Russian's decision to adopt this Duke Cogema Stone and Webster design now will put additional pressures and, I think, interests on the NRC to provide additional support. Our challenge in this issue is going to be maintaining our licensing schedule in parallel with providing support to Russia and GAN.

The next area I wanted to talk about was the Louisiana Enrichment Services proposal. The Louisiana Enrichment Services Gas Centrifuge Project, this is another enrichment facility, and we're continuing to work very closely with the potential applicant, Louisiana Energy Services, to prepare for a review of its gas centrifuge license application. Based on discussions we've had with this potential applicant, we expect a submittal to be coming in later this month. As a matter of fact, they've actually identified a day by which they'll be

providing us the proposed application. They've got expectations about us making a licensing decision by the third quarter of calendar year 2004. And they're targeting operation or beginning to operate this facility in the 2006 time frame.

You all recall that in the 1991 time frame, LES applied for a license for a gas centrifuge enrichment facility in Homer, Louisiana. And after seven years of extended hearing litigation, they terminated their licensing effort. We intend, the NRC staff intends to use, to the maximum extent possible, all of the previous technical environmental review information that we have on this project. So today what we're doing is basically reviewing their Q A program and making preps for the incoming application.

We have many challenges in this area. I'll just mention a few. One is going back and doing what I said, to be able to, in a most efficient and effective way, use the past technical reviews to the maximum extent possible. What's different now then was in the time frame we reviewed the Homer

application is that we've got the new Part 70 performance requirements. So that's a new consideration that was not a part of licensing that project, that we're going to have to overlay on those previously completed reviews. And the challenge will be one of the things I'll be talking about next.

We're going to be simultaneously reviewing the USEC lead cascade project, something that we had not expected when we laid out our time lines for this year.

So that brings us to Slides Eight and Nine, which is the United States Enrichment, the USEC license application. Like LES we've been and we continue to work very closely with this potential application, the United States Enrichment Corporation, to prepare for a review of its Gas Centrifuge Uranium Enrichment Application. We expect the license application and environmental report for the lead cascade to come in February of this year. USEC would like us to make a licensing decision within twelve months. They would also like to have their facility in operation in around 2005

time frame.

The USEC objective in this case is to replicate existing Department of Energy technology and reduce costs by advancing the materials and manufacturing technologies. And they've got a three phase program that they're working on right now. The first phase is ongoing, and that's the demonstration phase. That's mostly done under DOE auspicious and regulatory control.

The second phase is the lead cascade phase that we will license. And then the third phase is actually a commercial deployment phase that will also be licensed by the NRC.

The demonstration phase, the first of these three phases, is being done at Oak Ridge, Tennessee. And it really provides DOE a little bit more information about the gas centrifuge machines and the use of new materials in those machines.

The lead cascade project, the second phase, is intended to provide more reliability information on the machines and the auxiliary systems in operation. The lead cascade system, the second

phase, is just going to recycle the uranium tailings and products with no product really but withdrawals for sampling purposes.

The third phase is the major phase of this operation. That's the commercial deployment phase. And that would have a capacity of up to about 3.5 million SWU per year and enrichment capabilities of up to 10%.

USEC has now selected Portsmouth and the Portsmouth GDP facility in Pikestown, Ohio as the site for this facility. And they've already got buildings that house gas centrifuge machines that were used in the 1980 time frame.

We have challenges in this area as well. Just like we have when we talk about LES, we have to use to new Part 70 performance requirements. These are new considerations, new to DOE, considering where we were when we certified the gas centrifuge, the gaseous diffusion plants. So there's a new set of requirements that we're going to be dealing with when we're dealing with USEC.

Staff is also going to be simultaneously

reviewing the LES project. So that's going to be a challenge to us. Fortunately, for us, I think the short term challenges are less because we're dealing with this smaller demonstration project. And the hazardous material inventory is going to be smaller. It's just a demonstration facility. And it's going to be within the confines of USEC's existing infrastructure for the Portsmouth GDP's. So most of that infrastructure will help envelope the safety concerns that we'll be looking at.

The next area I wanted to spend a little time talking about is the National Materials Program. And there's Slide Ten in the package that highlights some of the issues there. Our vision for the National Materials Program is to take the partnership that NRC has with 32 individual agreement states and evolve that to a more unified program with common goals, common success measures, priorities, strategies for protecting public health and safety.

NRC today, working with the organization of agreement states and the Conference for Radiation Control Program Directors, is working together on

five pilot projects to test how well the NRC and the agreement states can collaborate; one, to identify the products that we want to work on and establish priorities for those projects; two, to demonstrate all the parties' ability and willingness to participate in the program; and then three, to demonstrate the acceptability of the products that come out of this pilot program.

There are a number of external factors that are affecting the pace of the pilots today. And one, of course, the pilot has been impacted by the need for increased NRC and agreement state focus and interactions on material security measures.

This is probably going to force us to look for and request Commission permission to extend the time lines on these pilot projects.

And although the number of agreement states continues to increase, we're also seeing the schedules for some new agreement states starting to slip. That's another factor that's having an influence on the National Materials Program.

And of course, the state financial issues are not

only effecting the individual state program performance, but we expect it's going to also affect the ability for the states to share in these National Program Activities and pilot projects.

The five pilots that we're working on, the first of which is about establishing priorities, working to see if we can come up with a common scheme for prioritizing the development of policy recommendations in this area, the development of rule making and guidance products in the materials and waste arena.

The second pilot project is going to be to see if we can have the agreement states take the lead responsibility for administering a national radiographer certification program. The third of the pilots has to do with having a joint process to collectively evaluate licensee events for possible generic implications or immediate regulatory actions.

The fourth pilot will involve the development of licensing inspection guidance for new uses of radioactive materials.

And then the fifth of the pilots will be to pilot

some of the revisions we've made to our inspection manual, Chapter 2800.

We have challenges in this area. I just wanted to mention or just highlight again, that the state's limitations as a result of their budget deficits are forming difficulties in their ability to hire, to train, and retain staff. It's also providing some restrictions on their ability to travel out of state and to actually participate in the pilot projects.

Another challenge for us is going to be to find acceptance by all agreement states for decisions made by their designated representatives. Another challenge for us is going to be to accept the products developed by these joint working groups.

And finally, I'll mention again, that we've seen the schedules for some of the new agreement states slipping, particularly Minnesota and Pennsylvania. Minnesota has now slipped to the mid fiscal year of 2004. And Pennsylvania has now slipped to sometime in 2006. I'm pleased to report that Wisconsin is on schedule, and it's looking like

they'll be granted agreement state status some time this summer as we complete the review.

