UNITED STATES NUCLEAR REGULATORY COMMISSION

BRIEFING ON OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS (NMSS) PROGRAMS, PERFORMANCE, AND PLANS

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THURSDAY

March 8, 2007

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The Commission convened at 10:00 a.m., Dale E. Klein, Chairman, presiding.

NUCLEAR REGULATORY COMMISSION

DALE E. KLEIN, CHAIRMAN

EDWARD MCGAFFIGAN JR., COMMISSIONER

JEFFREY S. MERRIFIELD, COMMISSIONER

GREGORY B. JACZKO, COMMISSIONER

PETER B. LYONS, COMMISSIONER

PRESENTERS:

LUIS REYES, EXECUTIVE DIRECTOR FOR OPERATIONS

JACK STROSNIDER, DIRECTOR, NUCLEAR MATERIAL SAFETY AND SAFEGUARDS

ROBERT PIERSON, DIRECTOR, FUEL CYCLE SAFETY AND SAFEGUARDS

E. WILLIAM BRACH, DIRECTOR, SPENT FUEL STORAGE AND TRANSPORTATION

LAWRENCE E. KOKAJKO, DIRECTOR, HIGH-LEVEL WASTE REPOSITORY SAFETY

MARK FLYNN, DIRECTOR, PROGRAM BUDGETING, PLANNING, AND ANALYSIS DIVISION

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

CHAIRMAN KLEIN: We look forward to hearing from the NMSS today. I have to get all these acronyms down. We will hear about your reviews of what you've done and what you're going to do. I know it's been a very active and productive time.

We'll also hear about, I'm sure, your relocation to Executive Boulevard now that we have the financial resources to continue that project.

Before we really get started, I assume that it's appropriate to make the special note that an individual that is thinking about retiring as I understand it; that Jack started out as an intern at the NRC over 30 years ago.

So this may be your last meeting, although we do have a rehiring option. We'll talk to you about that but, Jack, thanks for your service for all these years. We look forward to your continued participation in some way or else if you really do decide to retire.

Any comments from my fellow Commissioners?

COMMISSIONER McGAFFIGAN: Mr. Chairman, I'll join you in commending Jack for a distinguished career here at NRC. The 10 years I've been here I think he served in four different offices. Is that correct or is it three?

He can't keep a job because he's very good at each job he does. We'll miss him. It's effective the end of March or April?

MR. STROSNIDER: The end of March.

COMMISSIONER McGAFFIGAN: You've got some big shoes to fill.

COMMISSIONER MERRIFIELD: Mr. Chairman, I too, would like to join in making some comments about Jack. He has been real stalwart here at the agency. I think

he's messed up a few of Luis Reyes' succession plans by leaving at the time he's chosen to leave because I think there would have been, had he chosen to stay, even bigger and better things for him. Certainly we recognize all of us in life make choices to move on.

Since I'll be moving on later on this year, you're beating me out the door. I would say it was a pleasure. I think for me one of the more noteworthy issues that Jack has worked on recently was the task force on protection of radiation sources.

Jack and I had a chance because we're both working on that to spend an extraordinary amount of time together and I think the fact that we were able to come up with such a good report was because of the amount of time and effort and personal expertise that Jack invested in that.

We will have more opportunities to wish you farewell, but certainly this is a good opportunity to talk about some of the successes you had and the real value you made to this agency. Thank you, Mr. Chairman.

CHAIRMAN KLEIN: Thank you.

COMMISSIONER JACZKO: I guess I would just add that I, too, appreciate the work you've done and I've enjoyed the opportunities we've had to work together. It's not been nearly as long as Commissioner Merrifield and Commissioner McGaffigan, but I certainly have in that brief time seen the contributions you made to this agency.

I certainly appreciate that I think as Commissioner McGaffigan said it will be a challenge to replace you. I wish you well in your endeavors and I hope that they somehow involve the agency.

COMMISSIONER LYONS: My turn? Jack, I really appreciated the chances

we've had to work together. You certainly helped me learn what it means to be a Commissioner here and I've appreciated that. A lot of good interactions, not as many as my more senior colleagues, but certainly wishing you all the very, very best in the future.

MR. STROSNIDER: Thank you. If I could take a brief moment, sir, I want to thank you for all those kind words. It really does mean a lot to me.

I'd also like to say in response that I really appreciate the opportunities that the Commission has given me, willing to take a chance and let me do different things. I've had the opportunity to do things I couldn't have dreamed of when I came here out of school 31 years ago and I really appreciate that. So thank you.

COMMISSIONER JACKZO: I thought everyone dreamed of being an office director.

COMMISSIONER MERRIFIELD: Certainly dreaming to be a Commissioner.

MR. REYES: But it turns to a nightmare. No.

CHAIRMAN KLEIN: Luis?

MR.REYES: Good morning, Chairman and Commissioners. The staff is prepared to brief the Commission on the activities of the Office of Nuclear Material Safety and Safeguards. It's been about a year. It was March of last year when we briefed the Commission, so we're going to bring you up-to-date on a lot of activity during the last year.

I'm going to turn over the mic to Jack. He has members of the executive team at the table and we have other members of the staff and the regions behind us in case we need additional support for that. Jack?

MR. STROSNIDER: Chairman Klein, Commissioners, good morning.

Speaking of opportunities we appreciate this opportunity to brief you on our role in ensuring the safe use of nuclear materials. In particular, the safety of the nuclear fuel cycle.

The newly reorganized NMSS is streamlined, focused and energized. We're ready to protect people and the environment and to ensure the safe use of nuclear fuel throughout its life cycle. That's from ore conversion and enrichment through storage and transportation to its final disposal.

The Division Directors will tell you about their programs. Bob Pierson is going to talk about Fuel Cycle Safety and Safeguards Programs. Bill Brach will talk about Spent Fuel Storage and Transportation. Lawrence Kokajko will talk about the High Level Waste Repository Safety Programs and Mark Flynn from the Program Budgeting, Planning Analysis will talk about the administrative support that is necessary to make all our program areas function smoothly and effectively.

Also joining us today are Eric Leeds the new Deputy Director. We're really happy to have Eric on board. He's a real asset to the organization and glad to have him as part of NMSS.

We also have representatives from the Regions, from the Office of General Counsel, Office of Research, Federal State Materials and Environmental Management Programs, Nuclear Reactor Regulation and the Center for Nuclear Waste Regulatory Analysis.

I just want to take a moment here to thank them for their valuable support, not only today, but throughout the year. We couldn't implement our programs without working as a team and they really do a good job helping us and working together.

The resurgence of interest in nuclear power has received much attention from the

utility industry, the public, and from the NRC. In this respect the reorganization of NMSS is timely.

It caused us to consider our mission, our goals and our objectives in the context of the entire energies restructuring to meet the upcoming challenges and we're excited by these challenges. Actually, we like to look at them as opportunities.

Extending the life of existing nuclear power plants and potentially licensing new nuclear plants inevitably will mean an increase in demand for fuel, whether it's enriched uranium or reprocessed spent fuel.

Along with this increase in electric generating capacity will be an increase in the production of spent fuel, increase pressure on interim storage, facilities and transportation, and finally the need to be prepared to make licensing decisions on the proposed geological repository at Yucca Mountain.

Our role is clear to us. We will be a strong regulatory organization, clear in our guidance and decisive in our licensing and enforcement actions. We will maintain our primary focus on ensuring safety.

At the same time, we don't want to become a limiting factor in the safe use of nuclear materials. In order to achieve these goals, we'll need to maintain a well qualified workforce.

We need to transfer the knowledge and experience gained from over the past 30 years of effective regulation and we'll need to establish the regulatory infrastructure needed to respond appropriately to the technical innovations we anticipate will characterize the next generation of nuclear power.

We look forward to meeting these demands and to the opportunity to ensure that the

nuclear fuel cycle continues to safely meet the needs of the Nation. With that, I'm going to turn it over to Bob Pierson who will talk about the Fuel Cycle Safety and Safeguards Programs.

MR. PIERSON: Good morning. My name is Bob Pierson. Thank you for having us here today. We appreciate the chance to talk to you about our program.

The first thing I'd like to talk about is the key messages of what we're trying to accomplish here. We do what we think are efficient, effective reviews in the fuel cycle area. We've had several major successes, one of which is the issuance of the LES license application, which we did on schedule. We're also meeting key milestones with respect to the other major applications, the U.S. Enrichment Corporation.

Second, I'd like to talk a little bit about the timing and the amount of work. It's uncertain and difficult to project how we're going to do this work, when we're going to do this work, and the degree of involvement we'll have to accomplish the work. That provides a challenge for us in trying to accomplish our mission for insuring that we have the qualified, trained staff available to do the work.

And last, these new and different technologies require different skills sets than what we currently have in place. We have to seek out other people to come in and help us accomplish the objectives.

We'll probably have to train internally and we'll have to go out and recruit for specific expertise, either within our organization or support us contractually to accomplish that.

What have we done in fuel cycle? We've issued the license for the LES National Enrichment Facility. Next slide, please.

This is a major accomplishment. The Commission issued an Order and asked us to do it within 30 months and we met that objective. It was a significant challenge for the staff to be able to accomplish that and I think it's a tribute to the staff's ability to rise to the occasion that we were successful in accomplishing that.

The second is we've issued the SER and final EIS for USEC. We're probably not going to meet the thirty month schedule for USEC, but we're very close.

We had some problems associated with things like decommissioning, financial assurance, a few other things and we're probably running about two months late on that. We hope to have that license issued sometime this spring. The hearing is expected to start the week of the 19th of March.

The third thing that I'd like to talk about is the Mixed Oxide Fuel Fabrication Facility. This is a very difficult program to regulate for the Nuclear Regulatory Commission. We have a lot of involvement internationally. We have involvement from the Department of Energy.

We have schedules to meet and we have all the conflicting priorities that go with meeting these different stakeholders and how they're involved with the process. That involves a lot of challenge for us to try and meet the objectives of what they're trying to accomplish, to do it in an effective manner, and to complete the program and reviews to support the national objectives. Next slide, please.

To continue on with accomplishments, I don't want to sell short the day-to-day activities that we do in our organization. We're in the process of approving ISA summaries for most of our licensees. We've achieved two of those, AREVA-Lynchburg and BWXT, which is our major CAT I fuel cycle facility.

We're close on all the rest of them. We would like to get them all done by April 2007. That may be a bit ambitious. We got a few technical issues outstanding, one of which involves common controllers and I&C components which we'll have to come up with a manner and way to accommodate that and not get too far ahead of what some of the other issues are that are affecting the advance reactor work.

I'd also like to talk to you about the fuel cycle information exchange. As you probably are aware, in the reactor world we have what we call the Regulatory Information Conference.

The Fuel Cycle Information Exchange is something we started. Last year we had our first one. We invited the stakeholders in to talk and interface with us and it went very well. We got a lot of positive feed back from the industry and stakeholders in terms of how that's going to be done. We have another one planned this summer for June 12 and 13. I'd invite your attention.

I'd also like to talk about one of the successes we had which is the downblending verification with IAEA. That was a seven year program. It's interesting from my perspective because it started out in FCSS then went to NSIR and now it's back to FCSS, so it's kind of interesting to come back and have this.

It's a program where we had IAEA verification of downblending of HEU associated with protocol. It's a very significant accomplishment that we're able to do that and make the processes work for the verification of ongoing oversight.

Next, I would like to talk a little bit about an innovative program we're working with Region II where we're working to come up with what we call a different way of doing

enforcement oversight.

