

UNITED STATES NUCLEAR REGULATORY COMMISSION

PERIODIC BRIEFINGS ON NEW REACTORS – PART 2

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Wednesday

October 24, 2007

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The Commission convened at 1:30 p.m., the Honorable Dale E. Klein, Chairman presiding.

NUCLEAR REGULATORY COMMISSION

DALE E. KLEIN, CHAIRMAN

GREGORY B. JACZKO, COMMISSIONER

PETER B. LYONS, COMMISSIONER

PANEL 2: NRC STAFF

LUIS REYES, Executive Director for Operations

WILLIAM BORCHARDT, Director, Office of New Reactors

GLENN TRACY, Director, Division of Construction, Inspection, and
Operational Programs, NRO

JAMES LUEHMAN, Assistant to the Director, Office of Enforcement

LOREN PLISCO, Deputy Regional Administrator for Construction,
Region II

PROCEEDINGS

CHAIRMAN KLEIN: Good afternoon. As I said earlier, it seems like we did this this morning when we were here. We look forward to a continuing discussion of our inspection program for the new reactors.

Before we start, I would like to acknowledge that as I understand it this might be Bill Kane's last Commission meeting as the EDO. But my understanding is you've only had 34 years and four months with the NRC. I don't know why you'd think about retiring with only 34 years and four months. My other understanding is that from talking to the staff that Bill always has two questions: Why are we doing this? And why are we doing it this way? I'm sure that trend will be continued by the new EDO, Deputy EDO, in terms of why are we doing it and why are we doing it this way. So, Bill, we wish you the best in your next phase of your life.

MR. KANE: Thank you.

CHAIRMAN KLEIN: So we will continue with our activities of this morning. Any comments before we start?

COMMISSIONER JACZKO: I guess I would say, Bill, its taken 34 years to figure out the best place to sit is behind everybody. Usually you're sitting up here. Well, good. I certainly would echo the Chairman's comments and congratulate you on all the work you've done and for this agency. For me

personally, you've been a tremendous resource and I appreciate that. Certainly, for the Commission as a whole your knowledge and expertise has really been valuable in decisions we've made. I appreciate all that work and regret that we won't have another opportunity to ask you questions directly. Good luck with all your future endeavors.

COMMISSIONER LYONS: Well, I'd like to add too, Bill, I just want to add that I too have tremendously appreciated the interactions we've had in the short -- relative to your tenure -- the short time that I've been here, but I really appreciate our interaction. I've appreciated your advice and I've also, if you recall, I've asked you for advice on retirement, too. Since I failed that multiple times, I'm very curious to see if you succeed and any advice you can share. Best wishes.

CHAIRMAN KLEIN: Luis, would you like to begin.

MR. REYES: Good afternoon Chairman and Commissioners. The staff is ready to brief the Commission on the new reactor inspection program. We're going to first present our accomplishments since last we met and then we're going to give you the status on several key issues, where we are regarding the new reactor inspection program. With that, Bill.

MR. BORCHARDT: Good afternoon. Although we're several years away from a combined license and the beginning of significant construction

efforts on the sites, there are important activities that we've already begun to work on, both domestically and internationally in support for site construction. Glenn will be briefing you on a number of those activities.

Just as important as those activities, we and our stakeholders are developing the key inspection and oversight programs that will be implemented during the construction phase. Although it might seem to some that we are way ahead of schedule on this activity, that couldn't be further from the truth. Because of the desire to ensure a stable and predictable regulatory environment, important issues need to be addressed in the very near future; the program development, the inspector training and the industry's needs.

The recent ACRS review of the ITAAC sampling methodology and the sampling concept and the following Commission decision is an example of one of those fundamental issues that needed to be decided now before we could develop the detailed procedures. Having made that decision allows us to further develop the procedures and programs on a schedule that will support construction activities. Active stakeholder involvement is vital to making continued progress on those activities. Go to slide two, please.

Since our last Commission meeting on new reactors which was August 22nd, the pace has not slowed down. It remains very aggressive. The revised Part 52 was published and was made effective September 27th. The Limited

Work Authorization Rule will become effective on November 8th, about 2 weeks from now, and the Aircraft Impact Assessment Proposed Rule was published on October 5th and that begins a 75 day comment period.

We've had a number of COL application activities and we're now in the midst of exercising the new and enhanced acceptance review process which is already, I believe, showing great benefits; providing more definition to the quality of the application and will give us an enhanced ability to establish a schedule that will be predictable and able to be supported by both the applicant and the NRC staff.

The safeguards protection orders have been issued to all four reactor vendors. We're in the process of providing that information to those vendors as their programs get approved. As you heard a little bit about this morning, a very aggressive and resource intensive public outreach efforts. We're going to each of the combined license sites, meeting with the public, public officials and that's continued to receive very positive feedback.

Responding to one issue that was raised this morning, I would just point out that we're going beyond the NRC policy in order to enhance that stakeholder involvement and we have made arrangements with a local library in the vicinity of each of those COL sites so that they will have the entire licensing docket for that application. This is not a rebirth of a public document reading room or anything

like that, but this a way that we wanted to make sure that any interested member of the public that lives near the plant could easily travel to the library and gain access to the information.

We've also awarded the contracts which were a combination of commercial and National Laboratory support that the staff can utilize in doing our technical and regulatory review activities. So this is important information to help us with background information as we make the technical and regulatory decisions that are required by our mission.

In addition, there have been several offices that have been instrumental in issuing the necessary industry and technical staff guidance to support the applications. I'm talking about Standard Review Plans, the Reg Guides, all of the infrastructure that is necessary for both the industry, the NRC and the public to see how we're going to do our job. Slide three, please.

Just a brief overview of the current staffing situation in the Office of New Reactors. We have nearly 400 people on board. We're continuing to hire. The current guidance under the Continuing Resolution is that at least for the time being we're going to continue to hire up toward the 485 staff level. If that continuing resolution were to extend beyond the January timeframe, I think the agency will have to revisit that issue and it could impact our future staffing activities.

Office consolidation is moving ahead. We've made very good progress. It's a much better picture than it was six months ago. It's still not ideal, but we really appreciate the efforts of all of the offices and the Commission in supporting the consolidation activities. Slide four, please.

A number of minor changes, really, to the application chart here. The first I'll mention is that Duke for the Lee station under the AP1000 section has decided to have a two month delay in their combined license application submittal and that is in order to take advantage of the Bellefonte, which is the lead, the reference combined license application in order to benefit from that acceptance review and any experience that might be gained. We're very supportive of this slightly revised schedule.

Environmental studies have begun at both the Berwick and the Matagorda, Texas County sites and, of course, the South Texas Project submitted their combined license application on September 24th. We are about halfway through the acceptance review process on that. With that, I'll turn it over to Glenn Tracy.

MR. TRACY: Thank you, Bill. Good afternoon. The objectives of the new reactor inspection program are listed on this slide. Achieving these objectives includes monitoring and evaluating construction activities supporting the oversight of the licensee's completion of the Inspections, Testing, Analysis

and Acceptance Criteria known as ITAAC, and agency verification of ITAAC closure.

As I will discuss later, this includes providing you, the Commission, with the information you need to ensure that the inspections, tests and analysis have in fact been completed and the acceptance criteria have been met prior to operation in accordance with Part 52.

One of the key goals of the program is to ensure the smooth transition from the oversight of NRO in Region II during construction to the oversight of NRR in the applicable Region into and under the reactor oversight program for the ultimately operating reactor. Next slide, please.

This slide provides an overview of the new reactor inspection program and its multiple components and I'll spend a few moments describing it. The program provides for inspection and oversight of diverse areas covering the various stages in time from early design and component procurement through combined license design certification application development and review and through the conduct and completion of construction and the ultimate operational readiness startup testing program.

The following manual chapters are depicted: Manual Chapter 2501 in dark blue provides for guidance for evaluating the quality assurance of site suitability and environmental data collected to support an application. Manual

Chapter 2502 in dark green verifies the implementation of quality assurance programs and processes needed to yield a complete and accurate COL application and also directs the performance of design engineering inspections.

Manual Chapter 2503 in light blue provides direction for inspection of work that will ultimately lead to ITAAC completion under 10 CFR 52.99. Manual Chapter 2504 in yellow includes inspection of programmatic topics such as pre-operational testing and quality assurance. This Manual Chapter provides for the inspection guidance that leads to the transition to the reactor oversight process.

Manual Chapter 2505 in light green describes the assessment of licensee performance and is currently under development. It will be used to determine if inspection beyond the baseline is required. Manual Chapter 2507, the red line arrow, describes the vendor inspection program which is already underway at fabrication facilities where long lead time components are being manufactured or where design analysis is being conducted.