That's all I wanted to do in terms of showcasing a few of the challenges that we're dealing with in just the materials area.

I wanted to summarize by talking about a couple of things that are outlined on Slide Number 11. First, I would like to reiterate our commitment to accomplish our objectives through recruiting, developing, and ultimately optimally utilizing the full potential of our staff. This goes to some of the points that Carl was mentioning earlier.

We have -- and Bill also eluded to the broad range of disciplines that we need to carry out the various activities that we have on-going in the materials arena.

Some of the more unique critical skills, such as criticality safety and material control and accounting, these are very difficult positions to recruit and attract and hire people. And not only that, there's a limited pool of people out there available to work in these areas.

To offset these difficulties and to maintain our core competencies, we're using a number of strategies to close the gaps in these areas. We're using the Graduate Fellowship Program. We're using early placement hiring or over hiring into positions where we know somebody will be retiring or leaving in the near future. We're increasing the number of SLS positions, and we're relying heavily on the NRC's intern program.

The Intern Program, I see as a very successful mechanism for dealing with some of these issues. It's a pipeline. And it supports a continuity of filling these critical skills positions and maintaining our core competencies. Today NMSS has seventeen interns on board, and we're in the process of bringing nine more on board.

We have made a commitment to ensuring their success by coaching their supervisors, assigning buddies within their organizational unit to help them with the day-to-day activities, and assigning mentors to each one of the interns.

Our short term challenge here is to quickly

engage the interns and help them find opportunities to add value to the organization through meaningful work assignments. Our long-term challenges are helping them develop and gain more experience in the NRC regulatory environment, including the skills and abilities they're going to need to do more technically challenging work, and to help us develop policy.

To achieve our vision and organizational objectives, we've got to demonstrate behaviors that are consistent with our core values, our NRC core values of integrity, excellence, service, respect, cooperation, commitment, openness, and mission are all extremely important. We've got to increase the organizational capacity through improved clarity around our roles and responsibilities at various levels within the organization. We've got to improve our internal communication. And we've got to promote the value of diversity and new ideas and approaches and optimize our business processes.

An example of how we're working to achieve our commitments is, what we're working today with the

Office of Human Resource, another very important partner to NMSS, we're developing service level agreements that work on service and outcome oriented relationships and really help to define and clarify our roles and responsibilities in our partnership.

We are agreeing on specific services that we need from HR, what they need for us, what our roles and responsibilities are going to be, what the performance expectations are, and how these expectations relate to the outcomes that we're trying to achieve. It's a new way of doing business. And it takes us from an "us and them" mentality to a "we" mentality.

As you can see from just some of the things that I've touched on, we've got to manage and deliver on a very large number of diverse projects. And this is going to be very challenging. And I've just outlined a few of the challenges that we face.

I also would like to recognize that this is only a portion of NMSS' work. We've got other significant programs I didn't showcase today, particularly in dealing with the implementation of

our revisions to our new medical rule, Part 35, and dealing with the implementation to our new fuel cycle facility rule, Part 70.

We're in the process of developing policy options and recommendations for the Commission on how to deal with source material. We're also working on a number of other rulemaking and guidance activities. And that, you have to take that into consideration with the base load of all of the licensing, inspection, and event response activities that we do on a day-to-day basis. We're scheduled to have another meeting with the Commission on the waste arena activities, including high level waste, some time over the next couple of months.

Finally, I just want to mention that we're also invested in NRC's international programs, particularly in support of U.S. interest in safe and secure use of radioactive materials worldwide. We're doing this through bilateral exchanges, through multi-lateral activities, particularly using and relying on IAEA and NEA and through cooperative efforts with our neighboring countries of Mexico and

Canada.

That concludes the prepared remarks that I have. And we're now ready to answer any questions that you might have related to the items that I showcased or anything else that we're working on in the materials arena.

Chairman Richard Meserve: Thank you very much. You obviously have a very diverse set of activities and challenges in front of you. I think it's Commissioner Diaz's opportunity to go first today.

Commissioner Nils Diaz: Thank you, Mr. Chairman. I thank the staff for the presentation and especially for the very good background material. I was able to sink into it and put my teeth to good use.

Dr. William Travers: Somebody just said oh-oh in the background.

Commissioner Nils Diaz: Just a comment first. I note the safety and security area is very large, very complex. I would like to repeat something I said many years ago, that the enemy of

the good is the better. And I would rather see some things done that are good rather than keep waiting. So that we look forward to receiving the proper information in the proper amount of time to be able to move forward in this area.

Having said that, let me go to some of the other areas. Let's see. On the issue of the licensing of LES and the USEC and the fact that you're going to be using a lot of what you had before from the previous LES project and you now have the new Part 70, can you give me a sense of what is really, what you're going to find. Are you going to find something that's going to complicate your life? Or do you think that the new Part 70 will make your life easier?

Mr. Martin Virgilio: Well, let me start out by saying the new Part 70 is going to take a different cut at it than we have in the past using the ISAs, being risk-informed, and helping us focus in on what is the most important, what are the structure systems and components that have got the greatest impact on public health and safety? With that, let me ask Bob if he would like to add

anything.

Mr. Robert Pierson: I think that's exactly right. The integrated safety analysis should allow us to focus on what's important. And, at least preliminary, most importantly I think the review for LES, in most cases, will be streamlined by taking that ISA approach.

For instance, in the area of criticality, it's at least our preliminary understanding, we don't have the application, but our preliminary understanding is that there really is no mass of material because of the centrifuge design. The criticality probably isn't a significance issue. It's something you need to look at, but it's probably not a significant issue. There are a few things that could complicate the review that may be different from what we've had with some of our other reviews.

The one thing is the depleted uranium, what happens to the tails. And that's still a situation where the LES may have some arrangement with the Department of Energy to take the tails. They may have to store it on site, something like that. But

that, in conjunction with what we do with our security areas is, of course, different from LES.

Now, in terms of security, what we're planning to do is treat this like we would any Category III facility. We'll ask them to review the facility, provide to us what we call our critical target areas, and then use what we have provided to you in the interim compensatory measures and the process there to decide what levels of protection we need and apply the same criteria we would for any Category III facility.

So my sense is, given the experience that they have and the experience we've got, I'm optimistic about that review. And I think that we should be able to do it in a relatively straightforward forthright fashion.

Commissioner Nils Diaz: Thank you. On the National Materials Program, I see some warning flags, especially with, apparently, some of the financial crises that are taking place and the probability of moving all of these pilots forward. I know the staff is planning to say we need a little more time. Could

you give us a sense, is there something that we could do to help the present situation? Is there any new fact that we should take or new considerations to allow the process to keep moving forward, maybe a little slower, but I would really not like to see it slowing down too much.