We're working with alternate dispute resolution with one of our licensees to handle - I wouldn't want to characterize a large, but a number of events and a number of enforcement actions that would cause us to be concerned about their ability to safely run the program.

So we've introduced alternative dispute resolution to try and work with the licensee to affect the root cause and change it rather than giving them enforcement actions to change. Next slide, please.

Going on with additional accomplishments, MC&A rulemaking activities. We have completed the technical basis for changes to Part 74. We have the technical basis for the rulemaking that identifies MC&A requirements for materials stored and handled in surface buildings that's distinguished between surface buildings that would go to support a geological repository as opposed to surface buildings that would support an integrated and independent spent fuel facility.

We also submitted a proposed rulemaking for the National Materials Management and Safeguards System. This is in response to initiatives that were post 9/11. Next slide, please.

Future challenges; this is the thing that concerns me. This is what keeps me awake at night. This is what keeps me thinking when I'm driving back and forth to work wondering how we're going to do this.

We have four major things that I think are on the plate right now. One is GNEP, one is SILEX, one is MOX and one is conversion/deconversion. What are we going to do with that?

With GNEP this is a program that the Department of Energy has started and the question is what's the NRC's role and how involved and what time frame do we do to get involved?

If the country takes this initiative and works and develops this Global Nuclear Energy Project and the NRC is expected to provide regulatory oversight, and the schedules are consistent with what are being promulgated today, then we're almost behind before we've even started because we really need to have rules in place and have guidance in place so that a licensed potential applicant can come in and apply understanding what the rule requirements would be that we would be suggesting.

This is something that we need and we're in the process now of sending a paper forward to the Commission and asking for some guidance from your perspective about what we need to do, where we need to go, and how we need to interface with the Department of Energy.

We're also working with the Department of Energy to get a cost reimbursable MOU to allow staff to become familiar with the technology but one of the things that is hampered by that is we don't think that we can allow cost reimbursable resources to do regulatory development. I think that's really the long pole in the tent that we need to address.

The next one I'd like to talk about is advanced enrichment technology, which is SILEX. It's a separation of isotopes by laser enrichment. This is a slight variation of a topic that we had in the past, which was AVLIS, which again is a laser separation technology but it's different.

It's going to require some innovative thought in terms of proliferation resistance, in

terms of material control and accounting, and in terms of how we control the information and how we do the review. Again, we'll be exploring that and moving forward to figure out how to accomplish that.

Next, I'd like to talk just a quick second about the Mixed Oxide Fuel Fabrication. We talked about that earlier in the presentation. This is a place where we really get the hands-on experience in terms of licensing that provides a good growth path into GNEP and SILEX.

I was very concerned early on when we had the budget uncertainty about losing potentially the MOX program because it provides the seed for us to maintain the technical cadre of folks to allow us to be able to more easily step into these other technology reviews.

I'm relieved to see that Congress is moving forward with MOX and we are as well. We're in the process now of looking at continuing the review of the license which was submitted earlier this year and we've approved the license and we'll be proceeding with our review.

The next thing I'd like to talk about quickly is uranium conversion/deconversion. As you probably know we have one conversion facility in the United States, which is Honeywell. It is my expectation and I think the industry's expectation that we are going to get additional facilities to do conversion work.

It's unrealistic to think that the one existing facility metropolis would be able to maintain the demand. Our regulatory infrastructure wouldn't support that, whether we regulate it or whether we allow Agreement States to regulate it, we need to do some regulatory infrastructure. We need to do some revisions to 10 CFR Part 40.

We'll be coming forward to you with the paper to talk about a proposal for accomplishing that as well because that's a place where over time, our oversight of the Honeywell facility is built up the license is an adequate license for their facility but the license has probably got a lot of specifics in it that wouldn't necessarily be easily extrapolated from the regulation if the regulation were not updated to accommodate it. Next slide, please.

COMMISSIONER MERRIFIELD: Bob, for the purposes of the record, you started the slide by saying you were listing things that keep you up at night. You were reflecting the amount of work that we have ahead of us, not a safety concern.

MR. PIERSON: It's not a safety concern. What I'm concerned about is juggling my resources to accomplish this. I feel remiss in not providing this Commission paper on conversion/deconversion already. The point is I just haven't had anybody to do the work on it. It's something that will be coming shortly.

I'm not staying awake worrying about safety issues, I'm worried about being able to address the future of these pending safety issues.

COMMISSIONER MERRIFIELD: I just wanted to make your point clear so there is no ambiguity. You don't have safety issues that keep you up at night relative to the facilities?

MR. PIERSON: If I do I'd put resources on those quickly. These are ongoing issues that -- this is the kind of thing that are long lead times, training issues, resource issues, availability issues. The problem is you get behind.

When you get behind on something, you have a difficult time catching up. You spend

additional resources and you get even farther behind so these are the things that I feel we need to be looking into.

COMMISSIONER MERRIFIELD: When I asked the question, "Is it a safety concern that keeps you up at night?" a yes or no answer would have been sufficient. Keep going.

MR. PIERSON: Ongoing for the future challenges, the next one is New Facility Safety and Safeguards, Licensing, and Inspection. As you probably aware we're entering a new realm particularly in the area of construction.

We're doing the first major construction facility in the fuel cycle area and it's done through Region II oversight of the LES facility and we're going to be following that in rapid succession by construction of the MOX facility.

A lot of the lessons learned that we had from the 1970's and 1980's, we're going to be the ones that are ensuring that the licensees are actually implementing them.

It's interesting to see some of the problems that are happenings at some of the Finnish construction projects because if you've been in this business long enough you realize that some of those things were things that we went through '78, '79, '80.

We need to be careful that we don't do the same thing again on that. That's a challenge for us in Region II.

The other thing is the IAEA Safeguards at New Facilities and Implementation of Additional Protocol. This additional protocol will expand the regulatory realm of NRC. We have to work with some of our stakeholders elsewhere in the government to make sure that we have the appropriate oversight and appropriate allocation of resources to be able to

accomplish that. Next slide, please.

Strategies for success; we need to continue to risk inform the process. We need to develop and maintain expertise of our people. What we try to do is hire educated people that can be flexible, that can be used at a number of different venues. That allows us the flexibility to do these different technologies and accomplish that.

We also need to increase resources. We also need to develop new regulations and guidance, some of which I've talked about. We also need to continue to stress staff flexibility, the willingness to move to different technologies, to different work, to be able to accomplish that. Next slide, please.

Commission decisions; we have two papers that are going to be coming forward to Commission relatively soon. Our GNEP paper is in the last throes of staff concurrence so it should be imminent, I would hope within the next couple of weeks.

And it's basically telling the Commission what we think might be some options in terms of how the staff can be engaged, what some of the regulatory options might be, what some of the recommendations might be with respect to how we proceed with our GNEP oversight, should that be something that we need to accomplish.

The next one of course is conversion/deconversion. I talked about this earlier so I'll move on through that. Next slide, please.

Commission decisions - fuel cycle facilities: We have a number of MC&A rulemakings that are for Part 74 changes. Fiscal year 2009 SNM facility final rule and then like I talked about earlier the building of the potential geological repository and how they would be differentiated from an integrated independent spent fuel storage facility.

And then enhanced requirements for NMMSS. We've got the dates laid out in terms of 2007/2008 for each of those. So that concludes my presentation. I sort of skipped over some of that, but I'd be happy to answer any questions now or later.

MR.REYES: We'll keep the presentation going.

MR. PIERSON: All right. So, Bill.

MR. BRACH: Thank you, Bob. Good morning, Chairman and Commissioners. I'll be discussing the Spent Fuel Storage and Transportation Division activities.

Nuclear power plants continue to need to increase their spent fuel storage capacity to support plant operations. Since our last program briefing last year to the Commission, eight additional independent spent fuel storage installations have been licensed. There are now 45 NRC licensed spent fuel storage facilities.

Based on nuclear power plant projections, we anticipate an additional 17 new storage facilities to be licensed in the next few years. With the exception of two site specific licenses issued last year, -

COMMISSIONER McGAFFIGAN: can I ask a clarifying question? Most of these new facilities are generally licensed, right?

MR. BRACH: That's correct.

COMMISSIONER McGAFFIGAN: People are using casks that are certified through the certification program and then their Part 50 license allows them to do this.

MR. BRACH: That's correct.

COMMISSIONER McGAFFIGAN: Since they pose different issues as you go

through your numbers, can you give us how many are generally and how many are specifically? If that's too hard, we'll get it after.

MR. BRACH: All of the new planned facilities for the seventeen I mentioned are all planned as generally licensed facilities. With regard to the 45, sir, about 15 are site specific and the remaining 30 are all generally licensed ISFSIs.

As you just mentioned, with a general license there is no specific application to the NRC for spent fuel storage facility, rather a general license is conveyed to Part 50 nuclear power plant licensees who elect to use an approved dry cask storage system licensed under Part 72.

We continue to experience significant stakeholder interest in spent fuel storage and transportation at the National, the State, and local levels.

With the increase in the number of new storage facilities, the regional offices with our support have engaged in local town hall type meetings to discuss the NRC regulatory licensing and inspection programs and to answer questions from local government officials and public citizens. We typically hold these meetings in the evening to facilitate increased attendance by local members of the public.

As the Department of Energy continues to make progress in transportation planning for Yucca Mountain, we're engaging with stakeholders from Nevada and from other States including the corridor states through which many spent fuel shipments will travel en route to the repository.

Over the past year there have been a number of considerations at the national level which could have a significant impact on our spent fuel storage and transportation program.

In the last session of Congress, proposals were considered which could have resulted in a significant increase in new storage facilities or new regional storage facilities.

The Global Nuclear Energy Partnership that Bob Pierson just mentioned brings new considerations on recycling, reprocessing the spent fuel which could have an impact on the number and the characteristics of spent fuel to be shipped. The program may also introduce new advanced reactor fuels which can bring new technical challenges to our storage and transportation programs.

We continue to closely monitor these considerations and others to stay abreast of potential influences on our program. May I have the next slide, please?

On this slide and the next, I have identified some major program accomplishments over the past fiscal year. I believe we successfully implemented the agency's strategic objective of enabling a safe and secure use of nuclear materials by providing an effective, transparent, technically sound program for the licensing and inspection of the interim storage of spent fuel and the transportation of radioactive materials.

Let me now highlight just a few of our accomplishments. In February of last year after receiving Commission authorization, we issued a Part 72 spent fuel storage license to Private Fuel Storage, for the first of a kind away from reactor independent spent fuel storage facility.

You may recall this was a highly contentious and highly visible licensing process for the staff. I also want to recognize the significant contribution by the Office of General Counsel and staff from other offices in supporting this licensing action.

We continue to challenge ourselves to improve the timeliness of our casework. We set a goal to improve our timeliness of reviews by 30% over 6 years. That's a 5% improvement per year for the next six years and we're now two years into the six year period.

This past year we met all our strategic plan milestones and output measures for casework completion and we were able to achieve the forecasted improvement in the timeliness of our reviews. I would note the timely and effective implementation of the spent fuel storage installation inspection program as well by the four Regional offices and our headquarters staff.

We also provided extensive support to the Office of Nuclear Regulatory Research and the completion this past year of the dry cask storage probabilistic risk assessment. This was a multi-year collaborative effort of our two offices. May I have the next slide, please?

Often we are asked in public meetings the "what if" questions. That is, what would've happened if the spent fuel transportation package had been on the train in the July 2001 Baltimore tunnel fire or on the truck in the April 1982 Caldecott highway tunnel fire?