And lastly, Manual Chapter 2508 in orange provides the verification of quality assurance program implementation for the preparation of a certified design. We are building upon our previous experience here including the lessons learned during the construction of the current operating fleet. As was discussed this morning, there are numerous historical lessons learned regarding significant quality and oversight related concerns during the previous period of

construction in the United States, as well as current insights from our international partners.

These lessons learned and insights have been identified and reemphasized in our Information Notice 2007-04 issued earlier this year.

With regard to our current inspection program and its procedures, the procedures required for Limited Work Authorizations were completed in the last fiscal year, including the revision of four Manual Chapters, 2501, 2, 3 and 4 and the issuance of three new Manual Chapters 2507, 8, and 614 as well as 20 supplemented inspection procedures. The remaining procedures for the program are being prioritized and refined and will be issued throughout this fiscal year.

These procedures are coordinated with the Regions, coordinated with NRR and incorporate the lessons learned of our domestic and international experience. The procedures are being used as is the case for 2501 by both Region II and headquarters in the oversight of early site permits and site characterizations. They're being piloted where appropriate, such as is the case of vendor and third-party audits with NUPIC and Quality Assurance activities and they're all being placed on the NRC's website to encourage stakeholder comment and discussion during our workshops and public meetings. Next slide, please.

This slide and the next will highlight a few of our more recent

accomplishments. We've completed six COL design certification pre-application audits to date at South Texas, Bellefonte, Lee, North Anna/Grand Gulf, VC Summer and Areva. Two more are currently scheduled at Shearon Harris and Mitsubishi Heavy Industries.

We completed six vendor inspections at Japan Steel Works, Conval, B&W Canada, Velan, University of Texas, and Areva. We have also participated in a nuclear procurement issues committee, the NUPIC audit, at Cameron and are participating in another NUPIC audit this week at Flowserve Vernon.

Regarding ITAAC sampling, we presented our methodology to the ACRS on July 11th and on July 24th ACRS Chairman Shack informed Chairman Klein and the Commission of the committee's concurrence with the staff's ITAAC closure verification process that uses a sample-based inspection program. The ACRS agreed that the staff's threshold value used to select the ITAAC to be inspected should result in adequate samples for the advanced boiling water reactor and AP1000 designs. Next slide, please.

Continuing on recent completed milestones, we've established key bilateral relationships which I will discuss in greater detail in a later slide. I also want to knowledge our collaboration with NRR to enhance the existing operating experience program to include construction insights and I will speak further to this.

And finally, I note the issuance of the Manual Chapter on the qualification of our inspectors and Region II's current work with the Technical Training Center on inspector training specifics. Next slide, please.

I will now provide some information on our areas of current focus. Current Quality Assurance activities include pre-application audits and the development of our oversight of first of a kind engineering. Program development activities include the ITAAC closure process, our construction assessment process and enforcement policy, the incorporation of construction insights into our operating experience program and international cooperation. Next slide, please.

As I mentioned, the pre-COL application audits are defined in NRC Manual Chapter 2502. Inspection procedure 35005 describes the staff's review of the quality assurance program and its procedures and their implementation by the prospective applicant or its designee for activities affecting the quality of the COL application. This procedure describes the staff's review of the process applied in the development of the COL application and how this process impacts the accuracy and completeness of the application as required by 10 CFR 50.9.

For those COL applications that do not reference an early site permit, the staff will review the implementation of quality assurance controls for the site characterization during the pre-COL audit. Pre-COL application audits are not a compliance review, but more of a readiness review. The results of the pre-COL

application audits feed into and inform the staff's acceptance review of the COL application.

During these activities with prospective applicant and/or the associated contractor, the staff will review a sample of design documents, procurement documents, corrective actions, their audits, their training and qualification records and their quality assurance records associated with the activities affecting the quality as applicable to the COL application.

The staff will also audit the test control, measuring and test equipment associated with the site characterization activities during the COL audit if it had not already been conducted by the geotechnical foundation audits.

What are the examples? I will list some examples of issues from COL audits to date that affect the completeness of the application. They've included: applicant oversight of contractor activities, procurement document controls, policies and procedures to verify the quality of the suppliers and policies and procedures for the corrective action programs.

Regarding our first pre-submittal design certification audit we just completed last week, we found no programmatic quality assurance issues; however, seven application content gaps in either ITAAC, diagrams, analysis, testing or certain assumptions and specific FSAR chapters were identified. What we're using, Reg Guide 1.206 as our benchmark. However, we would classify,

and the team did classify, none of these gaps as overly significant and they will be described in a public inspection or audit report.

In summary, these activities have proven beneficial to the NRC and our applicants and continue to be refined as experience is gained. Next slide, please.

It's been emphasized by our senior agency leaders that it is extremely important for the detailed design review to be done early in order to validate the design and insure that it is properly translated into the detailed design documents for a particular site. As was mentioned this morning, this is especially important during modular construction activities. We hope to conduct these activities during the timeframe of Manual Chapter 2502, which describes how we will in fact look at the detailed design engineering inspections and to do it during the COL application review phase.

However, we recognize that the applicants have the ability to conduct these activities later and we have in fact adjusted Manual Chapter 2504 for the on-site and construction time frame accommodating such an approach in both Manual Chapters. Again, the objective of the design engineering and inspections is to ensure that the design process for a reference plant being constructed to 10 CFR Part 52 is effectively implemented in accordance with the NRC's regulations and the design commitments made in the applicable FSAR.

I should emphasize that the focus of these design engineering inspections during the COL review is not on work previously covered during the design certification process. The focus of these activities includes the translation of the high level certification design information into the lower tier construction, design and procurement documents, review of the closure of the design acceptance criteria, deviations to the certified design, and site specific issues. These inspections will be conducted to verify that any additional DAC, the Design Acceptance Criteria, or ITAAC, that an applicant submits in the COL application are in fact complete. Next slide, please.

On this slide and the next I describe the new enhanced vendor inspection program which is described in the new Manual Chapter 2507 developed this year. Enhancements to the NRC's vendor inspection program to support new reactor licensing efforts were described in SECY-07-0105.

The specific enhancements to the vendor inspection program include broadening its scope, increasing the oversight of the supplier audit activities, focusing on 10 CFR Part 21 implementation, and developing additional inspection, training and qualification guidance.

What are the factors that led to these enhancements as described in the SECY? In some cases, the sole availability and extensive use of vendors for large nuclear components overseas and expected entry of new global suppliers

to the nuclear industry, the use of modular construction techniques, the need to support ITAAC verification and the planned use of suppliers for components and engineering and licensing service from outside of the United States. Next slide, please.

The vendor program looks at critical quality attributes for long lead time components and insights regarding ITAAC related to those components. And as you know, we worked with the industry in issuing regulatory issue summary 2007-08 for the importance of gathering information for them to give us which vendors and which fabricators will be used in what time period in order to allow us to properly schedule our oversight and our witness of the ITAAC and ITAAC associated manufacturing processes.

In an attempt to make the program as effective and efficient as possible, the staff has made strides in expanding international cooperation in the oversight of vendors, which I will discuss in further detail. We have been actively participating in MDEP Stage Two pilot project, which includes a working group on component manufacturing oversight. While still under development, it is fair to say that the cooperation on vendor inspections is widely seen as one of the most promising areas for increased multinational activities.

Additionally, the staff developed a new Inspection Procedure, 43005, which was titled "The NRC Oversight of Third-Party Organizations Implementing

Quality Assurance Requirements". I noted that we have already piloted this new audit procedure of NUPIC and the NUPIC's joint utility audits at Cameron. We are doing it again this week at Flowserve Vernon.

NRC observation of these self assessments is important in enabling the regulator to inform and enhance its program and process. Our vendor inspections to date have been effective in identifying issues in corrective action programs, compliance with 10 CFR Part 21 and the implementation of commercial grade dedication. Next slide, please.

I will now discuss some of our primary activities with the ITAAC verification and closure process. ITAAC are important because of their significant role in meeting Part 52, their legal standing and because they are numerous in quantity and vary widely in scope.

As indicated earlier, our goal is to effectively support you the Commission in ensuring the inspections, tests and analysis are performed and that the acceptance criteria are met prior to operation. To do this, the ITAAC closure process includes the following: NRC inspection and oversight of the construction of the structure, systems and components; licensee performance of ITAAC activities; direct NRC inspection of a sample of the ITAAC; the completion of the ITAAC; and a submission of a closure letter to the NRC by the licensee; the verification of the closure of all ITAAC through a review of the licensee's

documentation and our own inspection record; and the documentation of ITAAC closure verification by the NRC.