Mr. Martin Virgilio: I think continued support for the staff, recognizing that the time lines will probably be extended somewhat. Let me ask Don, and I know Paul is in the audience as well. And he may have some comments to make. But Don?

Dr. Donald Cool: In each of the situations, there are a little bit different variables going on. And one of the things we're going to be pursuing is not attempting a one size fits all approach.

The last of the pilots, the work on the 2800 Inspection Procedures, is actually the furthest along and is closest to the previous way in which we've done business in which the states have been participating in a group which we've had significant resources in.

Moving to some of the others, we lean more

and more toward the states being the dominant contributor to them. For example, the one in radiography certification, where we're piggybacking, trying to see if state work which has already been on-going -- the Conference of Radiation Control Program Directors had a committee looking at the issue for a number of years -- ask them to go ahead and take the lead with us providing some support, changing the relationship just a little bit. We'll have to examine each one of them as they come along to see how to best try to leverage the resource that's available. I don't know at this particular moment that I can predict, with any specificity, how it's going to play out. Each one will be different.

Ms. Margaret Federline: If I could just add to that, Carl chairs the management review boards for IMPEP. And Karen and I both are on those. We take those opportunities to talk with the states themselves because the reviews frequently show some impacts from financial constraints. So we talk to the states in-depth to try and find out what would help you, you know, what would help you in your

program. And we're sort of accumulating some information that we can, perhaps, use.

Mr. Paul Lohaus: Don has done a good job in characterizing the pilots. What we've done, as Marty indicated, is work with the OAS Board and the CRCPD Board and developed an implementation plan. And the implementation plan has us proceeding forward, but it also reflects some of the realism in terms of the issues we're dealing with, and reflects a need for consideration on maybe providing some flexibility in terms of our schedule and the timing.

But we are proceeding forward. We have charters. We're getting the working groups established. There's an implementation plan. And what we plan is an early status report to you in the late February time frame to lay this out, provide the implementation plan, and provide for some consideration of the need to give some flexibility in the scheduling.

Commissioner Nils Diaz: All right. But I believe it's important to actively seek, if there are problems, what early solutions we can offer. I think

that would be of value to us.

Mr. Paul Lohaus: Yes.

Commissioner Nils Diaz: Thank you. I noticed that the last slide of the staff presentation deals with the issue of how to integrate the workload with the proper human resources. And I thought that was a very poignant message, and I think I take it to heart. There are many, many issues in there that I know you're dealing with. I think you have already addressed many of them.

Is it your plan to try to, in the near future, to do a real mesh of the integration of what you need to do with the capabilities of the people in a manner that you use them better while providing them career opportunities and advances? How are you planning to do this? It seems like a tremendous task.

Mr. Martin Virgilio: It is a continuous and ongoing task as we receive new work, as new work emerges, and as we sunset existing work. How do we make that transition? How do we take skilled staff and move them to a new location? How do we

recruit and train new staff to take on the new challenges?

It's not something I can say that we stop and do. Although we do, as part of the budget process, step back. And as part of the PBPM, the planning program process that we're in right now, we look at our planning assumptions. And we look out over the next couple of years and we try to predict, with some discussion with the folks that we regulate, that will be submitting applications to us, and with discussions with other stakeholders, what's the work that's coming at us over the next couple of years? Then we sit down and say, well what are the skills that we'll need and how many of them do we need? And that's sort of a continuous cycle as we go through the planning, the budgeting, and then the actual implementation and the performance management, PBPM process.

Then as new work emerges, as we have with the fuel cycle facilities, we can't wait to step back annually. We have to say, okay now what are our immediate needs? We didn't predict that we would

have both the USEC and the LES applications. So it's not just numbers but what skills do I need as well to deal with that. So I've got to deal with that as issues like that emerge as well. But it's a continuous process.

Commissioner Nils Diaz: Is there a model that you're following that you say, this is what I should be and this is what has succeeded? You know, Do you have a plan, an organizational plan to match resources to work? Is there such a thing?

Mr. Martin Virgilio: We look at our critical skills, again, as part of going through that budget cycle. And we say, we do our predictions as to what's coming. We're doing that right now for this next budget cycle. It's called planning assumptions. And we look at what is the work, we look at what are the skills that we need to do that work.

And in parallel with all of this, we're developing our staffing plan. So that's sort of the model of how that's done.

Dr. William Travers: I think you mentioned

earlier, Marty, an important element, this partnership with HR, to make sure what we're developing is a coordinated and integrated approach to these very complex issues that you've raised rightfully so. And as Marty indicated, I think it will be a continuous effort that we're going to have to all engage in, including recruiting and a host of activities, to make sure that once we've gotten good people in here that we're developing them and that they feel part of the program and actively engaged in productive work in the agency.

Commissioner Nils Diaz: It seems to me like, since so many issues have emerged, you might need some tools like early discriminations of issues and personal capabilities so you can do some matching, at least in the interim until you keep on developing these things. That seems to be a critical issue; being able to say, this is what is needed, this is what I have. And I don't know, with so many things that you're doing, whether there is -- like I said there might be a model that you could use but I'm not familiar with any.

All right. Thank you so much. Thank you,  
Mr. Chairman.

Chairman Richard Meserve: Commissioner  
McGaffigan.

Commissioner Edward McGaffigan: Thank you,  
Mr. Chairman. I'll tell you my major concern. And  
I've said this privately to you, Marty, and to my  
fellow Commissioners. When I look at the issues that  
you're facing in this arena and the waste arena, how  
you manage to stay really focused on getting at least  
the top priorities done -- because I really don't  
think you're going to be able to keep any sort of  
reasonable schedule on everything. And you're not  
going to achieve everything. But you face the  
challenges you talked here about, if we were talking  
about waste today -- and you talked about it sort of  
peripherally a couple of times, sort of  
internationally, whatever.

Yucca Mountain obviously looms, package  
performance study, various transportation issues,  
Part 71 rule, making restricted release a viable  
option, and various and sundry other things may come

to mind. The issue we may soon launch on accelerator produced material in the Congress, West Valley, et cetera. So you have just an enormous number of things to do and limited resources.

And some of them are a lot more important than others. But some of them are going to be central to how this agency gets viewed in terms of its performance, and others, frankly, can slide a little bit. How do you sort that out? We have a long list that you've given us for this meeting. Would it be useful for you if the Commission all sat down and put one, two, three on priority next to each of those and you could sort out what the true highest priorities were.