We completed the studies, briefed the Advisory Committee on Nuclear Waste and issued publicly available reports that examined these "what if" questions. We concluded that there would not have been any release of spent fuel from the transportation packages had they been subject to the temperature extremes from either of these real life tunnel fires.

In the transport packages, which do not have a welded inner canister, there could be some minor release of crud materials from the surface of the spent fuel rods but any release

was determined to be well within the Part 71 regulatory limits. This release was premised on a total loss of the package's seals.

Through a user need request for research with the Office of Nuclear Regulatory Research, we are evaluating seal behavior in these fires scenarios to determine the extent the seals would have continued to perform their function and the extent of any release.

I would also note that the completion of the tunnel fire studies addresses in large part a question raised by the National Academy of Science in their February 2006 report on spent fuel transportation concerning performance of spent fuel packages in extreme fire conditions.

And lastly, I want to recognize a significant technical assistance and program leadership our staff has provided internationally in both radioactive material transportation and spent fuel storage activities.

This past year we chaired an international transportation seminar, chaired international conference sessions and technical consultancies. We also helped write guides and standards, provided expert technical assistance in the IAEA's review of other countries programs, and led the development of risk informed changes to the international transportation standard including, for example, significant progress in the area of transportation package surface contamination limits. May I have the next slide, please?

As we look to the future and prepare for casework anticipated this year and in the next few years, we are already experiencing a growth in the technical complexity of both our storage and transportation reviews in areas such as high burn up fuel, burn up credit and moderator exclusion.

We have a number of collaborative efforts underway with the Office of Nuclear Regulatory Research, Electric Power Research Institute, the Department of Energy, Nuclear Energy Institute and others to address these technical challenges.

In the past few months we've reached a closing point on three casework reviews for which we either closed the review based on an incomplete application or closed the review with outstanding significant technical issues remaining after two rounds of questions.

The evolving technical complexity of the applications has contributed in part to our closure of these reviews. However I'm concerned that we, the NRC staff, may be changing our expectations or the measures of technical information necessary for us to reach a regulatory acceptance.

In this regard we're conducting an internal self assessment and we will be engaging with the industry on this topic.

Maintaining staffing levels continues to be a challenge. Over the past three years, our division has experienced an annual attrition of 16% to 18%. That's a loss of approximately one out of every five staff members in each of the past three years. Our attrition this year to date is no exception.

Our division management takes pride in the large numbers of division staff who have used their experience in our organization as a steppingstone forward in their career. However, recruitment, staffing and training continue to be a significant challenge to us.

As I discussed on my first slide on key messages, the potential for changes in the National spent fuel management program could have a significant impact on our spent fuel storage and transportation program at the NRC.

For example, staff estimated that some of the proposals to create the many new spent fuel storage facilities could require a significant increase in both FTE and contract funds to support the technical review and anticipated licensing hearings.

We continue to monitor closely proposals in this area to stay abreast of potential influences on our program. May I have the next slide?

COMMISSIONER McGAFFIGAN: Can I ask a question on that slide? Yesterday we heard about 15%, I think it was NSIR attrition rates but that was mostly to internal other offices. Your 16% to 18%, is that mostly internal people getting opportunities in other offices or is it people leaving the agency?

MR. BRACH: The answer is most are internal. Over the last three years approximately two-thirds of all the staff that have left our office to a new position, approximately two-thirds of all those staff were moving within the agency in a career path progression to a new position in another office.

COMMISSIONER McGAFFIGAN: The net number of around 6% would be consistent - the challenge faced by the EEO and all of the senior managers is how much is it important to rotate people and how much is it important to keep people in offices so they develop expertise.

At the moment, we seem to be erring on the side of moving people around as opportunities arise so that they're better presumably capable down the road. I just wanted a clarification that this is mostly internal.

MR. BRACH: The two thirds were all staff promotions of moving to a new grade position or moving from a staff position to a management position.

COMMISSIONER McGAFFIGAN: Thank you.

MR. BRACH: May I have the next slide, please? Given the challenges, let me discuss a few of the initiatives and activities we have to build an organizational capacity to meet our program needs.

As we just mentioned, the key to our program success is our staff. Considering our high attrition rate our effort to facilitate knowledge management and knowledge transfer from our senior staff to our new staff is critical to our continued success.

Through our monthly technical seminars, discipline working groups, mentor relationships and qualification programs we have been reasonably successful in this regard to date.

I try to challenge our staff to continually search for new approaches. For example, through our engagement in international reviews of other developed countries' regulatory programs, we look for new and alternative approaches.

This past year we've embarked on two initiatives to improve the effectiveness and efficiency of our regulatory framework. This past year we are developing a common standard transportation review plan with our Canadian counterparts to facilitate our reviews and approvals of transportation packages used in cross border shipments.

We also initiated a revision of our Spent Fuel Storage Standard Review Plans to incorporate in part the insights gained from recently completed dry cask storage probabilistic risk assessment.

During the past year the Divisions of Repository Safety and Spent Fuel Storage and Transportation have formed a working group of management and senior technical staff to

provide coordination between the two organizations and our respective review roles of the Department of Energy's Transportation, Aging and Disposal Canister Design.

Our collective goal was to assure that Parts 71 Transportation, Part 72 Storage and Part 63 Disposal Requirements are well understood by the staff and our reviews are well coordinated. May I have the next slide, please?

On this I want to briefly profile two topics which we'll be bringing to the Commission. The first topic, moderator exclusion, involves possible approval of fissile transportation packages, package designs which would take credit for the package's ability to preclude moderation from entering the package during transportation.

A number of applicants have expressed interest in and are planning to request NRC approval of moderator exclusion in their package designs. The staff recently briefed the Advisory Committee on Nuclear Waste on this subject and received favorable comments on some of the technical considerations being evaluated by the staff.

I would add that the staff believes routine approval of moderator exclusion is a matter which requires Commission engagement and we plan to provide a paper to the Commission on this topic in the next few months.

The second topic involves the staff preparation of proposed rulemaking and paper for the Commission on the licensing terms and renewal periods for our storage cask certificates and licenses.

The Commission has previously provided guidance to the staff on this activity and we envision a proposed rulemaking package would be provided to the Commission for consideration later this calendar year or early next year.

This completes my brief overview of the Division of Spent Fuel Storage and I'll now turn the presentation over to Lawrence Kokajko to discuss the Division of Repository Safety.

MR. KOKAJKO: Chairman Klein, Commissioners, good morning. I'm happy to have this opportunity to tell you about the Repository Divisions' activity. As you know the U.S. Department of Energy publicly maintains its intent to submit a license application for the national repository at Yucca Mountain no later than June 2008.

The repository safety staff maintains its readiness to review this license application primarily through its pre-licensing interaction with the Department. This activity includes reviewing publicly available analysis and modeling reports and similar documentation prepared by the Department to support the Yucca Mountain pre-closure engineering work and the post-closure performance assessment.

We continue to encourage the Department to make as many documents publicly available as soon as practical and to ensure meaningful participation by all stakeholders. These interactions help assure that issues previously identified to DOE have been and continue to be addressed appropriately and that new issues we identified through our interactions are brought to the attention of DOE management and hence should improve the quality of license application. Next slide, please.

The NRC and Center staffs have been developing strategies to ensure a timely, thorough and focused review on aspects of the proposed license application that we believe will present the greatest risk potential, address the most uncertainty, or otherwise critical to our requirement for multiple barriers.

Some examples include the resistance of the engineered barrier system to corrosion,

the amount and chemical makeup of infiltrating water, and absorption of radionuclides to aquifer matrices.

Another key attribute is maintaining our policy of openness for meaningful participation by all stakeholders. We built a dedicated facility, hearing facility in Las Vegas that was used this past year to host several public technical exchanges with DOE. And as part of our public outreach program we met with Inyo County California Board of Supervisors, Death Valley National Park Service staff and Inyo County residents.

Last December we met with State of Nevada, Clark and Nye County representatives and members of the Timbisha Shoshone Tribe. At each meeting we provided an overview of NRC's role in the potential licensing of the geologic repository and the safe transportation of spent fuel.

We continue to hold evening open houses periodically in local communities and we also plan to hold a public meeting with the affected units of local government later this year on the NRC licensing process. Next slide, please.

As I noted our primary mission right now is the pre-licensing interaction such as the public technical exchanges. We along with the Center in Region IV held three public meetings with the Department related to pre-closure safety assessment that discussed our expectations for reliability estimation, safety basis, pre-closure seismic issues and aircraft hazards among other topics.

We also held public technical exchanges on DOE’s critical decision one process and post-closure total system performance assessment. We continued our review of DOE documents and sought clarification from DOE on selected technical matters.

Examples include the new infiltration modeling work being conducted by DOE and the use of Pena Blanca uranium ore deposit in Mexico as a natural analog for radionuclide migration.

Finally, DOE continues to provide on an irregular basis responses to NRC's additional information needs on open key technical issue agreements. We also issued final interim staff guidance regarding the review methodology for seismically initiated event sequence that supplements the Yucca Mountain review plan.

We've also drafted for public comment certain interim staff guidance documents related to level of information reliability estimation as well as doe performance objectives in radiation protection program.

We also anticipate issuing a draft ISG for public comment on human reliability analysis in 2007. Next slide, please.

COMMISSIONER MERRIFIELD: Just for purposes of the record, I probably should have raised this in the last slide when you talked about some of our work with the Shoshone Tribe. It is my understanding that we are also trying to work with some of our Federal counterparts and most notably the Department of Interior to encourage them to appropriately recognize some of the Tribes as having interest relative to the Yucca Mountain facility. Is that not something else we're working on?

MR. KOKAJKO: We are working and in fact we met with the Department of Interior just this week on Tuesday to discuss just this request. They have requested that they be considered an affected unit so that they could get assistance to support its impact assessment of the repository on their community.

COMMISSIONER MERRIFIELD: Mr. Chairman, I make this note. I think the Commission, and I was involved in some of this some years ago, has made a demonstrated effort to reach out to Indian Tribes as it relates to the Yucca Mountain facility.

I think our staff should be credited with doing a lot of work in their reach out effort and try to reflect the interests of the affected Tribes in those communities. I think this is a noteworthy development.

Obviously the decision on that rests with the Department of Interior. I know our staff has been working to try and encourage an appropriate decision in that regard. Thank you.

MR. KOKAJKO: Thank you very much. Slide 24, please. The NRC and Center staffs have been working for several years now to update and revise the NRC Total System Performance Assessment Code. This computer code simulates the performance of the natural and engineered systems of the proposed repository and we look for its completion in 2007.

The TPA code will continue to be used to assess the risk significance of features, events, and processes at Yucca Mountain and in the development of alternative conceptual models. The NRC headquarters and Region IV staff with support from the Center has observed a number of DOE Quality Assurance audits this year.

For example, we've looked at corrective action plan audits, U.S. Geological Survey work, infiltration modeling and the newly revised design control processes. We use these audit observations as another mechanism to provide feedback on areas requiring DOE management attention.

As noted in the final bullet, we've developed a knowledge management and transfer

system. Given the long history and complexity of the high-level waste program, simply replacing retirees is not enough to ensure a thorough review of the license application.

The knowledge and experience of our retiring colleagues must be transferred to incoming staff and ramp up time is essential to success. Our knowledge management and transfer system is designed to facilitate this along with providing resource centers for our technical review and qualification program as well as providing a forum for sharing knowledge, experience and questions in various technical communities of practice. Next slide, please.