An ITAAC closure working group was established in June of this year, comprised of representatives from NRO, Region II and the Office of the General Counsel. The groups' project plan was coordinated with stakeholders both internally and externally. The group is addressing a number of significant policy matters including determining the scope and process for headquarters technical support, developing an all-important template and detailed guidance for ITAAC closure, developing the policies for the review of site specific ITAAC with the COL application and refining the skills and resources necessary to sample the ITAAC and implement the baseline inspection program.

Progress to date by this working group as well as our stakeholders include the sampling inspection approach has in fact been provided to the commission and endorsed by the ACRS. The initial templates for the desired format for the 5299 ITAAC closure letters have been openly developed with industry. This was a main topic of our August 31st and October 18th public meetings.

Refined baseline inspection program resource estimates and a generic inspection schedule for AP1000 informed by the vendor have been developed working closely with Region II. And it's worth noting that such a schedule will have to be developed for each vendor type as ITAAC are structured differently.

We've communicated lessons learned on the format of ITAAC for AP1000 and ABWR for improved format and quality in the future and we are in fact developing a generic communication in this area.

Regarding information technology, the development of what's known as the Construction Inspection Program Information Management Systems, we call it CIPIMS, continues with beta testing currently underway within Region II. We just developed a new procedure feedback process on NRO's website to streamline our ability to provide comments upon our inspection procedures.

We're working toward a goal of integrating the information capabilities of the Enterprise Program Management System within NRO, the CIPIMS database I just talked about, and the scheduling tool that we utilized on site by the industry.

Our vision for a streamlined process to construction inspection information includes the capture of our inspection results to support ITAAC closure verification and the scheduling inspections and having all of this information readily available to the public. Next slide, please.

This and the next two slides turn our attention to assessment, allegations and enforcement. We've carefully considered our experience and the success within the reactor oversight process in crafting our approach. Specifically, this approach to developing a construction assessment process involves utilizing the appropriate ROP attributes of transparency, predictability and scrutibility. Next

slide, please.

Our initial construction assessment program insights include the following: licensee performance would be determined by a periodic review of the inspection record and that would be looking at findings, issues involving ITAAC, substantive programmatic issues, cross-cutting issues, and serious or repetitive violations. Increased follow-up inspections would be graded and would include focused or broad based inspections in the areas of concern, including expansion of the ITAAC sample either within the family or more broadly.

Substantive crosscutting issues or a method for trending and integrated findings is currently under consideration in the areas of quality assurance programs, corrective action programs and safety conscious work environment. The staff believes that these cross-cutting insights developed during the course of NRC's inspections contain valuable information regarding licensee performance across all areas of the construction.

The inclusion of cross-cutting issues in the ROP in our belief has enhanced the agency's oversight of safety conscious work environment and safety culture.

I'd lastly point out a draft construction response table has in fact been developed in our public workshops with stakeholders to apply a graded approach and provides a predictable and scrutable NRC response to declining licensee

performance and we continue to work the details of that table in the public workshops. The next slide please.

Regarding clarification of aspects of the allegation program and integrating enforcement policy with the assessment process, we have been working with the Office of Enforcement, the Office of Investigations, the Office of the General Counsel and Region II to understand resource implications, legal limitations, work with our stakeholders and better understand the implications of the new global marketplace.

As an example, the applicability of employee protection regulations provided under 10 CFR 50.7. Our future work in this area includes finalizing the overall assessment process flow chart and defining critical terms, developing a methodology for dispositioning licensee identified issues, developing examples for determining the severity levels of violations, deciding on the final cross-cutting themes and appropriate agency response, and defining the appropriate periodicity and content of the agency's assessments of licensee's performance. We've developed a formal project plan in this area in coordination with our stakeholders. Next slide, please.

This and the next slide discuss the agency's construction and operating experience program. Working closely with our partners in NRR and the agency's operating experience program, as well as with the Office of International

Programs, we're seeking to obtain construction experience both from the domestic and international partners and projects and share it with all of our partners in a timely and effective manner.

Our activities include a review of generic operational issues with implications on new reactors, review of the event root cause evaluations, staff evaluations for the applicability to new reactor designs, construction or operation, information exchanges and the working group on operating experience, the use of bilateral agreements, foreign visits, international inspector rotations.

Specific uses that we envision are input to Wizard, the tool we use to enhance our technical reviews and to the inspection program documents themselves to be used by the inspectors in their training. Communication of these issues to all of our stakeholders, domestically, via generic communications and internationally via our agreements. And evaluations of the issues for safety significance and applicability to the U.S. designs and reviews. Next slide, please.

This focus on construction activities is an element of the agency's overall operating experience program. An example of a recent application and lessons learned include the identification of defective parts and the issuance of a Part 21 notification by a vendor informing the NRC that a faulty batch of screws with application in safety and non-safety related systems had in fact been shipped to NRC licensees.

The lesson learned from this as well as the event described this morning with the Information Notice on fraudulent parts by NRR is that due to new construction demands and new suppliers potentially unfamiliar with NRC regulations, licensees and applicants need to remain vigilant about the potential introduction of defective, counterfeit or fraudulent parts into the supplier chains.

A complete list of our near-term activities include the training of our staff, developing a dedicated Web page, continuing to leverage existing bilateral agreements and the promoting and sharing of construction experience, designing office instruction and guidance documents and we are in the midst of revising our Memorandum of Agreement with INPO. Next slide.

We have met on multiple occasions with stakeholders here in Washington and in the vicinity of the potential new reactor sites. We are also presenting our messages at various industry and stakeholder conferences. In addition, Region II has held or scheduled upcoming meetings at every proposed new reactor site. Several public meetings and workshops were held in the last fiscal year on the construction inspection program, on the construction assessment process, the ITAAC closure process, quality assurance and vendor inspection, and new reactor operator licensing.

Formal project plans have been developed in key areas such as ITAAC closure and the assessment process and the frequency of meetings is increasing

as we develop the detailed guidance. There has been additional interaction with industry working groups such as NUPIC, the INPO's new plant deployment group, as well as through our QA audits and vendor inspections. We are receiving feedback, both positive and negative and they have provided valuable insights supporting the construction inspection programs development.

And lastly, I'd note in addition to our focus on our website, we've also undertaken an initiative to identify NRO program documents that need to be revised in the future to accommodate limited English proficiency individuals who work or reside near the newly proposed new reactor sites. Next slide, please.

This and the next slide highlight our recent international efforts for which we are proud. This week at their invitation, we are observing a Korean inspection at Westinghouse in Portsmouth, New Hampshire where reactor vessel internals are fabricated. And next week we accompany them on another inspection at Crosby Valve. We are planning for them to accompany us on a vendor inspection in the near future.

Regulators from the United Kingdom will be in the United States next month to conduct design assessments at GE and Westinghouse sites in Wilmington and Pittsburgh. We have been invited by them and will be accompanying them on those visits and upon request, are providing insights regarding our own efforts in our quality assurance reviews in the designs. Next

slide, please.

We've had effective interface with the Japanese and the Japan Nuclear Energy Safety Organization, JNES, and coordinated and briefed JNES prior to our first enhanced vendor inspection at Japan Steel Works. We plan to further coordinate with JNES and NISA, the Nuclear Industrial Safety Agency as we plan our further oversight of Mitsubishi Heavy Industries.

We have routine interface and a highly cooperative rapport with STUK and Loren and I held extensive discussions with our counterparts in Finland. Mr. Joe Tapia, as you know, one of our Senior Construction Inspectors out of Region II, completed a very successful two month rotation at STUK and Olkiluoto 3. We're looking forward to do more U.S. rotations internationally.

In other recent cooperative activities, we invited the Canadians to participate in our recent vendor inspection at the B&W Canada and we had an excellent experience with the French, particularly at the inspector level accompanying us at our inspection of Velan in Montreal. As a result, we've been invited by the French regulator to accompany them at their future vendor inspections at the Areva production facilities. All of these exchanges have provided key insights into each country's method of oversight and enable us to build a foundation of trust and rapport for communicating and sharing information effectively in the new global market. Next slide, please.

My final two slides provide several key conclusions regarding our work to date. We believe we're effectively conducting our pre-application audit activities and vendor inspections. We're supporting the application reviews and we're certainly coordinating with our international partners and developing our new program. Next slide.

Project plans have been developed for our key areas of development and the reason for that is we want to make sure the milestones are understood and we can work with our partners in effective workshops.

And lastly, to emphasize Bill's opening comments, timely stakeholder support is critical and their involvement, meaning all stakeholders, as we develop this program. Thank you so much for this opportunity and I hope to be effective in answering your question.

MR. REYES: Chairman, that completes our prepared remarks and the staff is now ready to answer your questions.