Commissioner Jeffrey Merrifield: If it would, you might want to wait a couple of years to get the output of that process.

Commissioner Edward McGaffigan: No. We would just separately go home and do homework and turn in 1, 2, or 3, next to a bunch of items. And they would write the SER for us.

Chairman Richard Meserve: That would be

good until the next week when you get another surprise.

Commissioner Edward McGaffigan: Well, whatever. But there are some things that are more important. How do you focus on them, because you can get diverted?

Mr. Martin Virgilio: I think it starts with making sure that we're all in agreement about what our goals and measures of success are. I would like to be able to assign the one, two, and three. But I would really like to make sure that you're bought into how we're measuring success, what our goals are. And we're in the strategic plan update process.

Commissioner Edward McGaffigan: I think the strategic plan, in all honesty, with all due deference to all the people who write all those laws, CERCLA, and whatever, the level that you guys write it just isn't all that useful.

Mr. Martin Virgilio: Well, let me bring it to the level where I think it's helpful to me. If today we're looking at how many loss sources are

acceptable as part of our measures, and today, pre 9-11 we were perceiving on the number of about 300 loss sources per year as being acceptable.

In light of 9-11, we're rethinking that.

And imagine the Commission says, and the staff recommends and the Commission says, no we want a different number, we want to lower that number. That provides me the kind of guidance that I need to then say, well, what activities do I need to prioritize, one, two, and three, in order to get to the finish line, in order to deliver to those measures.

Commissioner Edward McGaffigan: I personally think, as one Commissioner, that that particular issue, unless you're talking about sources above the thresholds that we've been talking about that are of significance to RDD's, that there's a lot of agony in this country about lost sources. And a lot of these lost sources aren't all that relevant from any perspective, safety or security.

I mean, there are some minor problems you could get with them. But we're talking about a limited number of isotopes and numbers that are 10 or

60 curies or above. And there are not a lot of sources of that sort that get lost every year. So the focus should be on the larger lost sources. The smaller ones, obviously we don't want to encourage people to lose them or abandon them and we should do what we need to do, but there isn't a security imperative for rounding them up.

But there's other things that we need to do in the security area that you guys are working on that are far more important; getting some sort of export/import regime, getting some sort of cradle-to-grave management of these larger sources of these particular isotopes. And we're making relatively modest progress. I mean, we sort of knew last spring -- or at least Carl knew -- what the isotopes were and approximately what the curie levels were. And we now have validated that through a large Sandia contract that cost us a fair amount of money. And we're still talking about what we do next.

So I think that we have to be really disciplined about figuring out which things need to be done first and not kick things into study space

for long periods of time.

Mr. Martin Virgilio: We agree. And in order to accomplish some of the things that I talked about today, we've actually slowed down some of the lower priorities issues. We've made some decisions based on where we see those activities, where they make contributions to the goals that we have and the measures that we've established.

For example, some of the guidance development work that supports Part 70, some of the work that we had envisioned that we would do on developing better backfit guidance in order to support Part 70, we actually slowed that down in order to support some of the other activities that I spoke about today. So we are making these decisions.

Commissioner Edward McGaffigan: One issue that comes up, in terms of managing, I get the sense at times, that staff at lower levels sort of flounders around for awhile. I mean, you have all these issues, you've got a group of people at the table here, plus maybe John Greeves and a few others when you throw in waste. And everything sort of funnels through you.

And we have these, you know, processes here that staff in the lunchroom talk to me about, you know, the infamous concurrence process. And everything takes an inordinate amount of time, including getting to you guys. If I were a staffer in the bowels of the agency, which thank God I'm not, trying to get guidance as to how I deal with issue X other than sort of impromptu and having one of you test it against us to make sure that, you know, if your guidance is right -- how do you shorten that? How do you flatten the organization so that someone who's working on some aspect of -- take the LES or USEC applications which we'll have a wall between us when those are in -- but how do people get prompt guidance so that they can make rationale decisions?

Mr. Martin Virgilio: We've been working with the EDO's office on that very question. But I'll say that there's a universal agreement right now that one of the things that we've got to work on is the employee to management ratio at the first line level. I think where we stand today, within NMSS, I've got some very large sections. And it takes a

while for the individual section members to be able to get to that first line supervisor to get the kind of guidance that you were talking about.

And some of my sections are on the order of twelve, fourteen, or more people. And that's a challenge. And I think that we've got to address that challenge to make sure that there's access to the first line supervisor to help in that decision making.

We've got to have roles and responsibilities right. We've got to make sure that, at each level, we're making the right decisions and adding value, and that people are not coming to the director's office and asking questions that really should be dealt with quickly at the first line supervisor level.

Commissioner Edward McGaffigan: If the first line supervisor really knows the answer. The first line supervisor also has to know when he or she needs to keep checking.

And it has to be a fast way to do that. I lived in flat organizations my entire career in

government. I've been really lucky, 26 years in government. At the State Department I was working for Under Secretaries, in Moscow I was working for an Ambassador directly, and in the White House I was working for the President's Science Advisor directly, and in the Congress for a Senator directly. And I never had to put up with large chains of command, second guessing things or whatever. So I sympathize with these folks in the lunchroom.

It isn't your office, you know, they complain about Research, NRR, it's universal. Getting prompt decisions, getting decisions that will stick as they move up through the organization, and getting decisions in any sort of finite period of time.

Ms. Margaret Federline: If I could just add one thing, a key aspect of all of this is deciding at what levels alignment is needed for the various issues. And we have a process in the office where we look out over six months to a year horizon and identify issues and look at what alignments are going to be needed to be successful in this process.

And we target specifically -- there are items that we need to interface with you all early on. There are items that we need to interface with Bill and Carl early on. And we target those and set up processes so that we have that alignment and discussions occur before staff puts pen to paper.

I mean, it's not perfect yet. But I think it's a process to acknowledge where the additional input is needed and to make sure it gets factored into the process at the time.

Dr. William Travers: I think we're all looking for the right balance between the processes that we use to manage this diverse set of issues, that is, highly technically complex issues. I think in the main, the management team adds value to most of these. I think when I was a staffer I remember complaining about, you know, why did what I was doing have to be reviewed by anybody in management.

Commissioner Edward McGaffigan: I don't mind your review. I think the review is useful. It's to get it done promptly and to have it -- and to get I early. I mean to get it, like Margaret says --

but there are numerous examples that I'm not going to go into where alignment between the Commission and the staff, in say the security area, has not been perfect over long periods of time. And there was no forcing mechanism to get alignment.

And I think that happens in other areas based on what people tell me in the lunchroom, which is a very dangerous place for the rest of you guys.