In our final year before DOE submits its license application, we face many of the same challenges we have faced in the past in terms of staff attrition, in preparation, in developing and improving the tools we need to review the license application and continuing to interact with DOE in pre licensing.

We also have some fresh challenges. First among these is to finalize the proposed revisions to Part 63. EPA received extensive comments on its 2005 proposed rulemaking as did we. We anticipate in the coming year we will move forward with and issue final regulations in the revised Part 63 as soon as practical after EPA finalizes its standard.

We must position our resources necessary to initiate the license application review and make the appropriate docketing and licensing decisions in what is a very stringent time schedule. As you know, we have approximately 18 to 24 months to complete the technical review, which has been 20 years in the making.

Given this time frame, our staff must be well-prepared, trained and certified in accordance with our policies and procedures. DOE certification of its licensing support

network collection will give us approximately six months notice of the license application submission.

This certification will be our principal notice for final staff preparation. We are staffing now to levels necessary to review the LA and defend our licensing recommendations within the statutory time frame.

Finally, I'd like to note that the Repository Safety Division and the Office of Information Services has an excellent record in terms of developing, certifying and maintaining our LSN collection and we'll maintain that record. Next slide, please.

In 2007 and beyond our success will depend upon our preparation such as the continuation of our licensing interaction with the Department. The more information we can obtain from DOE analysis and modeling that will form the eventual foundation for the license application, the better prepared we'll be for the review and the more thorough and complete that review will be.

We've requested several public technical exchanges with the Department in key topical areas and we hope that these will come to fruition. As you heard Bill Brach mention, our divisions have and will continue to work together closely with respect to the proposed transportation, aging and disposal canister approach.

We also work with the Office of Nuclear Security and Incident Response on security related matters associated with the geologic repository operations area.

Human capital is clearly one of our most important issues. To meet the considerable challenges ahead of us, we'll augment our existing staff with new talent needed to fill critical skill and experience gaps, train and certify new staff members, and continue to maintain

readiness of our veteran staff.

Our colleagues at the Center face the same challenges that we face. The Center's management, whose representatives are here with us today, is committed with our support to maintaining their core competencies. Next slide, please.

Openness is an NMSS goal, and an NRC principle of good regulation and a key strategy for the success of the high-level waste program at the NRC. We and the Repository Safety Division at the Center and in Region IV value and embrace openness and are committed to its continuance.

We'll continue to involve members of the public, the State of Nevada, affected units of local government, Tribal representatives and the industry in our public interactions with DOE to the greatest extent possible.

We'll continue to advocate for public accessibility of documents. We'll maintain our independence, neutrality, and integrity in pre-licensing during the LA review license decision making process and in the hearings that follow.

Our staff is assisted in this by the entire NRC infrastructure, but in particular with the support of the Office of General Counsel and I cannot say enough good things about that group. Next slide, please.

Finally, I'd like to bring to your attention two matters that will require Commission involvement. The first is revisions to Part 63. At the appropriate time we'll finalize the proposed changes to Part 63, hopefully sometime later this year.

These Part 63 revisions are critically important to our regulatory framework. The second matter regards potential security rulemakings which will be a joint effort with NSIR.

Since DOE continues to revise its concept of operations and facilities for the geologic repository operations area, we must be able to produce a security rule that captures all the possible operations for handling disposal for the various fuel types that can be encountered.

Thank you for your attention to this presentation. I would like to turn this over to Mark Flynn of the Program Budgeting, Planning and Analysis Division.

MR. FLYNN: Good morning. I'd like to discuss the activities of the Program Budgeting, Planning, and Analysis staff. The key message I'd like to discuss today is that we have successfully managed the business activities of the office through a period of change and transition.

This includes an office reorganization, budget uncertainties during the current fiscal year and beyond, and the planning and coordination associated with the move to Executive Boulevard.

While the challenges associated with these activities are experienced by all, it has been and will continue to be especially challenging to the PBPA staff to ensure the day-to-day operations of the organization are fully supported. Next slide, please.

Our program accomplishments over the past year include as I mentioned a moment ago the NMSS reorganization. This was effective on October 1st. This effort included the support of each division within the old NMSS, required the establishment of a transition team to identify issues and implement solutions associated with this effort.

The transition team handled tasks associated with staffing plans, organizational structure, budget, contracts, time and labor and various administrative support functions.

There was also significant effort to split resources among the new organizations.

These tasks were accomplished effectively while allowing staff to focus on safety and ongoing work while transitioning to the new organization.

The second program accomplishment is related to the effective management of NMSS resources. An example of effective Resource Management includes the reduction of the amount of forward funding on NMSS contracts from the previous year but more work remains in this area.

We also effectively managed the office FTE utilization, contract obligations and expenditures, under the limitations of the FY2007 continuing resolution.

The next program accomplishment I'd like to discuss is related to the Human Capital management. Specifically, NMSS developed and implemented for FY07 new elements and standards for branch chiefs based on the five executive core qualifications.

We successfully rehired selected annuitants with critical skills or unique expertise to address emerging work and transfer institutional knowledge and we prioritized and developed strategies and actions to be taken to implement the Comprehensive Diversity Management Plan.

The final program accomplishment is associated with knowledge management. Two of the other divisions have touched on this but during the past year NMSS has been proactive in establishing two communities of practice websites, one created by our NSPDP staff and this is related to the activities that those individuals go through.

And the second is related to the Repository Safety Division. The Division of Spent Fuel Storage and Transportation holds monthly knowledge transfer seminars where senior staff share their knowledge and experiences and the Division of Fuel Cycle Safety and

Safeguards facilitates the Fuel Cycle Processes Course to foster knowledge transfer to staff new to the fuel cycle regulation. Next slide, please.

Our future challenges: The first and most challenging is the continued provision of high quality resource management and support to meet the emerging business needs of NMSS during a period of transition and within existing PBPA resources.

There are always challenges associated with the provision of this support and we need to manage our resources as efficiently and effectively as possible. We also need to ensure that necessary budget resources are available for programs NMSS will be required to support in the future.

The second challenge we face is the upcoming move to Executive Boulevard. While we have been and will continue to work closely with the offices of Administration and Information Services, my staff is leading the planning and coordination efforts associated with this move within the office.

The challenge we face is to ensure a smooth transition to the Executive Boulevard location and minimize disruption to staff during the move. Also, we need to ensure the staff has the necessary infrastructure support to perform their jobs effectively.

I'll also note that this move will begin on the 23rd of this month and it will move one of our divisions over two weekends and the plan is to move the rest of us in the mid-May to early June timeframe. Everything is on schedule.

The final challenge is associated with NMSS staffing. We have recently experienced an attrition level which is higher than the agency norm. Consequently we are aggressively working to stay ahead of this to ensure proper staff levels are maintained and necessary

skills and expertise are available to accomplish our mission. Next slide, please.

Our strategies for success: The first strategy is to identify and where appropriate implement improvements to the multiple financial, administrative and human resources processes we use to manage the business activities of the office.

We'll continue to review and address the effectiveness of these processes to ensure we are operating efficiently. This requires a critical assessment of the processes which will result in the validation of existing procedures or the modification or elimination of others.

We plan to look at our budget formulation, our budget execution, and our contract and acquisition processes within our office to make sure we're achieving efficiencies.

The second strategy relates to the use of shared resources. We are working closely with at FSME to maximize the use of shared resources for various administrative and information technology support activities.

However, following our move to Executive Boulevard, this arrangement will not be as effective and we are planning to adjust this approach as appropriate.

The final strategy for success is to work closely with other NRC offices including the Offices of Administration, Information Services, Human Resources and the Chief Financial Officer to ensure the business infrastructure support is provided in an effective manner. This concludes the PBPA portion of the briefing and I'll turn it back to Jack.

MR. STROSNIDER: If I could have the last slide, please. I just want to take a moment in conclusion here to reaffirm our offices commitment to the idea and principle of continuous improvement.

We are constantly looking for ways to do our work better. I meet with new

employees when they come in. This is one of the things we talk about. I encourage them to bring their new perspectives.

We continually talk to the staff in our all staff meetings and other opportunities encouraging them to ask themselves the questions, why are we doing what we're doing and why are we doing it the way we're doing it?

The message is not just that they should feel they can do these things, but that they're expected to. We are very committed to that and I think it's helped us and will continue to serve us well.

To that end, one of the things that we use to help us in this is an organizational capacity model which, in the interest of time, I'm not going to go into this in any detail. The elements are on the viewgraph and we do review these.

We look at these and the value of it is that it helps us make sure we're really taking a comprehensive look at what we need to do to build our capacity to handle the challenges of the future. We remain committed to continuous improvement.

This approach I think served us well in the past and we are going to continue working that. Thank you for your attention this morning. With that, we'll turn it over for any questions.

MR. REYES: Chairman and Commissioners, That completes our prepared remarks and staff is ready for questions.

CHAIRMAN KLEIN: Thank you. I would like to express my appreciation and I'm sure for my fellow Commissioners for this good overview. Obviously, you have a lot of challenges, not only with the move, but with Jack's impending retirement, so it should be

challenging times ahead.

I appreciate your comments on the continuous improvement because I think that's what we all should strive for is to answer the questions in terms of are we asking the right questions, are there better questions we should be asking. I appreciate your comments on the continuous improvement. With that, we'll start the questions with Commissioner McGaffigan.

COMMISSIONER McGAFFIGAN: Thank you, Mr. Chairman. Since I wasn't totally prepared for this, let me start with Bob Pierson. You talked about your future challenges and being behind the ball from the get go. I have some sympathy for that honestly.

I was one of the ones that said if DOE is really going to do GNEP then we probably need to have reprocessing regulations. On the other hand, I think of the things you listed in slide eight, things that are sure to happen are SILEX and we've got to give you the resources to do that.

We need to clarify that the uranium conversion/deconversion is going to be regulated by NRC, not by the States. That's what the paper presumably among other things deals with. I think you're right that there will be - it would be nice to update those rules because that's real.

The MOX facility you said Congress supported it and I think its Congress supported it with a tremendous twist or two. They don't get any money until August and they've got a bunch of –

MR. PIERSON: We see that as a positive.

COMMISSIONER McGAFFIGAN: It's a mix. It's positive but I think the Russians are advocating an entirely new strategy relying on breeders. You've always been subject in the MOX program, DOE has and you indirectly, to the notion the Russian program and the American program should proceed approximately and equally hand in hand.

I would say you face tremendous uncertainty there and then GNEP you face even more uncertainty than the MOX program. If I we're voting, I'd want you to have the resources for SILEX and MOX to the extent that DOE is paying for it's random conversion, but GNEP it's hard to figure which version of GNEP - you're writing a paper and you're thinking about the version of GNEP of a few months ago.

I'd like to be ahead there, but I don't really see us having reprocessing recycling facilities at the same timescale as DOE sees it.

MR. PIERSON: That could very well be. I think what I was trying to say and what we're going to be saying in the paper is we're really presenting different regulatory options, the potential implications for those regulatory options.

And my only point was that if we follow DOE schedule and if DOE follows it themselves and they are proceeding with that and there is an expectation that NRC would do some sort of license review of a reprocessing facility and a burner reactor then we're probably behind in terms of our regulatory development even as we speak. Where those things come true or not, that's a policy issue.

COMMISSIONER McGAFFIGAN: I agree. Congress should give us the resources. If they give DOE full funding, they probably need to think about giving us some extra funding.