CHAIRMAN KLEIN: Well, thanks. Just one follow-up from this morning. We were hearing data about the FOIA, the length of time for the FOIA. Can you just comment on that before we start the round?

MR. REYES: Ed Baker is here with me and while Ed gets to the podium, you need to understand that if you take a particular number for a particular example it may not give you the total picture. So what we like to do is

give you the NRC's picture in terms of FOIA responses. Ed.

MR. BAKER: Ed Baker, Office of Information Services. If you go back and look at -- the number in question actually was in 2006. We did have 230 median days for processing complex requests that year. That particular statistic was driven by a 30,000 page request concerning Davis-Besse and the head degradation at Davis-Besse. So, that was an extraordinary effort and unique as I'll talk about with respect to the other years.

In 2004, our median time was 47 days for complex requests; 2005 it was 12; 2007 it was 40 days. At the end of FY07, as we just reported to the Department of Justice, our oldest request on hand, our oldest, was 61 days of any of the types, simple or complex. Additionally, at the end of FY07, we only had 13 requests that were older than 20 days.

Now with the Commission's help in terms of resources, we have moved forward with our improvement plan for processing FOIAs and we've been successful. When the Department of Justice comes out with their report, I think you'll find we're doing very well compared to other agencies.

CHAIRMAN KLEIN: So the long one was a very complicated one?

MR. BAKER: Very complicated, very large; involved investigation reports, so it was a very complicated request.

CHAIRMAN KLEIN: Okay. Thanks.

MR. REYES: Occasionally we get a situation like that where one particular one is really a big impact. If you only measure that one, then the number doesn't look good. But if you look at the whole picture, I think -- the other dimension that Ed didn't mention is that as a result of putting the vast majority of documents electronically available to the public, the number of requests keeps coming down. So, it's just a sign, in my opinion, that people are getting better at finding the information that we have on the ADAMS system.

CHAIRMAN KLEIN: Great. Thanks. Commissioner Jaczko?

COMMISSIONER JACZKO: I guess I'll try and focus my questions on a couple areas. I guess I'm always reminded whenever we do these things that I always have to go back and reeducate myself about why it is that we don't inspect everything. I think that's part of the lesson here, I guess, for this meeting and it came up for me as I was the person who suggested we convert the ITAAC paper to a voting paper.

Essentially what the Commission said was we asked ACRS to take a look at the sampling and ACRS did recommend that process. It was interesting as I was going through the material for this meeting that as I was starting to read through the material and I kind of worked in some sense chronologically from the front of the book to the back of the book. I started asking myself are we intentionally telling people exactly what ITAAC they don't need to worry about

because we're never going to look at.

As I kept reading in the book, I got to a lot of information in the book about the workshop that was held in June, I guess, with a lot of stakeholders. Then I started reading through the comments of the stakeholders and then I got to a series of a large number of comments that were largely the same thing said by one particular individual, saying that we're doing exactly that. We're telegraphing exactly the things people don't have to worry about for ITAAC. So I thought that was somewhat interesting.

To some extent, by way of a first question, how is it exactly that we are going to ensure that licensees will be as accountable for the ITAAC that fall below this. We've established this .4 and I have to be honest, I don't know what that is .4 of, but it's the metric that we use. So it's a number that we created in some kind of index depending on the importance, depending on a variety of different factors. Anything that falls below .4 or in some way below or above .4 gets part of the sampling and if it doesn't then it's in a different category.

If you could just briefly explain what happens to those things that don't fall within the sampling specific program that we have?

MR. REYES: I'll let staff answer that specific, but you need to remember that the licensee has a vested interest. Forget about the regulator. They have a vested interest to make sure that that system works before they

take ownership from the vendor and the suppliers and the construction company. So, just a big financial investment for them to know that everything they purchased and that everything they pay for installation is working. So they have their own interests and need to be working in good order before they --

COMMISSIONER JACZKO: I'd like to get into the more technical issues because that's precisely my concern. They do have a big financial interest in here and that's my worry.

MR. REYES: If it doesn't work, you can't run it.

COMMISSIONER JACZKO: Absolutely. You know, again, the point is we have a responsibility here. I'm not worried about what their interests are. I'm worried about what our responsibilities are as a regulator to make sure that public health and safety is assured. That's our responsibility.

MR. REYES: My point being is that they have multiple interests in making it go right. The next one is ours.

COMMISSIONER JACZKO: Absolutely. And I'm worried about our interests because we have different responsibilities as a regulator than they do as utilities. If we could maybe get on to the specific issue. Luis, did you want to address that? I'm looking at Glenn because I assume he's the one that knows.

MR. REYES: Glenn can do it because I'll tell you my own personal experience, but since he hasn't done it, let him tell you. Then I'll tell you the

untold story of 30 years of doing it.

MR. TRACY: I'll try and get it right and Loren can also help me.

Yes, sir. As you remember, we briefed you and we did go to the ACRS as you stated. Regarding the rest of them, we did put in a requirement that all families of ITAAC and if you remember the various families has got to do with groupings to ensure we're looking at these large components using some of our best inspectors from the days of construction.

As a result, each family will in fact be tested whether any element of that has such a risk or a safety element to have warranted .4, we're still going to go there.

COMMISSIONER JACZKO: We will do one?

MR. TRACY: One in each family. Yes, sir.

COMMISSIONER JACZKO: Were there ever more than one?

MR. TRACY: Yes, sir. If in fact we find problems which is the next point in the ITAAC sampling those that we have tested in our inspections or those that have been closed and we find issues. The 2505 assessment program will then likely mandate it's under development, but the expansion of a sample. That can either be against a family or against the entire program.

COMMISSIONER JACZKO: Again, I guess I'm more interested in things that don't get caught by the expansion. I guess in theory there shouldn't

be problems. In theory, everything -- particularly those things that are in the .4 we should catch. When I had the briefing I think that you referred to, one of the questions I asked is what are the things that fall specifically into the sampling, what percentage of the resources are they relative to all the other things?

Ultimately, this is a resource issue. As I said, I always go back to reminding myself why it is we don't inspect everything and the reason is because of limited resources. We can't do everything. Again, just looking at the comments and wondering is this the right program.

The question that comes back to my mind is what additional percentage of inspection resources are we talking about to get at those approximately other 60% of the ITAAC? The ones we're inspecting, are they the ones that are most resource intensive from an inspection standpoint or are they the ones that are most risk significant, which doesn't necessarily translate into resources necessarily?

And that to me is probably the more important metric of looking at this; the two together, I think.

MR. TRACY: I would be making a lot of assumptions to just multiply the fact that we're looking at perhaps 15,000 inspection hours to be looking at our current sample, which could be expanded and say we're looking at 35% ITAAC. Well, I can do the math and multiply that again -

COMMISSIONER JACZKO: I can do that math. I'm looking for insight into whether that math is correct. Is it linear?

MR. TRACY: No, sir. I would not consider it necessarily linear because the ITAAC varies, as I stated, so widely not only in number but in scope. I think the key to get, if I can try and get to the heart of the issue, is whether or not we have chosen the appropriate ones and the number and have we missed anything.

What we have targeted, as you fully understood, the most risk significant and view the most safety significant and that is focusing the industry and what the staff would consider the right areas. But the underlying premise even Mr. Lochbaum, for example, raised in the workshop was what about the ones you're targeting and then you're going to put all your attention there. The position would be there's a sample within the sample, sir.

COMMISSIONER JACZKO: What about the ones we're not targeting?

MR. TRACY: That's

COMMISSIONER JACZKO: So that we will be sampling those one in a family if it doesn't meet the .4 --

MR. TRACY: That is correct.

COMMISSIONER JACZKO: And that will be on a random basis?

MR. TRACY: It's a random selection by Loren and his staff. That is correct, sir. The other point --

COMMISSIONER JACZKO: We only have a few more minutes, so I want to get onto some other things. We had a paper in March, and I have to admit I didn't mark this down in March and I haven't tracked it well. As I was going through the material there was a lot of good material in here.

One of the things and this was the SECY Paper-07-0049: Construction Inspection Rules and Responsibilities. One of the things that the staff said in there, and this is on Page 2 of that, is "with the significant increase in the services provided by vendors and the fabrication of safety related items necessary to support new reactor construction, the existing vendor inspection program will need to be enhanced substantially to provide the assurance that vendors are providing items and service that are consistent with our safety significance".

I guess my question is simple: Are those enhancements being made and if not, what needs to be done to do that?