Can I ask one question to Robert Pierson? You mentioned Category III, facilities, as what the security requirements you propose for USEC and LES facilities. Is it Category III, or is it gaseous diffusion plant ICMs, because there is a difference?

Mr. Robert Pierson: Well, we would consider it, at this point with what we know, a Category III. And the difference between the gaseous diffusion plants and the Category III is that it's really based upon the amount of uranium hexafluoride that could be released, what the critical target area is.

And at least as I understand the proposed designs today, the gaseous centrifuge facilities

would have relatively small amounts of uranium hexafluoride in the liquid or gaseous form. So the actual risk off-site to any potential act would probably be relatively small and contain a relatively close level to the site. Now, that's different from the gaseous diffusion facilities where we have relatively large amounts of liquid and gaseous uranium hexafluoride in the process. Now, that could change if, for example, we find that the design isn't as we think it is, if they have, say large sampling areas or something like that where they're trying to purify the materials or something like that.

But at least as I understand the proposed design today, I don't see the large volumes of UF-6 that we would necessarily see as a potential risk in terms of either sabotage or security or off-site consequences.

Commissioner Edward McGaffigan: I'm uncomfortable going very far in this. My understanding is that you're going to give us a paper fairly soon as to how you plan to approach security?

Mr. Robert Pierson: We're trying to do that in the next few days. That's correct.

Commissioner Edward McGaffigan: Because it will be useful to have that discussion with the Commission prior to the applications being submitted. And I just urge you to get that paper to us promptly.

Is there, in terms of flattening the organization, do you have any ideas currently under consideration for trying to flatten the structure, make it easier for people to get to you guys?

Dr. William Travers: We have some ideas. But I think it's appropriate to look for an opportunity to discuss it with you in a different forum.

Commissioner Edward McGaffigan: Okay. The general license tracking system, which you didn't mention today, is that working yet?

Mr. Martin Virgilio: The system -- let me just tee it up for Donald a little bit here. The system is, in fact, working. We've got the hardware out there, and the software system is operating fine. Our challenge right now is that 50% of the responses

are not where we want them to be. We went out to roughly 3,000 licensees, and now we've got roughly half of the responses entered into the GLTS system, the hardware software system.

Now we're dealing with challenges around getting the other half of the respondents to recognize their responsibilities and provide us the information that we need. With that, Don?

Dr. Donald Cool: Yes. There are several things that are going on. The system is operational. We continue to load in the initial set of responses that we go from general licensees.

One of the things that we have discovered is that, as with all automated systems, unless the computer sees exactly the right thing in exactly the right place, it doesn't know what to do with it. And we've, in fact, had to deal with a significant number of the things that have come back where there has had to be manual processing in order to get the information into the system.

We then have a number of people who, having submitted us the information, we have not an

alignment in terms of what we thought they had and they had. That's one type of follow-up. At least we had communication with them.

We had the whole set of folks, now roughly 50%, for whom we haven't managed to close the communication loop. And we're pursuing those with a variety of activities, including going to a contractor. We've nicknamed it Gum Shoe, private investigator type individuals who specialize in finding people to try and give us a contact that we can then have an inspector or the appropriate individual follow up on. So we're pursuing a variety of forms to try and increase the number of folks we've had interactions with.

Commissioner Edward McGaffigan: So a lot of these sources that Margaret referred to earlier that get lost are the general license sources.

Dr. Donald Cool: We have some of those that fall into that category. When we have find one of those and we no longer have the mismatch, it's going to end up in the system.

Just a record note, I guess, the vast

majority of the sources that would be against that metric are significantly smaller. They are the very small sources, check sources and a variety of things, because anything is counted against the criteria. They are not the sources that we've been engaged in separately.

Mr. Martin Virgilio: The overall message I would like to leave with you is that I think we've made significant progress on the Commission's objective of getting better control over the general license sources. I think it is still a success story. We're still tracking down the dead beats.

Commissioner Edward McGaffigan: From an information technology perspective, some of the problems you have with the system probably could have been anticipated if we had been smarter, I suppose.

Mr. Martin Virgilio: We learned an awful lot as we developed that system.

Commissioner Edward McGaffigan: The last question, I guess as a factual matter you mentioned that USEC wants their license for the lead test assembly in something like twelve months. There's a

mandatory Section 193 hearing for enrichment facilities. Is it possible to complete a hearing in twelve months?

Mr. Robert Pierson: Yes. The test assembly doesn't actually enrich. The key is the process is set so that there's no actual enrichment that takes place. It's a process whereby it circulates material through the process. So technically it's not an enrichment facility. That's correct.

Commissioner Edward McGaffigan: So it's not an enrichment facility. Section 193 does not kick in. So there will still be a possibility of a hearing but it would not be a mandatory hearing?

Mr. Robert Pierson: Not a mandatory hearing. That's correct.

Commissioner Edward McGaffigan: So the twelve months depends on whether a party has requested a hearing?

Dr. Donald Cool: If that would turn out to not be the case. I mean, if we look at it and decide that it, in fact, does enrich, then we would have, of

course, a different situation on that. But at least as they've presented it to us, and conceptually, it's not designed to enrich.

Commissioner Edward McGaffigan: Thank you, Mr. Chairman.

Chairman Richard Meserve: Commissioner Merrifield?

Commissioner Jeffrey Merrifield: Thank you, Mr. Chairman. It's always a pleasure to follow my esteemed colleague, Commissioner McGaffigan, because he always generates additional questions for me to ask. The heart of one of the first questions that Commissioner McGaffigan asked, in terms of the ranking of the items that you've given us on one of the attachments -- and we laughed a little bit about how easy or difficult it would be for the five of us to align on what the right ranking system is. But I guess the heart of the question is this; given your own look at this, it would seem to me that at the end of the day, the thing that we are striving toward is making sure that we're having the maximum protection of public health and safety.

And so in that regard those issues and items which could have the greatest consequences, obviously, should take greatest priority. And given that focus, do you think that the ranking and the system that you have come up with for listing these items and ranking them is in about the right place or not?

Mr. Martin Virgilio: Yes, because safety overrides all other considerations. We look at each of our activities and judge them against their contribution to safety, public confidence, efficiency, effectiveness, and realism, and reducing regulatory burden. But safety dominates.

When we step back and say, well, okay, relative contribution, how then do you sum them up? And how then do you decide which of are the top third, the middle third, or bottom third? It's safety that prevails.

Commissioner Jeffrey Merrifield: But overall, you're comfortable that this list you've provided us aligns with that objective? One might quibble with a few relative ones, but overall you're

comfortable with that?

Mr. Martin Virgilio: Yes.