COMMISSIONER MERRIFIELD: Can I ask for clarification? The issues that you talk about in future challenges; you mentioned conversion/deconversion and some of the other issues you grapple with. Are you going to give us one paper that's going to encompass all this?

MR. BRACH: No. We are giving you a paper on GNEP which will be out shortly. Then we'll be giving you a paper that will be addressing conversion/deconversion.

COMMISSIONER MERRIFIELD: What is the expectation when we're going to receive those papers?

MR. PIERSON: The GNEP paper, we're in the last throes of concurrence. I think we've got one office, two offices left to do and then we'll be sending it to EDO. The conversion/deconversion paper actually I think we just drafted. As I said earlier, we haven't put the resources on it. I can probably get that out sooner if that's the desire; May/June timeframe something like that.

COMMISSIONER McGAFFIGAN: With regard to the SILEX and the GE thing that is a sure thing, mark me down as somebody who wants to give you some mid-year resources for that, or adjustment to the 2008 budget wherever you need it. But, you also have to be very careful there in terms of the SILEX is definitely appropriately – the details of the SILEX technology are appropriately highly classified.

MR. PIERSON: We have an internal memorandum that we developed in our organization with a plan for how to achieve the SILEX review. I think it's important to understand that as opposed to the AVLIS review which tended to have a few discreet technology issues which if you protected them you essentially protected the technology from

proliferation.

I don't think SILEX lends itself to that. I'm not really familiar with the design. I've only read the classification guides and some other things. I think it will be a challenge.

COMMISSIONER McGAFFIGAN: It's similar to the EMLS technology that Los Alamos developed and Pete Lyons is more familiar with it than I. It's not something we want to see in the hands of anybody else anywhere else in the world.

MR.REYES: Commissioner, we had a meeting on site with the applicant, NSIR and NMSS and we discussed about all the issues surrounding the control of the information, etc. etc. The staff is very sensitive to that issue.

COMMISSIONER McGAFFIGAN: It may also limit our contracting ability.

There are people at Los Alamos if they don't have conflicts of interest who could help us. If they do have conflicts of interest, if they're waivable, but there's a very limited community and our goal should not be to expand it.

MR. PIERSON: I can turn to Gary; he's my member who's doing most of this work, Gary Janosko. But we have a plan in place to essentially limit the knowledge and limit the integrated knowledge of the process to just a handful of people, just a couple of people.

COMMISSIONER McGAFFIGAN: That's what we need to do. What's the fellow who left during URENCO to go to Pakistan? A.Q. Kahn. We don't want to be creating an A.Q. Kahn for this technology.

The other issues, I commend SFPO. I would clarify when you say you have 62 total ISFSIs you're including things like the GE thing? The GE Morris?

MR. BRACH: Yes, we are.

COMMISSIONER McGAFFIGAN: I think there's some confusion. There's a recent American Physical Society report that said - I think they improperly used 65 sites, 65 only happens if you consider Hope Creek and Salem, two different sites. I think its 64 physical sites.

There's got to be at least two, Palo Verde and Harris, that don't need an ISFSI any time soon. I thought there was more than that of the 60 - use my number - 64 reactor sites.

MR. BRACH: There are 45 licensed facilities today and that does include as you mentioned GE Morris as well as some other ISFSIs, DOE Idaho, GMI facility for example. The 17 that are projected, that is information from which we're aware that utilities have publicly made a statement that they're planning to move to dry cask storage.

There are as well some other utilities that have not made public statements with regard to their spent fuel storage plans, dry cask storage plans, so we're not including them in that count. A total of 62 would be all currently licensed, including the GE Morris which is the only wet storage facility and other facilities --

COMMISSIONER McGAFFIGAN: So in terms of the 64 sites, it's probably 59 or 60 of the 64?

MR. BRACH: It would be in that range, yes.

COMMISSIONER MERRIFIELD: Just to clarify the record. Palo Verde has an ISFSI right now.

MR. BRACH: That is correct.

MR. REYES: Very small wet pools.

COMMISSIONER McGAFFIGAN: Since I had some time taken away from me, slide 28.

MR.REYES: Don't mention who it was.

COMMISSIONER MERRIFIELD: I'm not giving any back.

COMMISSIONER McGAFFIGAN: The security requirements for the GROA. We've been playing this game - we have to figure out what the security requirements are. They have to figure out what their surface facilities are. They sure as hell didn't know them in December of 2004.

Do you have any feeling that their June 2008 application is going to fully describe the surface facility so that we can apply the security rule to it?

MR. KOKAJKO: I feel reasonably confident that they will. They're taking a new approach. They're going to have very much of a phased-in approach. I think it's in four phases for the pre-closure facility and their license application is going to have to address each of those phases as they decide to build it.

COMMISSIONER McGAFFIGAN: If they decide to build it? Are we going to have four license applications? Are we gonna have for each phase?

MR. KOKAJKO: No, sir. It will be one license which will describe the whole thing, but it won't be built like that as we currently understand it. They'll be supplying the security areas to those things that they need for that phase.

COMMISSIONER McGAFFIGAN: Thank you.

CHAIRMAN KLEIN: Commissioner Merrifield?

COMMISSIONER MERRIFIELD: Mr. Chairman, I'm going to pick up where

Commissioner McGaffigan left off. I agree with virtually everything he said but nonetheless I want to go over some of it again.

As it relates to uranium conversion and deconversion, just to go back into history a little bit. When the Illinois State program came into play the Commission at that time made a deliberate determination that it would not have the Honeywell facility included as part of that trade off.

I think that approach, which I strongly agree with, is the right approach because at least in my view when you look at the Act as it relates to the authorities that were to be given to the States under Section 274i, and you look at the construction relative to utilization facilities, I think to me, although it's not entirely clear, I think one can make a strong argument for lack of a better word the emanations and penumbras of the statute would lead you to the conclusion that it was the right thing to do for the NRC to have authority over the fuel cycle facilities.

In my personal viewpoint, I know you all are putting together a paper. I think these are fairly straightforward issues. It's not entirely clear to me that the Commission couldn't on its own simply make a determination.

There may be members of the Commission that want to get all the details from the staff paper and I would sort of leave it to them. I don't think I personally need any more information to come to a resolution on that one.

I would underscore that by the fact that times have really changed. When we gave that authority to the State of Illinois we didn't have the security requirements we have today.

We have in place significant security requirements on how material is controlled in

both Portsmouth and Paducah. That certainly fit into our analysis relative to LES. That's part of the consideration with the future facility USEC is building in Portsmouth, Ohio, or is proposed to build in Portsmouth, Ohio.

We have stringent security requirements for that part of the cycle and it is not at all clear to me that the States would have the ability to control those. Certainly, not by their presumptive regulator would require diving into the Homeland Security elements of the States and I think that would be very complicated.

I think it would be very costly. I don't think it would be prudent. I don't think it would add value. A lot of great things the States do under the agreement State program, I don't want to take any of that away from them I just don't think it's a good idea to give this particular authority to them.

COMMISSIONER McGAFFIGAN: Mr. Chairman, I would try to use 20 seconds. I entirely agree, but I think there's a profound safety case just on the safety side. This is very complex, it's beyond what the States currently regulate by a mile. A State trying to create a second area of expertise, as Bob mentioned the Honeywell facility is largely regulated by license conditions, at this point unconnected to Part 40, and for a State to be brought up to speed makes no sense.

COMMISSIONER MERRIFIELD: I agree, particularly at a time when many of the States have told us they're under economic difficulties. They are having difficulty getting staff. We have the largest number of States ever in my awareness that are sort of on the edge in terms of compatibility.

We've got one State, not one involved here, but Rhode Island is thinking about giving

up their program and giving it back to us. I think there's a desire to try to make sure we empower the States, but I think this particular area is not one that makes sense.

CHAIRMAN KLEIN: As just a comment, as a very strong supporter of Agreement States and what they do, I don't think this is one of them.

MR. PIERSON: Maybe we don't need a paper then.

COMMISSIONER MERRIFIELD: The Commission might able to help you out there in an SRM. Getting on to a few other issues, I agree with Ed; I think in terms of prioritization on slide eight, dealing with SILEX, dealing with conversion/deconversion, dealing with mixed oxide fuel all take priority over GNEP.

Congress is wrestling with what they want GNEP to look like from their standpoint. DOE does a great job with technology. Our National labs are leaders. They have difficulties with time and budgets.

I'm sort of reminded of having discussions with my twelve-year old son about homework. How long do you think this is going to take you to get done? He says 10 minutes and an hour-and-a-half later he's still chipping away at it.

I think that sometimes is what we encounter with DOE. They would like to get it done faster than reality allows them to and I think GNEP is a classic case of there's a lot of very good things there but it's going to have to take time and effort to get it all put together. I think we've got time to be able to craft a regulatory framework that makes sense.

Now, as it relates to monies. You mentioned that you thought we could not charge DOE for regulatory infrastructure.

MR. PIERSON: We can charge DOE for technology understanding, for

developing expertise, but from my understanding from our Office of General Counsel we can't charge DOE to do actual rule development or guidance development to support that rule.

COMMISSIONER MERRIFIELD: That's an interesting one to consider. I think this underscores, given the amount of work that we have ahead of us, the Commission and I think the staff should be prepared to brief us on this, the Commission should be prepared to think about do we need to go ask Congress for additional general revenue for this area.

Clearly, we are ready burdening our licensees in the materials arena. The notion that somehow they would have to subsidize these kinds of efforts to me seems clearly inappropriate and I think it's something we have to consider.

I also agree with Commissioner McGaffigan as it relates to SILEX. I agree with your mid-year look at that one would seem to make sense.

And finally, on this round, there was some limited discussion for the Center for Nuclear Waste Regulatory Analysis. I think the Commission on a number of occasions has talked about how it is interested and thinks it would be great to have the Center more involved in the work we do.

NRR seems not to be able to come up with that as much as the Commission would like. But clearly NMSS is very familiar with the Center. You know the work they can do. I think I would continue my encouragement that you all have some fields particularly in this area –

MR. PIERSON: We do. We absolutely do.

COMMISSIONER MERRIFIELD: – really ought to be expanded and we really

ought to take advantage of perhaps putting more work towards the Center in this respect. Thank you, Mr. Chairman, that's it for this round.

MR. STROSNIDER: Could I make a brief comment with regard to GNEP and the regulatory infrastructure? First, I would acknowledge that the schedule issues are uncertainty or real. But I also want to suggest that if we wait until we know exactly what GNEP might look like, as Bob said earlier, then it's too late.

I think what we have to be thinking about is looking at risk informed performance based regulation where we can write a regulation that's broad enough to capture a range of scenarios. I think that's good regulation anyway. I think we can do that.

The caution I just put out is that if we wait until it's extremely well defined, exactly what it's going to look like, we'll be behind the curve. We need to think about whether we can do something like that.

COMMISSIONER MERRIFIELD: I don't disagree with that and certainly don't take my comments any other way. I think we should be prepared as a regulator for the possibility, whether it's five years from now or 25 years from now, that we may need to regulate things like reprocessing.

My only point is I don't think we have to throw down the gauntlet and throw all of our other regulatory priorities aside to try to meet the goal which at this point seems to be somewhat unattainable.

CHAIRMAN KLEIN: Commissioners Jaczko?

COMMISSIONER JACZKO: I want to begin by following up on the question Commissioner McGaffigan had raised on the high-level waste application. Lawrence, in

your presentation you made several comments about making sure we're prepared to handle a license application and I think you said success will depend on our preparation prior to a license application review and I assume by success that means an efficient and timely review of the license application.