MR. TRACY: I believe, sir, we have an appropriate level of resources right now in terms of the inspections we've conducted and what I know and my staff knows in terms of what components are being fabricated. As I said, we put out for the RIS, we believe that not only would there be an increase and

there's been an increase authorized for the fiscal year of '09 where we will be enhancing the program further. I'll get further informed. Yes, sir. We'll be expanding modestly and under a controlled methodology to ensure that we have an appropriate oversight.

COMMISSIONER JACZKO: So the answer is we have enhanced substantially the program at this point or not?

MR. TRACY: We will enhance the program substantially. I believe that the program right now has been under a modest controlled and appropriate level, but remember sir, not all of the procurement for the long lead components has taken place. Right now we're looking at six to 10 inspections within '07/'08. We're on that milestone. We're meeting it.

My own '09 budget would bring us up to about 10 FTE. My point being is we'll be doing about 10 per year. If that doesn't match up with the large component manufacturers at that time, I will certainly be going to my bosses and requesting additional resources.

COMMISSIONER JACZKO: So, as of right now this paragraph is being addressed.

MR. TRACY: That is correct, sir.

COMMISSIONER JACZKO: Okay. Thank you. I guess I'll try and squeeze in one more. Getting back then to the issue of some of the vendor

inspections. One of the concerns that I have, and Jim, perhaps you can answer this. Through this whole process we're going to be in a very different space. We'll be in a -- I guess it will be traditional enforcement, but it won't quite be traditional enforcement because we'll be doing some things that are kind of ROP-like. Of course, based on the feedback that I read from the workshop on the construction inspection program, there's some concerns about whether that's the right approach from the industry.

One of the questions that I have about is how we're going to go about doing some enforcement action and the potential enforcement when we have an international supply chain and we have vendors that will perhaps be manufacturing modules in other countries. What ability will we have to deal with enforcement? What ability will we have, for instance, to process allegations?

We rely very much, and certainly if you take the approach favored by NEI in some of their letters, this would revolve very much around corrective action programs. That is how most of the things and I think they say quite frankly to the extent mostly everything that shows up in the inspection program in their view should be handled with corrective action program.

How are we going to deal with corrective action programs that may rely on international vendors that certainly a good element of that corrective action program is that whole system of programs that we establish like an allegation

program, like all these kind of things?

How will we handle these kinds of things, given that some of these vendors will be in an international arena? Jim, I thought maybe you might be able to answer that. If you want to share thoughts or anybody else certainly for that matter.

MR. LUEHMAN: I'll take a shot at it. It's a pretty broad question. I think the first thing I would say, Commissioner, is that we do have experience in this area. We have, to a limited extent, over the last number of years had international vendors in the process. I think the first thing to keep in mind is that the applicant or the licensee is ultimately responsible. That's the first place that we're going to go.

To the extent that we can then go into the supply chain, it's really going to depend on the significance of the problem and whether it something -- I think it's going to be a risk-based approach. Obviously, things that solely affect one reactor or one particular site; things that are not very high in risk significance.

COMMISSIONER JACZKO: Maybe -- I guess my question is really how are we going to go -- I think as you said we'll go into the supply chain. How are we going to go into the supply chain? If it's a supplier, say, that's building the component in another country. How will we be able to do that?

MR. LUEHMAN: I think that's -- I'll give that to Glenn. That's really

an inspection issue. Once the inspectors go there, then we will have findings and deal with them in the inspection program, but exactly under what methodology we're going to approach that, I guess that's really more appropriate for Glenn.

MR. REYES: You need to separate safety and punishment. The safety issue will be that component or that service if it's not adequate. It will be fixed before it goes on. And when you're talking about the punishment or how do you get to resolve the issue, then it's going to be different. Ultimately, the licensee will have to fix it, but take about discrimination. A Chinese citizen doesn't have the rights under U.S. laws, so you couldn't go there.

COMMISSIONER JACZKO: I guess that's one of the things certainly that again going back perhaps to the theme of my comments here. I have to remind myself why we don't do everything. Part of the reason why we don't do everything in this country is because we rely tremendously on licensees and the people that work at licensed facilities. We have extensive programs in place to ensure that those people can raise issues.

We are dealing with a very different situation then if we're talking about components being manufactured in other countries where we can't guarantee a system in which we can rely on employees to raise issues and more importantly if we don't have an entity to hold accountable to have a program to require

employees to raise issues, it takes away a lot of information that we would get.

We only have to look to Watts Bar 2 or Watts Bar 1 and 2 to recognize the important role that allegations played in that particular project. Without the allegations, again, it was a different era, but we were close to issuing an operating license for those facilities.

My point is that it's a different approach. It will be a different role and if our inspections are limited, we don't necessarily and can't necessarily guarantee those other avenues of information.

MR. REYES: Those components and services will eventually land in U.S. soil and they will be under the employees of the U.S. company. You still have a source of information because if they see something wrong, maybe the foreign manufacturer or employee didn't raise, but when it lands in U.S. it has acceptance criteria, QC inspections before receipt, all the testing. So you still have U.S. citizens that are going to be doing that.

MR. TRACY: I'm only encouraged because I had personally participated in the Japan Steel Works led by John Nakoski behind me and that team was able to effectively as a result of a contractual obligation required by the applicant to have an Appendix B program. We were able to enter, brief the Japanese, and affect the good inspection to validate that there were following Part 21 and the requirements, make findings if necessary. I do agree, though,

that it can be challenging.

Regarding allegations, I just want to point out while we might not be able to go under harassment and intimidation, we'll follow the safety concern. We will cause a reactive inspection. We will validate that that component was manufactured properly.

COMMISSIONER JACZKO: Thank you.

CHAIRMAN KLEIN: Commissioner Lyons?

COMMISSIONER LYONS: First, my compliments on the briefing and also my compliments as I watch how over the series of meetings you're a full team, but certainly starting with Bill, are putting together a very comprehensive and very challenging new program. My compliments. I know it's hard to do. I appreciate the way the entire team has approached this series of briefings.

If I were to pick out one area of being a particular compliment, it would be the emphasis on stakeholder involvement; the various outreach briefings that you've held at each of the sites. I think that's excellent and again my compliments and that certainly came up this morning, too, in the morning panel. But that's very, very much appreciated.

By way of starting into a few questions and this first one is probably for Glenn, you talked about six vendor inspections to date. Maybe a couple of questions on the vendor inspections. I'm curious, just in general, how those first

six have gone and then I'm curious when you talked about the joint audits, this is to some extent getting at Commissioner Jaczko's interests also. When you talk about joint audits with a foreign regulator, where does the buck stop? Are we accepting the foreign regulator certification or in a joint audit? You can see what I'm leading to.

MR. TRACY: Certainly, sir. Right now "joint" means they're eating lunch and participating with us and observing each other. We had the lead and they were welcome and they joined and observed us. In these cases, as was going on in a few months, the Koreans have invited us. We get to witness their methodology; how they do business. Just like the French witnessed how Greg Galletti led his team at the Velan Montreal inspection. That's what I mean by "joint".

The vision ultimately? I'm going to let the MDEP Stage 2 and the lofty goals there take us. The bilateral agreements are allowing us to be able to do a lot right now. When you have inspectors being able to share emails and what are you doing and, oh by the way, I'm doing this at Areva; that's going to allow us to have a much more effective means of knowing the global marketplace and just an awareness.

Right now, sir, ultimately we are going to leverage as much as appropriate policy would allow us to leverage and within accordance of our own regulations

an awareness of a vendor's capability. I believe in targeting vendors which they may be some 100 to 150, targeting the ones that haven't had a gander at by anybody for a long period of time.

There's some question as to hearing a very positive up-check via the French approach of going from component totally vertically level, which is not exactly how we do it, but it's a way. It is informative and makes us more effective and efficient.

MR. REYES: We have not delegated our authority. We haven't delegated our authority. Could it be done in the future? You can envision that in the future. At the present time we call it.

COMMISSIONER LYONS: That was the main point I was trying to get at. And then in general, on the six vendor inspections that you've had to date, at least I think it was six, generally are you finding --

MR. TRACY: We see no programmatic or complete breakdowns by any stretch. We have noted areas where commercial grade dedication processes could be improved. Part 21 in procedures or in various implementations could have been proven in a few findings, as well as the corrective action programs within. Those have been our findings to date. We've also had some very remarkable programs that we think should be modeled as well.

MR. REYES: To put it in perspective, it has been very positive, but the six in question are major suppliers of the nuclear industry. You would have not expected for us to go there and find a major problem. It's a good outcome, but with Velan or JSW or Flowserve or any of those names, they're current suppliers so you would expect them to be in good shape.

COMMISSIONER LYONS: For another question, let me return to one of the issues that was raised this morning about whether the PRA for a particular site, for a new site, is resident here or at the site. When this issue had come up back when we were voting on it, I seem to recall number one, remembering that a summary of the PRA was to be here and was to be part of the public docket.