Dr. William Travers: If I can just add to what Marty said, I think it's also important to note that we've had every opportunity to interact with the Commission, and we will do that. In fact, in areas where we might not be meeting the schedule in a particular area, I think it's going to be incumbent on the staff to raise to the Commission what it is we're doing or why the schedule is slipping, what's being sacrificed, in what fashion, and in what sort of operational plan or strategy are we utilizing in these areas?

So I think we have every opportunity to keep the Commission informed as we go forward, particularly in areas where we do run into some schedule issue.

Dr. Carl Paperiello: Could I add to that?

Our fundamental job as managers is to make a lot of things run in parallel. The practical matter is, if you try to rank each of these to the most significant to the least significant, you can't do that. We have

tried this over and over again. You can bend them into the things that are most important and least important.

And then there was a time bound relationship. Some things are important but are not time bound as much. For example, the staffing issues that I mentioned are incredibly important, but they are never on a day-to-day or week to week importance. You can have an upset condition that must be responded to in hours.

So I'm reasonably comfortable that we're not in trouble at this point, that we have a lot of things going in parallel. We have due dates that we can generally meet. And when we can't meet a date, and things come up, there are things in here that are outside of our control, we'll inform the Commission. And I see that as our job.

Commissioner Jeffrey Merrifield: A second follow up question I would have is relative to some of the discussion toward the end, relative to the general license tracking system. We're going to be, in the spring of this year, going to be beginning the

second round of our analysis on that, in terms of sending out a second round of forms. At least that's my understanding.

Given the experience we've had with the first round and the difficulties in terms of tracking people down, do you have different sense of what we are to expect for responses and what kind of burdens that may place on us going down the road?

Dr. Donald Cool: Yes, we do. Because, in fact, at that point we have clearly two different parts of the effort. We have the part of the effort which we can call round two, which will be the second round of registrations which will deal with the individuals with whom we have already had a closed communication loop. So my expectation is that we have a much higher percentage of loop closures and a degree of alignment.

Separate from that, and having to continue to run in parallel, is the effort on the first half, that we never closed the communication loop, to try and close that loop and eventually move them into the category where we can have the on-going interaction

with them. And that will have to proceed at a pace and to the extent that we can continue to put resources on it, and who had the biggest sources, and how old was the last time anybody saw them.

But in terms of actually mailing out the second round, which we also expect to include a nice little bill for the fee so we cover fees associated with it, our expectation is that that will have a much greater degree of closure because we have interacted with them once in the last year.

Commissioner Jeffrey Merrifield: Having looked back and learned some lessons, and now that we're engaged with specialized contractors, is there any additional information that we should be asking of our licensees to make it easier for us to keep track of these things?

I'm thinking of things like taxpayer identification numbers or other methodologies to make sure that, as we find people, we can continue to track them as they may move these devices from place to place?

You may not have an answer to that, but I'm

sort of interested in seeing if in fact you're thinking in terms of lessons learned as to how we may improve these going down the line, having done so.

Dr. Donald Cool: In fact, one of the things we've been trying to do very actively as we've pursued this follow-up process is real-time lessons learned, what has worked and what has not worked. And part of what we're doing today is as a result of those initial efforts which weren't working very well, we're burning a lot of regional inspection time or otherwise, and discovering that finding some other resources to do some simple searches so as to be able to focus our resources -- and credit should certainly go to the regions. They've got some folks who decided they would sit down and hopped out on the net and did a lot of the searches and were able to do some of those things. Much of what we're doing today is a direct result of lessons we were learning early on in the process.

Ms. Margaret Federline: If I could just add, in the DOE NRC report that you're going to be getting shortly, we researched a large number of

commercial organizations, how they keep track, as well as other federal agencies. And we have some ideas about parameters that we should track to give us more control and, you know, relative balance of how difficult it will be.

Commissioner Jeffrey Merrifield: I know the staff tries very hard to have a disciplined list of items we're going to discuss today. And as is the preference of the Commission, I'm going to go a bit off track of what you want and get into a decommissioning issue.

In some of the back up slides that you provided the Commission, there is the on-going effort to transfer responsibility of some NRR to NMSS in the issue of reactor decommissioning. And right now as I see it -- and I'll willing to stand corrected -- when you start going through the ongoing decommissioning activities, it would strike me that the agency is probably the busiest it has ever been in this area in terms of the number of former reactors that are currently undergoing decommissioning.

One of the most recent reactors to come to

the end of that process is the Saxton reactor up in Pennsylvania, which, at this point, that activity, as far as I know, is complete. The question that comes out of all this -- and you may want to address this further in the next time we deal with decommissioning, but the question I have is, have we taken an opportunity to engage with the local communities attendant to those reactors undergoing decommissioning, particularly in Saxton, and the individuals who live near there to gain some lessons learned about how we might improve our process, if at all it needs improvement down the line? Have we thought about doing that or have we done that?

Mr. Martin Virgilio: I would like to take a better chop at that at the next meeting, but let me just, yes we have. And I think one of the bigger learning experiences for me and the staff may have been Maine Yankee and some of the interactions that we had with the public and other stakeholders like EPA in that decommissioning activity. I think we learned a lot from that experience. And we do from each individual one.

But public confidence, extremely important, one of our goals. And how do we achieve public confidence around decommissioning? How do we convince the members of the public that our decommissioning standard is the right standard, that it is sufficiently protective of public health and safety and the environment?

I do think that we are learning lessons. We're continuing to evolve and continuing to learn how to do it better.

Commissioner Jeffrey Merrifield: I'll take you off the hook on anything else, because obviously you weren't fully prepared for that type of question today. I know I am getting ahead of myself. But certainly the next time we have the decommissioning meeting, I would like to get into that with some greater degree of specificity. You know, we're very proud of being a learned and learning organization. And I think this is a case where, given all that we have before us right now, we really ought to take the opportunity to learn and be learning from the experience so that we may improve our way of interacting with the

public.

MS. MARGARET FEDERLINE: Can I just add, we have had a formalized process. And I had an opportunity to go out to an industry forum and present the lessons learned and close the loops. I mean, one of the things we want to do is be able to take advantage of any streamlining and make sure that the loop is closed with those who are coming afterwards. So we have formal documentation of this, and we'll share it later with you.

Commissioner Jeffrey Merrifield: Part of my focus isn't just on the industry participants who are undergoing and actually doing a lot of decommissioning. It's also attending to the issues of the people who live there in the communities and how they're involved.

I don't have it in front of me right now. We get various reports on the level of exposures. And obviously in the materials arena, we really do have a lot of opportunity where, unfortunately, individuals can come into contact, in the wrong way, with radiologic materials.