I think that's partially true but I think this agency has repeatedly said with new reactor license applications what crucially depends -- success in that sense crucially depends on having a high-quality license application. Based on, for instance, your answer of Commissioner McGaffigan's question about this proposal for four phase license application, I'm not exactly sure what that means, but it moves me a little bit more into the skeptical column when it comes to having a high quality license application.

The previous problem with the QA program which I think are still somewhat ongoing again puts me little more in the skeptical column of having a high-quality license application. I'll throw into the mix the fact that we had a meeting with DOE maybe about a year ago and I think I asked them the question if they knew when they were going to submit us a license application.

This was about a year ago and at that point they really didn't have a date. Here we are now about a year later and all of a sudden we have June 2008 as the date for license application. All of that puts me a little further and the meters moving a little more in the skeptical column on high-quality license application.

I think it's important to understand that we need to be prepared to do that, but I think when we talk about things like success it's largely going to depend on the quality of the application that DOE submits to us. I'm not sure that that's necessarily where they are and

it's not really a question, it's more a bit of a statement.

MR. KOKAJKO: Could I address that briefly? First of all, I don't mean to confuse the issue any further. DOE will submit a full application with a construction authorization, but they will build out in phases, and hence the security requirements for each phase will be applied to all phases but they'll just be put in place at different times.

The LA itself for the construction authorization will be full and complete. The question on the high-quality license application is something we've been stressing now for a number of years. I think it comes up at every quarterly management meeting.

We have always stressed it, whether Marty Virgilio has been there or Jack Strosnider or I, we've always stressed that the need for the high quality license application is essential to the success of arriving at an effective and efficient review. Something less than that, the review is going to be longer.

We're going to send out requests for additional information or other things that have to be done. We recognize that. We, the staff, have always stressed a high-quality license application is essential for the success of the program.

Hence, a couple things I made mention to here is we use some of these devices to bring information to DOE's management attention so that they will address it now rather than after the LA arrives.

COMMISSIONER JACKZO: I appreciate you clarifying. I didn't want to insinuate that the staff wasn't reinforcing that. I think from my conversation with Jack I think that's certainly something that I've heard from him.

I want to change gears a little bit to another issue that deals perhaps with a different

aspect of the spent fuel issue. This was a situation that occurred recently where we had a particular licensee that was engaging on a spent fuel dry cask storage campaign at Fort Calhoun.

As part of that, they had some errors in various avenues of that dry cask campaign. As part of that, they came in very late with a request to use some exemptions to their particular transfer canister for that spent fuel campaign.

I'm wondering - I know I had initiated a Commission direction on that to send a fairly strong signal to Fort Calhoun and other licensees that this is probably not the best way to move forward.

Just reading some of the background material from the staff, it seems that there still seems to be this pressure on the dry cask storage campaigns in very, very short time lines and very, very short deadlines that are given to the staff to process applications, to process an exemption request or whatever the case may be, which seemed to put this agency in a very awkward position of having to try and do some very often straightforward but nonetheless complex technical reviews in a very short period of time.

Sometimes I think really stretches the capabilities of our staff to do that, not because of a lack of talent and ability of our staff. I'm wondering if perhaps you can update me on where we stand with Fort Calhoun since they are by and large still in a similar place of having to do another spent fuel movement and then where we stand with other licensees that may be in a similar situation of having - the issue here was that they had a crane that wasn't sufficiently rated to lift the cask that we have already certified.

MR. BRACH: Let me if I can, try to address the questions you've raised. First,

with regard to Fort Calhoun I appreciate the personal engagement on your part and the Commission's part and our part in trying to identify very clearly to the industry the need on their part to anticipate and prepare very early in the process and we did provide a Regulatory Information Summary this past fall that you may be aware, that provided not only experiences of the past year that we had in the review of the Fort Calhoun exemption requests as well as the previous NRC inspection of the site and of the vendor as well; but also communicating a message to the industry in a broad context with regard to the time frames required to plan for a dry cask storage facility and the expectations on our part with regard to the interactions with NRC, whether it be through the Regional staff or through our headquarters staff.

We've been trying in both written as well as public forums to get the message out fairly clearly and using some of the experiences of last year as a case study, if you will, as far as why it's important.

COMMISSIONER JACZKO: Do you think that message is being received? Is it being absorbed, learned?

MR. BRACH: Part of it being absorbed would be a test of time. I will tell you personally from the number of interactions I have with licensees and vendors I think the message has been clearly delivered.

The other part, though, is implementation. It will take time and will be a test as far as message received, message delivered, message implemented. I would like to think the answer is yes.

COMMISSIONER JACKZO: In terms of all three of those is the message

implemented?

MR. BRACH: Message delivered, yes, that has been delivered. Message received from feedback from licensees and vendors I believe they understand what we're telling them with regard to the time frames that it takes with regard to dry cask storage planning whether it be a license application, a vendor's amendment or need for certificate as well as the lead time required for hardware manufacturing and delivery.

The implementation, the third leg, is one that will be a test of time over the near term with regard to are we seeing that in the licensees and vendors performance. I want to be optimistic and say yes but that's to be fully determined yet.

The second part of your question dealt with current status with regard to Fort Calhoun. We have had over the past six/seven months a couple meetings with both Fort Calhoun and the vendor, Transnuclear, the vendor they've used in their previous dry cask storage loading campaign.

Current status with regard to Fort Calhoun is one they clearly had made a statement to us that they plan to use and would envision to use a currently certified NRC storage cask, certified under Part 72. They also look at potential for facility modifications that would be upgraded the crane capacity, lifting capacity.

My general understanding is they are planning by the end of this calendar year to make a decision in that regard. Are they going to be making facility modifications or making use of what would be available certified storage casks for their use in future loadings?

COMMISSIONER JACKZO: Thank you. I appreciate that and perhaps it's something at that point it would transition to crane upgrades that would turn to an NRR

problem. Perhaps I'll ask Jim Dyer is here now or other NRR folks can be prepared for that question. I appreciate that. And I think I'm over my time. Thank you.

CHAIRMAN KLEIN: Commissioner Lyons?

COMMISSIONER LYONS: Jack, I appreciate the briefing that you and your colleagues presented and certainly you highlighted a very, very impressive number of accomplishments in the last year. If I were just to highlight a few, the LES license, the PFS license, the analysis on the tunnel fires and there could be many other areas, but I think it's clear that you had a very, very productive year.

By way of a question, I wanted to turn to an exchange that Commissioner McGaffigan had with you, Bill, but perhaps broaden it to Jack and maybe to any of you would like to chime in. That's on human capital issue.

Bill, you highlighted the 16% to 18% attrition within your specific area, but I think Jack, every one of your colleagues expressed some degree of concern on attrition. While much of that attrition may be movement within the organization, it still is a challenge from the perspective of your office.

Of course, the Center has been discussed too and my concern on attrition and human capital would extend equally to be sure that the Center has adequate resources, too, as we move ahead. At least my perception, Jack, is perhaps you're office is the one including the Center, as being the most challenged on some of these attrition issues and human capital issues.

I'm just wondering if there's anything additional that the Commission could or should be doing from the standpoint of human capital in the areas encompassed by your office. I'm

thinking of everything from perhaps something as extreme as Commissioner McGaffigan alluded to perhaps limiting transfers out of the organization, which I'm not suggesting, because that would be a fairly drastic step. That's a possibility.

Another possibility is to suggest that your office deliberately hire to a level somewhat larger than you anticipate needing. I'm just curious if you see any actions that the Commission could take that would help in this area. I extend it to your colleagues if they have any ideas too as well as to the Center because my concern very much extends to the Center.

MR. STROSNIDER: Yes. Let me give you a sort of general response to that and see if the staff here wants to add to it. Start with a little story. Bill Brach comes into my office frequently saying another person has accepted a promotion or rotation. I always say to him - my comment to him is always, "good job, Bill". But now I have to develop some more people.

It's our job. It's our job. One of the critical things and we did talk about our challenges in terms of maintaining and developing the right kind of staff. It's not something they can just go out and hire that expertise one time and you're done.

You have to hire the right people, you have to develop the right people and frankly if you're successful at it you'll see people moving on to other opportunities. I think it's a good thing. But it is a challenge.

We have to recognize that it is our job as the management of the office to continually keep that pipeline full and work it.

In terms of what the Commission can do to help, I think probably the biggest thing is

to recognize what the budget implications are. We're bringing on a lot of new people. We have a goal of bringing 25% of our hires as new hires right out of school.

We need to recognize that with that comes the cost of training those people, transportation, the Nuclear Safety Professional Development Program, I'll put a plug in for it here. It's a great program. It's developed a very capable, diverse staff for us.

We need to understand that if you look at the number of people that we're hiring and 25% of those are new hires, we need to support that and not just for them but also for the existing staff. They need continued development.

We talked about cross training. We've had some success in that area. We need to do more of it. We need to take the staff we have and bring them up to speed on some of these new technologies.

I think in terms of the Commission help, what I would encourage the Commission to look at is when you look at the budget look at have we really put enough resources in there to support that effort.

COMMISSIONER LYONS: That effort being the professional development program or training in general?

MR. STROSNIDER: In both areas. Clearly, in the Nuclear Safety Professional Development Program I'll tell you that I think if you look at the number of people we're bringing on and we maintain that goal of 25%, we're going to need some more resources in that area.

When we bring people in that are mid-level and they could be good engineers, good scientists, good at whatever their profession is, they need to be trained as regulators and

we need to have the resources to do that. It's both training and travel costs because we've had situations in the past where we had enough money to pay for the training but couldn't always get people to the class.

Then we try to do things like bring the instructors in here. I think that's one area where I would encourage the Commission to look at. We do recognize the capabilities of the Center. We try to work with them as a team then when we go through our budgeting and also our planning and looking at work load, we look to make sure that we maintain that expertise.

Again, maintaining is not a static word here, it's a dynamic thing. We have to recognize that it's our job to make sure that we continue to keep that pipeline full. I'll make a comment here with regard to any notion of - and this is my personal perspective - but with regard to trying to limit people from moving from one office to another, I personally don't think that's a good idea.

I think its success when people make those moves and we have to recognize that when people leave our office and go someplace else, that creates opportunities in our office.

What we have to do is make sure that that process is working efficiently and effectively. It motivates people. It gives them career paths and I think we need to be careful not to overreact to it.

COMMISSIONER LYONS: I didn't mean by my comment that I was suggesting that we limit -

MR. STROSNIDER: I understand.

COMMISSIONER LYONS: It would really worry me, too, but I was hoping that

we would at least talk about the full range of options from good ones to lousy ones.

MR.REYES: If I could add, you recently received a letter complaining from NEI on our fees, specifically how we budget differently in terms of the number of productive hours of an individual. That is probably the biggest change we made in the budget to make it successful in our future.

That comes from the fact that we had so many new people and we had to dedicate so much time for training that the average individual that we use for budgeting - we had an individual that we use for budging and we assume so much hours of leave, so much hours of work and that model was no longer good because we were bringing in so many people.

We had to change our model so that the average person that we have for our model now has less number of direct production hours. That's what you see in the budget and you have that letter in front of you on complaining on us.

My only point is that we are reinforcing what Jack said. We're taking a very hard look to make sure that the resources we need for this very dynamic scenario we're in are there for success. I need to enable them to succeed and that's how I can do it.

COMMISSIONER LYONS: I'm well over my time, but would any of your colleagues like to add to this point?