In addition, if I'm recalling correctly, to the extent that we have particular questions on a PRA or an aspect of a PRA, nothing stops us from asking for that information, whether it's resident here or resident there. I think I'm right that we still have adequate access to it.

MR. REYES: Let me make something clear. Nothing stops us.

COMMISSIONER LYONS: Thank you.

MR. REYES: Bill?

MR. BORCHARDT: Your recollection is right. The applicants are required to submit a summary of the PRA and its results. This is not an

insignificant document. If I remember correctly, it's in excess of 100 pages of detailed information. What isn't provided to the NRC are the thousands and thousands of pages that make up the PRA. That level of detail submitted, that summary, is really very much comparable in my mind to the same kind of balance that's obtained throughout the rest of the design.

We don't require isometric drawings to be submitted that show every portion, every inch of a piping layout. We look at a higher level amount of design information as part of the submittal. So what's required to be submitted related to the PRA is comparable to the rest of the design.

The second point I'd make is that all of the information that the staff requires in order to make its regulatory finding must be supported by information that can be found on the docket. So if we needed information from the PRA or any other source of information in order to make our regulatory finding, we would ask for that information and it would be provided on the docket and made publicly available unless it goes into the safeguards type of information. And then it's also documented as part of our safety evaluation report.

COMMISSIONER LYONS: And I was guessing this morning, and I think you just confirmed, that there could be aspects, probably are aspects, in the PRA that do start to cross into the safeguards area.

MR. BORCHARDT: Absolutely, the need to derive what the target

sets are.

MR. REYES: We do not make public the detailed PRAs of the existing fleet. We will not make it public for the future fleet exactly for the point Bill was talking about. It would give you the target sets, a sequence and where to go. So that information would not be released.

COMMISSIONER LYONS: Thank you. That clarifies the discussion from this morning. Sort of a question on ITAACs but actually a question for the non-ITAACs. Again, I'm not sure who to direct this to. I understand the sampling aspects for the ITAACs. Is there a similar sampling aspect for the areas that are not being handled on ITAACs and how do we know, how does the licensee, how do we know when we have achieved success in quotes on the non-ITAACs?

At least in my mind, they're not as well defined in terms of specific deliverables and probably require a little bit more interpretation. Again, I should leave it up to one of you experts, but my question is how do we work through the non-ITAAC issues?

MR. TRACY: I'd ask Loren to supplement me because he's also extremely familiar with the current ROP, but let me just state that we are going to develop a procedure, sir, and are developing procedures for program reviews and that's what the 2504, the non-ITAAC. This is the startup testing and training

programs, the quality assurance, work control. These programs, we have a lot of experience doing routinely now. We know how to do it. It's not as unique, shall I call it, as the ITAAC methodology, so we're learning from the current ROP.

It will be a sample based methodology and the bottom line is the procedures will tell and guide the inspector as to what he or she should be looking out in the field from a programmatic type of inspection. Loren?

MR. PLISCO: The answer is, yes, it is a sampling program, but it doesn't have the same mathematical rigor that we use with the ITAAC program and the expert panels. We have a lot of experience doing these kinds of inspections and the operating fleet is really looking at programs and processes to support the operation, the future operation of the plant and making sure they are in place so we can have confidence that they can operate the plant safely. So we look at those programs.

We pick samples of activities and process and how they're implementing that and there's a judgment made by the inspector of what samples they select and usually using risk insights if it's applicable for that process to select implementation samples to make sure they are implementing the program or process properly. It is a different process in how you select the samples. In this case, we really leave it to the inspector.

COMMISSIONER LYONS: It's still a sampling process? By our

experience in those operational areas at least where it's directly relevant.

MR. TRACY: I was just going to add, sir, that also in answering Commissioner Jaczko's point the staff, the experts, and Loren and I believe we'll also hit additional ITAAC. In other words, when you're looking at programs, you're also looking at the performance base of those programs. So additional ITAAC will in fact likely be observed different than those that are specifically targeted; another way to look at things.

MR. PLISCO: That's the answer I was trying to squeeze in before. The inspections we conduct for 2504 will cross over and look at implementation and ITAACs in non-targeted areas because of the nature of how we do those inspections and pick samples. It's very likely to hit other activities that are on what we call the targeted ITAAC.

MR. REYES: If I could give you a perspective. From the previous 112 decisions we made, people forget we had a sampling program. We used to call it 2512, 13, and 14; different numbers. We sampled systems where it was construction, pre-operational testing, startup testing, et cetera, et cetera. None of the 112 plants we licensed did we do the minimum sampling because that's not the nature of the beast. You get allegations or complaints from the employees. You get situations where at the first try the particular matter does not work and you have to redo it. So we end up the way we just execute the program will

always expand the scope.

Now some plants had many more scope than others, but when it's all said and done, you'll find out that we will not do the minimum. It's just the way the system is designed. You end up enhancing the sampling, whether it's a cable that is damaged or a pump that doesn't start. There's always something that happens that we make sure the licensee enhances the scope and we enhance the scope.

COMMISSIONER LYONS: Thank you very much.

CHAIRMAN KLEIN: Well, I'd like to thank both of you for a good presentation and it certainly compliments you on your progress from the last time. There's a lot of activity that's been going on, so I think I'm sure your staffs have worked more than eight hour days a few times. It really is good to see the team assembled. You're approaching that 400 mark quickly.

I can't help but be concerned about the CR in terms of -- you look in January of this year. The budget was the biggest issue and then once that was solved then space was our issue. I think Tim and his team and everybody for the whole agency that relocated over the summer is to be commended for carrying that out timely.

The two issues now are back to money and space, not just space. So we're going to have to watch that one as we move forward. I guess the question

for Loren in terms of passing on information. We're moving into the Part 52 for the new reactors, but we also have those other lessons learned and things that we watched called Brown's Ferry 1 and Watts Bar 2. So I guess I'd like to hear how do you get information that we learn from those processes over to Glenn and his job?

MR. PLISCO: Really in two ways. One, it turns out in most cases it's the same people. The enlightened decision of the Commission to put everything in Region II with Watts Bar being in Region II and we're doing all the construction for the fuel facilities in Region II. A lot of that information is being shared because it's the same staff that's doing all those construction activities. We're using leveraging the expertise of the staff to be involved in all -- Part 50, the fuel facilities and the Part 52 inspections. From the technical area, it's the same; a lot of the same people. So that's helping.

And we're working closely with Glenn's staff on the lessons that we pick up. For example, in the fuel facility inspection activities. We've had some issues at some of those construction sites that are identical to issues that the Finns have experienced, identical to issues that we saw in the '70s and '80s. We made sure that they were on copy to the Information Notice that went out because it really applies. It's kind of generic lessons on oversight of contractors, looking at the management of the process itself.

Not underestimating what you're taking on and making sure you have the controls and processes in place to handle that kind of complex activity, especially early on that same lesson. We're making sure the message is spread to our staff and to the other stakeholders. We're factoring into our training programs. As Glenn mentioned, we developed our guidance on how we're going to train inspectors. A lot of those lessons have been factored in training and developing our inspectors on what to look for and how to do business.

And I think the international experience we're gaining. We're factoring that back into -- we sent Joe Tapia for two months in Finland and brought those lessons back and made sure we factor those lessons and things that he saw into our program and how we conduct our business.

CHAIRMAN KLEIN: I think the international experience is really important. We are in a global economy. We're also in a global regulatory environment because at my level I talked to a lot of the regulators in terms of how do they operate and what do they do. I thought Joe's experience at Olkiluoto was helpful, but it was also a two-way street. Not only did he learn, but he also provided some information and I know that STUK has commented a lot on the fact that that was very beneficial.

I guess in that arena in terms of the vendor inspection, could you comment on what some other countries do for vendor inspections?

MR. TRACY: Well, certainly. In fact, in Japan we're looking forward to getting back and JNES recommended we meet with NISA because they don't necessarily do that type of oversight and so they were very interested in our visit to Japan Steel Works and how we performed it. While Japan Steel Works was extremely cooperative and informed and enlightened, as a regulator they don't have a vendor inspection program, per se. So we look forward to that interaction.

The French feedback directly from the inspector said it was extremely -- it was a very effective exchange. The bottom line is instead of looking at program and process and performance based, which is more our vendor inspection, they take it from a component level and go completely vertical, sir. They check every aspect in terms of their processes on a specific component validating that selection.

So, we are learning and its coming back to inform our procedures in terms of these are the different ways folks go about doing it. Clearly, Sherry Grier and her awareness as well. It's important we take a look at those countries; I just mentioned two, in the NUPIC group. Anyway, those are the insights I'd provide quickly.