Overall, the last time I saw some of this reporting, things seemed to be going in the right direction in terms of having fewer rather than more. Radiography seemed to be one that might be having some difficulties in terms of a higher number of issues coming up. I don't know if my memory's correct on that. If it is, do we have some sense of any action we need to take or any concern we need to have in that regard?

Mr. Martin Virgilio: I would like to go back to our performance measures. You know, in terms of overexposures, this is certainly one of the things we look at, both from a medical perspective, we look at releases to the environment. And, you know, things are at least as stable, if not trending in a downward direction.

Radiographers are probably one of the more risk significant areas in the materials arena that we regulate. I can't speak specifically, out of the larger group but maybe Don can, as to what the numbers are looking like.

Dr. Donald Cool: I'm not in a position to

give you specific numbers. You are correct.

Radiographers have this propensity for both challenging the limit over the course of the year and for finding themselves in situations where they have an acute situation that causes them to exceed the limits.

We're in January, so over the next few weeks, unfortunately, this is the time of year when we discover as licensees finish up their calendar year dose estimates that we suddenly get a few people that say, oops, I went over the edge. That has happened each year. I wish it was not going to happen this year. On the other hand, I would not be surprised if it did not.

This was identified as we have looked at issues and is, in fact, one of the things we're looking at for a more detailed specific analysis, one of the items that we were in hopes, quite frankly in the National Materials Program pilot, to be the early effort working with some of the states that are very heavy in radiography to do that kind of look.

Mr. Martin Virgilio: Just to give you a

sense of the numbers, you know our performance targets were 30, and looking at 2002, we were at 25. So that kind of gives you a rough number of how many over exposures that we're seeing nationally out of the hundreds of thousands of applications that we have in the nation.

Dr. Carl Paperiello: I might suggest that maybe after we get the data in for 2002, Commissioner, we get back to you and give you some numbers based on --

Commissioner Jeffrey Merrifield: I apologize if with the way I phrased the question, I was looking for -- I didn't expect for, off the top of your head to come up with those numbers. It may have been I was looking at some of the issues relative to ALARA in terms of the total dose. And in fact some of those, for radiographers, may be going up. But my memory, as I said, you guys give us lots and lots and lots of data and charts. And sometimes our memory on those is -- certainly mine is not the best.

Commissioner Edward McGaffigan:

Commissioner Merrifield, my memory is the same as yours. We had some data last Spring about the numbers of people who were getting between 2 and 5 Rem, which is below the regulatory limit but above the ICRP 60 threshold, and this trend was adverse according to the data that we got at that time.

Commissioner Jeffrey Merrifield: I appreciate that. And Commissioner McGaffigan does have a better memory than I do, so I appreciate his correction in that regard.

Last question, really a comment because I do want to pass it off to the Chairman. But, you know, we get information that various states, Minnesota, Wisconsin, perhaps Pennsylvania are going to come in over the next few years. Large states may take with them many licensees if they do become agreement states programs.

We have, over the four plus years now that I have been here, have been nervously anticipating the point where we reach criticality of not having sufficient number of licensees to sustain our materials program. That trend is not going in the

right direction, at least from a fee based standpoint. Although I won't quibble with the notion, we should be encouraging of more agreement states.

Does the staff have some expectation of the point at which we just can't sustain the program and we really are going to need to press hard with Congress to make sure we have the resources necessary from general revenues to sustain the kind of materials program that the public, I think, expects and should demand?

Mr. Martin Virgilio: In response to a tasking the Chairman gave us back in August of 2001, we went back and looked at that question. And in the end we came to conclude that Congress should, but may not likely, give us additional relief in this area. We think the time is now.

Commissioner Jeffrey Merrifield: Thank you, Mr. Chairman.

Chairman Richard Meserve: One of the dangers of coming last is that a lot of questions have been asked and I have just a few to ask, really

to build on -- I would like to build on some of the points that were pursued by both Commissioner Diaz and, at the end here, by Commissioner Merrifield. We have seen, as part of our approach to materials, the fact, as has been pointed out, that we have more and more agreement states, fewer licensees that are licensees to support our program, and the financial bind in which that places us.

And the Commission has had the work before it from the staff that resulted in launching the pilots which was to try to find relationships with the states that would enable necessary work to be done, alliances of various kinds. And the pilots were intended to explore that.

I wonder whether we're at a point where we need to seriously re-examine this whole area again. We have a large number of states that are in very substantial red ink. And the expectation that we had, that the states were going to have a capability to be able to take more of the work, I think, is increasingly in question. And in a world in which once -- and in many states this has meant

that there have been drastic cutbacks in state employment and that they are made to handle very severe budget crunches by basically downsizing the size of agencies. I don't know whether that's happened with the agencies with which we would deal. But we expect it would happen. And once you've lost that capability, then that's, as we are seeing very much in our problems on building up human capital as you've indicated, that's a resource that, once it's gone, it takes time to rebuild.

And I'm just wondering whether our strategy for thinking about this issue is one that needs to be re-examined and that our premise that there was a cooperative enterprise that we could engage in with the states where they could take a significant amount of the load seems to me that might be something that is subject to question now. And given that, that we need to find some other solution. I would ask you to comment.

Mr. Martin Virgilio: We would agree. And I go back to the -- you had tasked us to go back and look at this in August 2001. We did the study. We

completed the study in June of this year. And I don't think much has changed since June of this year.

It underscores the points that you're making. Where we are with the National Materials Program, I think our assumptions a couple of years ago as to how they could help us are now being, I think, moderated by the actual physical conditions within the states.

We've gone back and we've looked at our own processes and our own programs. We've really scrubbed through our programs. We've looked at what work we're doing and how does that work contribute toward performance goals. And we've shed the work that doesn't contribute to our performance goals.

We looked at can we do our work more efficiently. And we have scrubbed down and have found ways to make our programs more efficient, significantly more efficient to the point that we were able to accommodate, this past year, all the new emergent work that came on our plate. But I don't know that we'll be able to do that again next year looking at the emergent work that is coming at us. There's a real limit to our ability to do that.

So the bottom line of our study, when we concluded that in June of 2002, was that we're at that point now where we need to look at other mechanisms to fund the materials program here at the NRC or the National Materials Program, however you want to look at it. But we really do think we need to go back to Congress. Again, looking at the realities, it's not likely they're going to give us the relief. It feels like we're caught between a rock and a hard spot.

Commissioner Jeffrey Merrifield:

Mr. Chairman, I would like to associate myself with the question that you raised and the concern you have, which I share.