MR. BRACH: Let me just make one comment. I raised the issue or challenge if you will of attrition and recruitment and training as a challenge to us. I take personal pride, and all the management in the office, takes very much personal pride as we see staff in our organization moving forward in their career through career path progression.

As a manager I believe that's a very fundamental role I have to help staff in their

development and they're career and I take pride in - Commissioner McGaffigan asked the question roughly about two-thirds of all our staff are leaving our office to another part of NRC has been a career path progression of a move forward. I take pride in that. I want to encourage that. I see that as a success of our program.

I see it, though, as a challenge on my part and others in my organization's part that we need to be very actively recruiting to be bringing on the people behind them with requisite skills and abilities to replicate that continual process. I want to raise that as a challenge to me, but not as an issue that I'm looking to somehow stifle or hold back the opportunities in that regard.

MR. PIERSON: If I could add to something, too. Part of what we suffer from is that the people that we do bring in - if you hire a graduate nuclear engineer from a school that's got a very developed nuclear engineering department, they rarely have understanding of things like nuclear criticality.

You can train them to do that relatively easily but you can't bring them out of school and put them to work three days later doing nuclear criticality calculations.

We also have situations where in the reactor world we've got the Technical Training Center which supports course in the BWR, the PWR that sort of thing and that hasn't worked in the fuel cycle. In fact, this week we're teaching the course ourselves.

We've been doing that for number of years, but basically we take staff members from the fuel cycle group and they teach the course to new people that come in the organization from wherever they want to do it. It seems to work very well.

I don't think I want to change that, but what I do want to stress is that when you have

a small program that's relatively specific in the types of technology understanding applications that they use, you don't have the range and scale that you might have and ability to reach out and get support that might be available for other processes like reactors.

What ends up happening is we essentially end up bankrolling that ourselves. It costs us in terms of resources and efficiencies. All the programs that we do, certainly in the fuel cycle material control accounting, the criticality, the chemical engineering, those sorts of things, they're taught in schools generally, but the specific application of how you do that isn't well developed in most existing departments.

Maybe one thing the Commission might want to consider doing is spreading the word to some of these nuclear engineering departments that you need some expertise in criticality.

Currently, we have two universities that do that, Tennessee and New Mexico. Maybe the other universities should start expanding a bit and the same thing might be true in the case of things like reprocessing and some of the other technologies.

MR.REYES: Just to give you an example; we went after a Ph.D. just out of school from Tennessee because of its criticality experience. The person got a six-figure salary the next day he got out of college. We couldn't touch that.

It just tells you what the market is calling. We're not the only ones with the problem. So the resources are very limited. We grow our own. And I think Bob is right that we don't want to change that, but going back to the budget, one of the things that you're going to see in the '09 budget we're for making very specific line items for knowledge transfer.

In the past, it got bundled up with a lot of things and when things got tight and there

were changes made, unconsciously we made changes reducing knowledge transfer activities and now we're going to try and separate them so they're more defined.

And if we take an action on the budget for whatever reason, we understand we're impacting such things as knowledge transfer.

COMMISSIONER MERRIFIELD: I appreciate the fact that you guys are looking at it this way. We've talked, and I know I've talked for years about a National Materials Program and the notion that more of this perhaps should get put under general revenues.

It seems to me you're making that argument even more strongly today. These things are regulated by piece. Each one being different. We have to put a lot time and effort into training these folks and it seems to me just to further underscore why more of that cost should be paid for by general revenues and not passed off to our licensees because that would be inappropriate. Thank you, Mr. Chairman.

CHAIRMAN KLEIN: I think we'll have more opportunities for questions on the second round. I think you can tell from the Commission's questions that we are very concerned about human capital because our strength is our people. We're very people intensive and that's what will make us successful.

I like your comments, Jack, your comment about when someone is promoted and moves on it's a good job. But it is a challenge. In the academic world we faced it every day. As soon as we would get a graduate student trained, they'd graduate. Then you start all over and so there is a cycle.

I like your positive attitude about the mobility and the promotional opportunities. It

does indicate I think a concern that we should look at how do we do our training and how do we fund it and how can we do it more successfully because it is obviously a very important issue. We'll have continuing discussions on that because training really is important, as well as the cross training, as well as the new people that we're bringing in.

I think Commissioner Merrifield brings a good point; the fact as we look at our budgets, the fact that we are bringing in a lot of people, it does gives us cause to look at how we budget for the training for all our employees.

As far as a question, first a comment. I think all of us that have been following GNEP, Commissioner McGaffigan started that question about what is it today, we do need to look at some broad issues, specifically how that turns out is certainly unclear.

We do we need to be prepared and we can't wait until we see what that program ends up being for us to be prepared. So at a broad level we certainly need to do some preparation and see how that progresses.

I think you talked about what keeps you awake at night and Commissioner Merrifield made sure it was not a safety issue, but there is a related issue not as much as safety but exposure that almost keeps me awake at night.

Commissioner McGaffigan commented on the MOX plant, certainly, it's not clear how it's going to proceed. One of my concerns is that several years downstream if that plant is built it's being designed now for a unique form of plutonium that is very easy to handle.

What keeps me awake at night is the potential that years from now somebody is going to come in and want to use that same facility for recycled plutonium where your shielding requirements are much different. Have you looked at any of those implications?

MR. PIERSON: We haven't looked at those in a formal sense but you're absolutely correct. The plutonium is very pure plutonium. Its weapons-grade plutonium. It has certain factors associated with things like criticality and maybe throughput which would limit it in terms of commercial grade plutonium, reactor grade plutonium.

Again, the design does not lend itself easily to conversion and it was done deliberately by the Department of Energy because they felt like they didn't want to be using the MOX facility as a lead in for some sort of reprocessing.

We've signed several agreements including the French and made several statements to Congress, not us, but us as a Government, the Department of Energy, that this facility is only going to be used for the weapons material, not for any purpose down the road.

MR.REYES: In the layout we have, you could not process material that was highly radioactive. The shielding is just not there. You just couldn't. You may do it once but then that's it for the facility. It's not designed for that. You're exactly right.

It would be a completely different design, just like the F, and G&H Canyon at Savannah River. It would be a completely different design. It would be remote controls and heavy, heavy shielding.

MR. PIERSON: You could use perhaps some of the insight from the technology and training to transfer, but as far as using the actual physical facilities itself, it wouldn't work.

CHAIRMAN KLEIN: Thanks. On another question, in terms of just general interim storage, we've licensed a lot of facilities at reactors. If DOE comes in with a plan at some point about a central interim storage, have you identified any issues that would make

that more complicated than what we have already examined for reactor licensing?

MR. BRACH: There clearly would be some sighting questions we would have to look at as well as the cask systems, but the cask systems that are currently licensed and certified by us and used across the country horizontal as well as different vertical storage cask systems, I would assume that the department if they were looking at an interim, some type of central interim storage would be envisioning cask systems probably very similar to the cask systems we currently have.

From that aspect, many of the technical issues we have previously been engaged in I would anticipate to be very similar with regard to future central interim storage facility but the sighting may be some of the broader issues that might be more problematic for us to be addressed.

MR.REYES: I think Private Fuel Storage is the example we have done recently. I think Bill is right that the technical part of the storage of the cask etc. etc. are well known and we have reviewed those and using many facets. But the sighting of that facility most of the issues with PFS were all around the location and the sighting and hazards etc. etc. That would be the challenge.

CHAIRMAN KLEIN: Thanks. Commissioner McGaffigan?

COMMISSIONER McGAFFIGAN: Thank you, Mr. Chairman. On GNEP, I want to agree with Jack and I said it a year or two ago when this first came up I guess was a year ago. I think we need to put in place and I think you have some guidance from the Commission as to what sort of rule you're looking toward, some combination of Part 70 and other regulations that are in place today but one step process and all that sort of thing.

I think it would be good and we probably could do it with relatively modest resources to lay that out. In terms of conception, I think in the security side which you can lay out what would be required for a recycle facility. It's really more NRR's job to do the reactor if it comes along.

I'm not at all against you guys trying to get some conceptual things in place. The big money gets spent when you dot all the i's and cross all the t's.

I think it's going to be a judgment as to when to do that, but I think the more you can educate DOE about the likely requirements, if we do go to a one step Part 70 type process etc. sort of taking elements of Part 52, that may or may not be a controversial rulemaking at the time. It will be a big rulemaking.

You throw in the security requirements which not all of which will be public but it could be a pretty big deal. So I'm not against it. I'm for it. But I think we have to proceed at a pace I think the sort of conceptual pace is about right at the moment.

As Commissioner Merrifield said, it can be wild optimism at DOE, not just in this area but in many areas about how rapidly things are going to be achieved.

Lawrence, could you just tell me very quickly your understanding of these phases. I understand some stuff on phases because I saw some documents DOE gave to Congress, but I'm not sure that the phased approach to Yucca how many phases are there going to be and how do they describe them to you guys?

MR. KOKAJKO: I would have to get some site schematics out, but essentially it turns into something like this. The things that would be coming in via the TAD approach would be the first things that would arrive and it would require minimal handling and then it

moves all the way up.

If you consider they may have some ability to repackage, that's in a later phase such that they would repackage it maybe with a pool, a small pool that they would have at their disposal and that would be another phase of building that pool and that sort of thing.

Again, I don't have a lot of the information at my fingertips right now, but we can get that if you would like to see it.

COMMISSIONER McGAFFIGAN: It strikes me that what you just said means that the dead plants, the plant's that are decommissioned only have ISFSIs left will be lower in the cue then somebody who is yet to be determined who's going to drop the TAD canister yet to be licensed and there's policy implication in what you just said.

The last question I have - in passing I will say whoever is working at IAEA to get rational service contamination standards per square centimeter I bless them. I hope that they're some day successful.

I wasn't really suggesting earlier that we limit people, but I think there are times, clearly if you've got somebody about to be promoted and he's working for one of you folks or she's working for one of you folks at a crucial point in a licensing review, you got to at least say to the new office you're not going to get that person for six months because we don't have anybody to do this criticality review but Susan or John.

We've got to be a dynamic organization, but I think we also have to - I think it's very hard and maybe I'll direct the question to Jack. It strikes me the person that can best predict his workload is Bill. The next best is probably Larry and Bob is probably the least stable because –

MR.REYES: He is the least stable.

COMMISSIONER McGAFFIGAN: He gets these huge chunks that may or may not happen tossed at him all the time. How do you manage the human capital?

MR.REYES: I'll let Bill give you a real-life example on that.

MR. BRACH: You raised a question with regard to the extent to which offices work to cooperate and work together when a staff member has been selected for a new position.

An example at hand just within our office right now between our group and Office of Regulatory Research, we have a staff member who was promoted. His promotion went through, grade promotion went through. He continued to support in this case Office of Research for an extended period of time while he was doing some analyses for which he had a unique skill and ability and clearly within Research there was a need for that skill and also from a time frame a need to complete that work in a given time frame. We do work collaboratively together to-

MR. REYES: We don't hurt the individual. The individual gets the promotion and we assign him to finish the critical path. This is an organizational goal to get the work done. The individual then moves to the next position.

COMMISSIONER McGAFFIGAN: That's fine.

MR.REYES: We do work together.

COMMISSIONER MERRIFIELD: Mr. Chairman, since I joined the Commission I've been very interested in what's been going on with spent fuel storage and transportation. I was the first, and at this point, the only member of this Commission who

ever attended and been on a spent fuel storage shipment. I went on one from the Brunswick site up to Harris, it was a very enlightening effort.