CHAIRMAN KLEIN: In terms of your inspectors that go out and look at things, it was interesting Loren indicated it was the same information that

you're getting from Browns Ferry and also from Watts Bar that will feed into the NRO activities. Obviously, with Bill Kane retiring after only 34 years and 4 months are you having any difficulties in hiring and training people that will fill that inspector role?

MR. TRACY: We're challenged. We are doing okay. I think Loren will be able to tell you how the field is doing and he's looking forward to filling those ranks. Regarding programmatic people, there's no lack of desire for people who want to come work here. That is not a question. We are using the rehired annuitants effectively with a great deal of folks that were in the era of the actual construction and bringing those individuals in to help guide us and make sure we're well-informed historically.

So what I'm telling you is we do need, and I will keep your attention if you don't mind, on the fact that it takes about two years to qualify one of these individuals. So, the budget we're going to be asking for a budget informed by not only what we're hearing from the industry in terms of component procurement and what we need for a bigger vendor or a bigger construction, but then qualifying them in time. So that's why we put this emphasis on the training program.

So, sir, new young inspectors not necessarily out of the service or anything like that, we do need that period of time. A lot of folks are very

interested. They just don't come necessarily with the deep background. Loren and --

MR. BORCHARDT: We still have a number of people who have experienced from the 104 operating reactors that were involved in those construction activities. We're benefiting from that. I don't really foresee a significant problem hiring new people that become construction inspectors. I think there's a high level of interest and a willingness to do that.

Where Loren has been constrained so far is out of the budget. We have really because of budget restrictions this year and in previous years had to limit that construction inspection hiring pipeline. We want to try and get it moving as fast as we can because if all of the construction sites that are on that chart play out to have construction beginning in 2011, 2012 and on, we're projecting we'll need in excess of 200 people in Region II to be construction inspection. We have a dozen, maybe, now. So there's a lot of hiring to do.

I think there's a desire for people to take those jobs, just not the budget at this point.

MR. PLISCO: And we have a practical matter for the next year and a half on space. The same practical issue. I can't hire too fast because I run out of room.

CHAIRMAN KLEIN: It will be a timing issue. How do you stage it

knowing when they're coming? But as we indicated this morning, it's no longer theoretical. We have one and more coming.

MR. REYES: In November when we get the feedback on our FY09 request, if it's not very positive, we may have to revisit the issue one more time because if you're not going to have the money for the space, you can't get the space in time, then you can't bring the people in time, then you can't train them and certify them in time. There's a real window of opportunity here whether you're sending them to Finland or whether you're observing a fuel facility under construction or Watts Bar recovery and construction.

There are some windows of activities that we like to leverage as part of the training. So, plenty of interested and qualified people to come and join us. Some realities that we're wrestling with in terms of practical matters, space, and budget issues.

CHAIRMAN KLEIN: Since we are looking at a lot of international activities and I know Gary is heavily involved in MDEP activities, have you talked to other countries in terms of what they're looking at -- like in the case of Flamanville and Olkiluoto and then in China; how they intend to handle these licensing issues through an ITAAC-similar process?

MR. BORCHARDT: There isn't anyone that has really the ITAAC, except for obviously AP1000 and China, will have access to the ITAAC and

design acceptance criteria that we've developed as part of that review. They don't, to my knowledge, have the detailed inspection and verification programs established in their own countries. I think they're very interested in what we're doing.

Most of those regulatory bodies are nowhere near the size of NRC, so they have even more significant resource constraints and rely much more on almost a sampling programmatic review rather than a lot of observation of in-process work or completion of ITAAC as we plan to do.

We're engaging through various forums primarily through the NEA Committee on Nuclear Regulatory Activities interfacing with those other regulators talking about new reactor activities. And then, of course, the MDEP.

MR. REYES: IAEA has expressed an interest to come and take a look at how we're doing new reactor licensing because they're trying to put some general documents together for other countries who either don't have that or are interested in getting into nuclear electric generation. So they're interested in coming and seeing what we're doing.

CHAIRMAN KLEIN: Great. Thanks. Commissioner Jaczko?

COMMISSIONER JACZKO: Bill, this is an opportunity for you to reflect on some thoughts or amplify some thoughts you made at a previous meeting. This morning we heard from Westinghouse and others about the idea

of having 100% design completion or something to that effect. I know we discussed this in another Commission meeting and as I recall you were perhaps lamenting the fact we had gone down the road of design acceptance criteria, but raising perhaps some minor regret about having taken that approach. I don't mean to put any words in your mouth and free to clarify if that wasn't your mood at the time.

I guess I'm wondering if we look forward, what do you see as our ability at this stage knowing everything we know from the designs we've approved through the certification process and the designs that we're now getting in house and going to be reviewing in the next couple of years about what we can do to eliminate things like design acceptance criteria and get closer to that idea of having truly 100% designs completed by the time we're done with the COL? I don't know if you have any thoughts on that.

MR. BORCHARDT: Well, I dream of having a complete -- and so does Glenn, Loren, and everyone in the new reactor staff because it would certainly provide more assurance when that combined license is issued. At the plant, we understand how it's all going to fit together and how we can inspect it and how it can be built.

The reality is there is no regulatory forcing function to require it to happen. We have Part 52 and the regulatory decisions that have been made allow some

flexibility and some design details not to be developed when the combined license is issued. There is always, by definition, enough design information for us to make a safety conclusion and the safety findings. So, I have a high degree of confidence that that exists.

What I think the challenge is that we're working with now is when we issue a combined license, that's an operating license. It's not a construction permit. So, in order to resolve some of the issues, whether they be design acceptance criteria or COL action items that are in the design certification, what we are needing is design detail to a level that would be appropriate for us to issue a combined license. I think that is the learning curve that both we the industry and the public are on right now.

Having never been through it before, there is some uncertainty on all of our parts, but that's what we keep reminding ourselves of. When we buy off, if we were to close out a design acceptance criteria today on a certified design then that issue is now resolved and is not reviewable before the combined license is issued and if there's isn't an ITAAC, then it's not reviewed specifically as part of the legal proceeding after the COL is issued and before it begins operation.

We want to cooperate with either the COL applicants or the vendors, and/or the vendors, to get as much design detail finalized as possible. It's in all

of our best interests. I think Olkiluoto is proving that again, I hear over the last two years.

MR. REYES: If I could add to that. If you look at what's going to happen in the U.S., there's five designs. Take the one we have the COL for, the ABWR. It has been built and is in operation in multiple sites in Japan and a significant completion stage and construction in Taiwan. So the design is finished. Then if you take the EPR, it's almost built in Finland. It will start in Flamanville before the U.S. plants or that design are going to be built.

If you take the AP1000, the Chinese government doesn't have environmental requirements like we do, so their construction schedule is going to be ahead of ours. So, three out of the five designs should have been either built before and operated or built ahead of the U.S. I think that's going to help us solve at least the front end.

No two of the designs, it looks like they will be built in the U.S. for the first time and we have to watch specifically this issue because it would have been built someplace else and the design level may not be where we would like it to be.

COMMISSIONER LYONS: Two or one?

MR. REYES: The ESBWR and the Mitsubishi AP. The APWR. They're similar machines, but not exactly a 1700 machine.

COMMISSIONER LYONS: Oh, okay. The APWR is being built someplace else?

MR. REYES: Not our design. The four-loop pressurized water reactor yes, but not the one.

COMMISSIONER JACZKO: You're getting nods of approval from behind you.

MR. REYES: There's three of them that I think the reality is there're going to get sold. There's two of them that we have to be watchful on that issue.

COMMISSIONER JACZKO: I appreciate that. I think, again, we don't have a regulatory forcing function other than kind of the regulatory bully pulpit, I think, and I will continue to raise it where we can and hope that you all can have dreams about happier things than that. I think that would make us all probably rest a little bit easier.

The last question. This is a little bit off topic, but I think it certainly, again, gets to a lot of these issues of looking forward and we may not necessarily have the right people here at the table, but this is something that came up, certainly when I had a recent visit with TTC and was down in Region II as well.

The issue came up quite extensively about where we are with simulators and what agency plans are for procuring simulators and having the ability to begin -- again, because these are potentially long lead time issues and getting

our folks trained and understanding what to be looking for with some of these new control rooms and aspects of that.

I don't know if you have any thoughts right now on where we are on simulators and what it would take to procure them and time frames and costs and those kinds of things.

MR. REYES: If you look at the most optimistic schedule of construction that we have, for those plants to be producing electricity in that timeframe, 2015, 2016, they're going to have to have the simulator, some sort of stage in about 2012. Those simulators are going to have to be ordered early by the licensees and have those facilities. They're going to have to have operators trained and hired in that timeframe.