Chairman Richard Meserve: It seems to me that if the situation is changing, as it appears to be, that as a principle basis for going back to the Congress, where we have a problem that's emerging which is a national problem, that we ought not to prejudge what the outcome would be.

It may take a while to build the case. But if the reality is in front of us, then we're not

doing our job if we're not forcing it to be confronted in the political sphere where the answer has to lie.

It does seem to me that there's another aspect to this, and perhaps Paul would like to respond to this, that as we're seeing the inevitable diminution of the state programs, that that has implications for us in our IMPEP efforts in that we may find something, where we found programs to be adequate in the past, are going to be increasingly challenging for the states to be able to demonstrate that they're meeting our requirements.

I would think that we ought to expect that the scrutiny that we're going to have to deal with, and the states and problems that we're going to confront there, I would guess, are going to grow.

You know, it seems to me that's yet another issue that then becomes part of our agenda that we're going to have to deal with. And Paul may want to correct me as to what the impacts are. But given the numbers I'm seeing in just our neighboring states as to what they have to deal with in the way of budget

deficits, we ought to anticipate problems across the board in this area.

Mr. Paul Lohaus: You're exactly right.

We're seeing this in our IMPEP reviews. On the recent report we provided to you, there are three states in the middle category, the adequate but needs improvement category.

We have two states that are currently on heightened oversight. There are a couple of states that just came off of heightened oversight. This is more states in that category than we've ever had in the past. For example, Texas did a study in the fall. They did a survey of the agreement states. They had a very good response. They had 25 of the 32 states responded. Seventeen of those states reported some type of reduction, either in budget, freezes in terms of hiring a new staff, furloughs, a whole series of things. And it was coming both from the legislator, the executive level, and at the department of level. And they all reported. This is having an impact both with respect to the materials programs and also with respect to their x-ray

programs.

They're coping with this. I think in the short term we see effects, but not moving them to the bottom category where they're not adequate to protect public health and safety. But we're watching this very closely. There are three other states that we had that we're monitoring at this time because of concerns that came out from the in between IMPEP interactions. And we put them on monitoring. We're placing calls and staying in touch with what's going on.

At our MRB meeting yesterday that Margaret mentioned, a report from one of the states, Maryland, where they're experiencing difficulties, they've lost staff, they have a hiring freeze, they're not able to hire. So this is an area where we're watching this closely. We have tools. We're applying those tools. And there's uncertainty over the long-term, Chairman.

Chairman Richard Meserve: Let me ask about one other area that relates to the same problem. As you've indicated in your presentation, there are a number of things that we're thinking about in the security area. And exactly how our relationship with

the states are on this issues is something that needs to be resolved. But I know at one time we contemplated for some of the interim compensatory measures that some of the states would be, perhaps, doing some of the inspection that would relate to that, perhaps with some compensation from us.

But there are other activities where, if we expect the states to implement comparable regulations, that there are going to be compatibility issues needs for states that undertake rulemakings.

So I think that this is yet another dimension of this, an area where our regulatory program is changing and where we anticipate that the states or we insist that the states keep up with us. We're facing yet another area of conflict with the fact the budget realities of which the states are confronted and what we're asking them to do. And I may be wrong. Maybe the interactions, because security is such a high priority for them that this is to the top of the list and we don't need to worry about this. But I would be surprised if that's the case.

Mr. Paul Lohaus: The states are giving the

security area a high priority. And to maybe add some balance to this, if you look at some of the programs based on the recent IMPEPs, they've come out fully satisfactory with no recommendations.

There's sort of a formula for success that some of the programs are using. And the states are looking at this. Some of them are moving in this direction. For example, New Mexico recently did this. They're looking to establish better fee systems that are apportioned to the programs. They are providing that the fees that are collected are specifically earmarked for the radiation control program. What they do is put a portion of those fees back into staff development and training.

And there were several states on the past reviews that had basically had clear records, had very strong programs, good staff stability, but that was sort of the formula they were using. They have an adequate fee base, they keep it in pace with their needs, and they're earmark the funds from those fees back into the programs. And I think we'll see more and more states following that path. It will provide

some relief for them in this area. It's a good model that some have used and others are beginning to follow suit.

Commissioner Nils Diaz: You may want to simplify the SRM and show that we're not voting on supporting this.

Chairman Richard Meserve: Okay. I think that's enough for me in this area. I think there are some serious issues that we're going to have to confront.

Dr. Carl Paperiello: Can I add something on that? We have been watching the situation with the agreement states and our budget very carefully. And I think even the survey that was referenced, if I recollect from the October meeting, we sent up to the Commission a copy of that.

We're watching, not just at the IMPEPs but at the MRB meetings. We're discussing the results of the periodic visits to the states. So we are watching. The practical matter is the MRB has been, in many cases, instrumental by sending an appropriate letter to the right place or talking to the right

people in the state, seeing that in spite of the difficulties, additional resources go to the agreement state program.

If we saw a problem, I think we've been keeping the Commission informed by the various written communications from State Programs with the status of the various states. If we saw a serious problem out there, we would tell you.

We're very sensitive to the issue that you raised, you know. And my observation is usually the problems come a year to eighteen months after the money gets cut. I'm not thinking just of the agreement states. I'm just thinking of all of the regulatory activities we've been involved in where budgets get cut and ramifications occur down the line in organizations. So we are watching it.

I want to assure you that today there isn't a problem out there, I mean in the sense that the public health and safety is affected. And I don't recognize that there's a potential.

Chairman Richard Meserve: And I don't want my questions to be interpreted as being critical of

the states. I'll pick up the point that Commissioner Diaz just made, that we have a common problem with the fact that they're facing significant budgetary problems within the states. We have a national program that we're interested in. Some way or another we need to make sure that happens and the program is implemented in an efficient and effective way.

And one important component of it, namely what the agreement states can do in some areas, is significantly disabled right now.

Commissioner Edward McGaffigan: Mr. Chairman, can I ask one related question? I think it's fairly simple. What is the probability that you would assign to a state or one or more states, giving back their agreement in the next three years?

Dr. Carl Paperiello: I couldn't give you a number. I would be surprised if a state gave an agreement back.

Dr. William Travers: I asked a question just a moment ago, do we have any inclination that there's someone out there considering that. And the

answer was no.

Commissioner Edward McGaffigan: Better not tell the state legislators that there's a possibility.

Chairman Richard Meserve: I would like to thank you all for a very helpful presentation. Your work is very important to the agency and to the country. And we very much appreciate your efforts.

With that, we're adjourned.

<Whereupon, at 3:30 p.m., the  
Commissioner's Hearing adjourned.