I was also the member of the Commission who initiated a COM, it was COMJSM-01-0002, that asked the staff to take a look at the Baltimore tunnel fire to see if that would have any impact on the canisters that we regulate.

I did that at the time because there was significant interest on Capitol Hill and elsewhere about that fire and I think there were questions about what would happen.

I was pleased with the statement and I'm paraphrasing somewhat but the conclusion of the staff that there would not have been any release of spent fuel from the transport packages had they been subject to the temperature extremes from the real life tunnel fire. That underscored what I thought was going to be the outcome when I first developed that COM back in August 2001.

The issue of spent fuel transportation is one that has engendered a lot of political controversy. There are lots of questions on various folks, in my view a lot of nonsense, which has been floated out there.

All of the information that the staff has provided us over the time that I've been here has demonstrated that fuel can be safely transported. The Commission has thought about and talked about doing a full-scale test of a storage canister.

I agreed to that and I was one of the supporters of it. Not because I felt that there was any scientific doubt, in my mind there's no scientific doubt. I think this material can be transported safely.

There is some doubt on the part of the public and it was for that reason that I was

willing to go along with it. The fact of the matter is there are folks that have been running around our country with mock canisters claiming that these are mobile Chernobyls. That statement I believe is a bunch of horse hockey.

I think we have clearly demonstrated that we can safely transport spent fuel in the United States. All the information indicates it. Obviously, we're going to have our public challenges in terms of convincing some doubters out there, but I think all the scientific evidence that we have, our international counterparts have, is this is a safe way of dealing with it. But unfortunately there's a lot of B.S. that's still out there in the public.

In terms of other issues, Mr. Chairman, a couple quick ones. I want to congratulate Bob. You talked a little bit about alternative dispute resolution. This has been an issue that I championed on the Commission and I'm very pleased to hear the progress you've been making and I think it's very noteworthy.

In terms of Jack, your comments about the need for rotations among the staff, I would agree with Commissioner Lyons. I think certainly we do want to encourage folks moving around. We certainly don't want people to be stove-piped in their career.

I think our agency benefits from having a diversity of views and experiences and it has been a real positive effort on the part of our staff.

Relating to Commissioner Jaczko's concerns about Fort Calhoun, I would certainly agree. I think our licensees should be very open in telling us what they expect when they are going to be doing these fuel movements to come in late, to come in with a long list and expect our staff to jump through hoops is inappropriate.

It's not a good use of our resources and certainly when they want us to be disciplined

in our licensing fees. I think it's somewhat hypocritical to come in and expect us to go through those types of hoops.

In terms of the issue of changing our numbers, and Luis you went into this, changing our numbers as it relates to our productivity, how many hours our staff can work, I think it's certainly understandable and I sympathize with the notion that we need to invest time in making sure that the new workers we bring on board are well trained.

I think again some of that can be accounted for by the fee structure that we come up with and I think we do need to continue to take a look at balancing that in terms of what is appropriate.

I would say as a general matter, however, I would hope that the staff is focusing this in a way where it is a temporary situation, whether it's a year, two years, five years and not building into our processes that we expect this to be a permanent situation. We do expect our staff to be efficient. We do expect them to be effective.

I'm willing to go along with the notion that we have to tweak that a little bit right now, but I certainly wouldn't want to build into our staff the mindset that that's the way we would always do business because I think we can do better. Thank you, Mr. Chairman.

CHAIRMAN KLEIN: Commissioner Jaczko?

COMMISSIONER JACKZO: A couple brief comments about an issue that was discussed earlier about Honeywell. I'm certainly in agreement with the general sense of my fellow Commissioners that the licensing of a new conversion/deconversion facility should be something that is done at the NRC level rather than the Agreement States.

I would not want to, however, not have a paper come forward if that paper were also

going to address other issues, such as the use of ISAs for conversion/deconversion facility. Trying to take some of the Part 70 aspect and put those into regulatory framework rather than doing it as Commissioner McGaffigan suggested through such a large number or licensing it through its actual license.

MR. BRACH: We plan to address that in the paper.

COMMISSIONER JACKZO: I certainly think there would be value in that aspect but I certainly don't think we need to necessarily spend a lot time on the other aspect. One other brief comment on a point you had made Jack, about the need to look for GNEP and some risk informed performance based regulation.

I certainly have learned a lot about this thing since I've come here. I think it's worth exploring those. One area where I think we have to be careful with risk informed performance based regulations is not making them too overly broad and too overly undefined I guess I could say.

In the sense that they wind up providing very little guidance about what our regulatory framework and standards are. In which case we wind up just making the hard choices in guidance documents in other areas and really don't achieve that right balance of having useful information in our regulation.

I certainly think that as we look at these things it's important, but put me more in a skeptical camp in terms of being able to come up with one risk informed performance based regulation that's going to capture everybody. I think it's probably going to have to have greater granularity than that to really be effective which may mean that we need lots of sets of performance based risk informed regulations.

The last point is really just a question. I think Bob, you had talked about this. One of the future challenges you talked about was for some of the new fuel cycle facilities and I think particularly the LES facility was the issue of IAEA safeguards.

I'm wondering if you can just go into a little bit more detail about what specifically the challenges are there and what we are doing to deal with those challenges now so that those don't become problems in the future.

MR. PIERSON: Part of what we need to do is we need to identify to the IAEA eligible facilities. The question is if we identify the facility as an eligible facility, what LES would be, what sorts of oversight would they use to assess the throughput to provide the MC&A measurements that they would need to have the confidence that there was no diversion taking place?

Ideally, that would be incorporated into a design because there's a lot technology that has been developed over the last few years. It doesn't need to be done manually. It is being done manually at a lot of existing facilities simply because it was backfitted into the process.

Ideally one know early enough that the licensee, in this case URENCO LES, could incorporate the provisions into their design so they could have whatever remote feedback mechanism that could do that.

From that perspective, it would be useful to have that sort of information early on. I think there's some question about whether IAEA wants to do any facilities in the U.S. and really whether there's any value added from their perspective. That could be the case.

But our regulatory development basically lays out the process, we're implementing

the protocol basically saying what we're going to do, how we're going to do that.

COMMISSIONER JACKZO: If I understand you correctly the challenge right now then is getting a clear signal from IAEA?

MR. PIERSON: That is one, in terms of implementation of the process, yes.

COMMISSIONER JACKZO: Thank you.

CHAIRMAN KLEIN: Commissioner Lyons?

COMMISSIONER LYONS: Just a few comments. I'll add my support to all my colleagues on the Honeywell issue and NRC control of the licensing process. Commissioner Merrifield made a comment about the importance of supporting the Center and I think I implicitly did that in my comments.

I very much agree with Jeff that we should be looking at, and I think it falls to your organization, to find appropriate contractual vehicles to make sure that the Center's capabilities are well used.

Also agree with both Commissioner Jaczko and with Commissioner Merrifield on the Fort Calhoun crane issue. I hope we're not going to see further examples of that kind of a request in a sense for the NRC perhaps to bail out a licensee that didn't plan ahead quite enough.

Just one quick question for Bill, at least I think it's for Bill. There's been an issue on getting French data on the burn up credit that can be used in spent fuel casks. I believe we've been waiting for DOE to make a decision on whether they are going to assist in providing resources to get that data. Is that resolved?

MR. BRACH: It's resolved in large part. The Department of Energy last year

did decide that they would proceed with acquisition of that data to help support resolution or addressing burn up credit ability on our part to provide allowance for burn up credit.

My understanding at this point is that the Department of Energy with contractor assistance is currently reviewing the data to determine its value, its applicability and later this spring will make a final decision with regard to the actual acquisition of that data. A review is underway right now to make that determination.

That's a step forward in progress from where we were about a year ago when at that point in time the possibility or the prospects for funding were slim at best. It's moving forward. I'm more of the optimist, but I think it's moving forward in a very positive move.

COMMISSIONER LYONS: I hope your optimism is well founded and I hope the data proves to be useful and that we can get that data to you for the very obvious applications you'll have.

CHAIRMAN KLEIN: A question on education. You mentioned that you have some specific needs of talents and you mentioned criticality. Have you conveyed your needs to the Nuclear Engineering Department Heads Organization? Just to let you know that NRC doesn't know all the acronyms. There's an organization called NEDHO that is Nuclear Engineering Department Heads Organization. I guess my question is have you communicated to them what our needs are?

MR.REYES: I don't think we have in a clear way. We have gone to the universities. We have interviewed and asked who's going to graduate with what specialty etc., etc. I don't think we have gone on a collective way.

MR. PIERSON: We work with two universities, University of Tennessee and

University of New Mexico and we have grants, we call them grants, research contracts we work with and we provide seminars. We send people out there on an ongoing basis, but to my knowledge we never communicated to the department heads.

CHAIRMAN KLEIN: Two is a good start, but there are others.

MR. PIERSON: I understand, but we're building on that because of existing criticality programs in place that we're building from.

MR.REYES: The need is great at the NRC. When I was an executive on loan to DOE I did a review for them and my report included this as one of the issues that they needed to address. Just in talking with some of our colleagues, we know they have the same situation.

In fact, their needs there are higher because we deal with pretty clean U-235 but they have an assortment of other mixes. It's more than the NRC.

CHAIRMAN KLEIN: In my past academic life, we used to have a lot of feedback from industry on what their educational needs were so that we could train students to meet the needs of the customers. Those that were hiring. I don't remember ever hearing from the NRC on what their needs were.

MR. PIERSON: I'm a member of a committee of a graduate school that I provides feedback on that, the University California, Berkeley so I do some interface.

CHAIRMAN KLEIN: But in a broad sense. All the NEDHO meetings that 'I've attended --

MR.REYES: Let us take that as a good suggestion because the more we tell them what the product needs are, the more the people who produce the product can help

us.

CHAIRMAN KLEIN: Thanks. Any final comments?

COMMISSIONER MERRIFIELD: Mr. Chairman, just two quick ones. You made mention repeatedly which I thought I've long agreed with and that is we should tell our licensees if you bring us a quality application we will show you timeliness. I think some of the comments that Bill Brach had go to this.

We had an occasion with some licensees who gave us incomplete applications that we turned back, but you counterbalance that appropriately with a concern that we not change our expectation of what is an acceptable application. The notion of ratcheting up our standards.

I support your initiative to make sure we balance that out, I fully support it. If we don't get a good application, send it back, on the other hand let's not inappropriately change what we expect to be a good application.

Final one, Mr. Chairman, is this is the last one of these NMSS oversight meetings that I will have. I have to say I think when I came to the Commission, and I think Ed can probably certify this as well, I think there was some thoughts within the staff, within the NMSS staff, that somehow they were looked at as somewhat of a second thought as it related to some of the reactor issues.

I think the meeting we had today and the actions undertaken by the Commission at least during the time that I've been here, should be a very clear indicator to our staff of the importance that the Commission places on these issues and that these are clearly critical areas and initiatives that we have been protecting people and environment and certainly I

think the Commission takes it quite seriously in that regard. Thank you, Mr. Chairman.

CHAIRMAN KLEIN: Thanks. On behalf of the Commission, I'd like to thank you for your great presentation. I think you can tell a lot of interest certainly on human capital that was brought up. I'd like to thank you for having a very productive year and what you to do for the agency. That was very dynamic. Jack, best of luck in your retirement.

MR. STROSNIDER: Thank you very much.

CHAIRMAN KLEIN: Meeting is adjourned.