We will follow with something similar to that because our operational inspectors will have to follow suit. So that is an issue that's going to have to be raised and discussed in the 2010, 2011 budget for us in terms of how and when. Now there's several approaches you can take. In the early days -- let me go back. The NRC put regulations in place --

COMMISSIONER JACZKO: Perhaps maybe if you go through those and skip the option of us having the midnight shift at Sequoyah. To me, we can take that one off the table right away.

MR. REYES: Since I was trained on that shift --

COMMISSIONER JACZKO: Certainly from my perspective. I don't want to speak for the rest of the Commission or OMB or all those other people that were involved.

MR. REYES: I think we're going to have to be in an evolution kind of thing and then we need to think about how to leverage those resources at the beginning and the best way. And then eventually to the best. That's what we did in the past. But I think you have a good point during the 2010/2011 budget discussions, we need to have a serious discussion about this kind of issue because it takes time.

MR. TRACY: Just the fact that TTC management was enlightened enough to already come by, meet with the op licensing guys, get the time frame and put together some thoughts since its so digital and so software oriented. In fact, you can have a lot of designs perhaps in one room. There's a way to do this quite efficiently. All I wanted to point out is they were enlightened enough to be that far ahead. That was about four months ago.

COMMISSIONER JACZKO: They mentioned that to me and I think it is, again, it may be a different idea for a simulator. We don't have to have dedicated hardware, software in the same way that we did in the past.

MR. REYES: The computer doesn't have to live in the same room that the displays are. You can have the simulation displays while the computer is

far away resizing a different place, somebody takes care of it.

COMMISSIONER JACZKO: I appreciate that and I certainly look forward to hearing what the staff proposal is as we get closer to the time to do that. Again, speaking for myself, I certainly encourage you all to think about some kind of dedicated resource because everything I've heard from everyone is that the way it was done originally was not optimal for our staff in a way that we want to have happen. Again, lots of other people will have a say on that so I'm not guaranteeing anything right now. Thank you.

CHAIRMAN KLEIN: Commissioner Lyons?

COMMISSIONER LYONS: Following on what Commissioner Jaczko just said, I think my interest in Digital I&C and simulators is well known and I very much share an interest in the points he's making. I also want to be sure that we have an NRC dedicated facility somewhere and perhaps, Glenn, as you said, there will be some innovative ways of distributing that. But, yes, we need it.

I was going to make one comment, Luis, just to follow-up on a point you made. That was that the IAEA has been expressing interest in observing some of what we're doing from the perspective of applications to developing nations.

I just wanted to mention that I was very favorably impressed at this year's general conference that the IAEA has taken substantial initiative also NSAG has

been involved in this as well. There are now excellent publications from IAEA sort of laying out a blueprint of how a developing nation might work towards a nuclear power program. At least in glancing at it, these struck me as being very well constructed documents.

And also at this general conference, I heard far fewer developing nations suggesting that they could simply buy an entire program. It was fewer than the year before. To me, it's very important that we and IAEA get the message out that you don't buy a nuclear power program. It's a lot of work.

Two fairly quick questions and I'm sure I won't use all my time. Glenn, you mentioned, if I understood correctly, that in France I think you said the vendor inspections follow a component.

MR. TRACY: It's my understanding from the feedback from my specific inspector, yes, sir.

COMMISSIONER LYONS: Well, maybe I'm not quite envisioning exactly what you mean by that, but is that true of every component? Or is this a selection?

MR. TRACY: It's a selection. It is an assessment -- again, I want to make sure it's feedback from the inspectors' interactions that we're gaining these insights, and again they have invited us to join them in Areva. When you're assessing a vendor, you select a specific key component and John, if you want

to add any. You track that component through the process to validate that the programs and processes and controls of that component have been achieved.

COMMISSIONER LYONS: So there tracing down the sub elements?

MR. TRACY: That's correct.

COMMISSIONER LYONS: For a pump, perhaps?

MR. TRACY: That's correct.

COMMISSIONER LYONS: But they're not doing that at 100%?

MR. TRACY: No, sir. That was a specific example.

COMMISSIONER LYONS: It's still a sample, but it's a different type. It is perhaps a different cut of the sample?

MR. TRACY: I'll just add that we have a lot to learn as we continue this dialogue and we actually go overseas and see them perform such activities as well.

COMMISSIONER LYONS: That was exactly my next question. There's already been reference to having an inspector at Olkiluoto. I think that's great. Presumably there will be opportunities at Flamanville, in China. There are a current opportunities in Japan and Taiwan. Are we taking those opportunities? Or do we have plans to take those opportunities?

MR. PLISCO: The answer is yes. Glenn and I are working as we

speaking and looking at what opportunities we would have next year and what type of inspector and what type of activity. That's where we're spending our time on now. Digital I&C is one of the areas we're looking at where we really -- as far as the staff skill we're short on. We thought that would be a good opportunity to get overseas in Japan or Taiwan with the ABWR expected to be built here to get some insights from sending a Digital I&C inspector over for a couple months. We're still formulating our plan on when and who and what skill sets. We haven't contacted the countries yet directly to start to arrange a time, but that's what we're talking about right now.

MR. REYES: In a particular project, you probably can leverage one on one assignment. Let me give you an example. In Finland, as you probably had a chance to see our report, we had a lot of look into steel structures, concrete structures, et cetera, et cetera. The electrical cabling phase of the project is forthcoming so our plans are to send an inspector there from an electrical background for that electrical construction because the cable pulling, et cetera, et cetera is in a different phase of the project.

A different set of issues, et cetera, et cetera; not only to this project, but pick the window and pick the area that we're trying to seek experience on. That's what's being discussed right now.

COMMISSIONER LYONS: To me that's a very, very wise

investment in terms of enhancing safety of the plants that eventually operate here. So I compliment you and let's follow through and take advantage of every opportunity for international experience that we can gain.

MR. REYES: We're shameless. We're going to steal every good idea we can.

COMMISSIONER LYONS: That's fine. That's all I have, Mr. Chairman.

CHAIRMAN KLEIN: Well, I know that Bill dreams about that 100% designed and finished. It's interesting when you look at the best laid plans and then you're sort of overcome by events; the early site permit and the complete design certification before we went to the COL and then events sort of changed that.

In terms of -- you talked earlier about the acceptance of these COLs and other activities. What's been your major challenge on accepting as you're going through the current COL and ones you expect to see, and the fact that the design certs may not be completed?

MR. BORCHARDT: Are you talking about doing an acceptance review on a COL? For example, on EPR design that's coming up?

CHAIRMAN KLEIN: Or an ESBWR.

MR. BORCHARDT: Right. I think we don't foresee any major

roadblocks in doing that. There is certainly going to be a linkage and there could ultimately be a timing issue between the relationship so that if there was a delay in the design certification review and its rulemaking that it could impact the COL review, but I don't believe that we would find issues because of that relationship that would cause us from accepting the combined license application.

So I think we can do the two reviews in parallel, although they could impact each other if things don't work out as anticipated.

MR. REYES: The sequencing may be a problem. The system was designed to follow a particular track and when you get out of it, we think we can do it, but we leave the door open because it's hard. One reviewer needs to talk to another reviewer and that particular design review hasn't been completed, it's hard for a person doing the COL review to get that insider information. So that sequencing could be a problem.

CHAIRMAN KLEIN: A scheduling issue. In terms of your vendor inspections that you've done to date, you indicated the ones that you visited are sort of well-known. What do you expect to be the challenge when you go to the ones that are lesser?

MR. TRACY: A lot, I believe, of what Ms. Grier indicated this morning, a lesser knowledge of NRC's regulations. In fact, the expectations and how do you deal in this particular industry and what the NRC expects. I think

that's why you have groups like INPO and others trying to get out in front and be proactive in order to assure that there's an informed and this NUPIC group similarly can assure that the audits similar to what perhaps even occurred in some aspect at Cameron where before you're trying to ship some components, you understand the specificity and the need to meet all the regulations. I guess the bottom line to your question would be I expect a lesser experience and a great deal of reeducation or education.

MR. BORCHARDT: We talk to companies that had a nuclear qualified program in the past, let it lapse because of the lack of work and now are trying to reinvigorate that program. They're acknowledging that as a significant effort. You can only think of the effort to take someone who's never been involved in the industry. It's a real culture shock to that organization to come up to Appendix B standards and the standards that the industry is requiring. They may think they're doing an excellent job, but it still might not meet the standard.

I think that's really going to be the difficult friction point between the regulator and some of these vendors. In effect, the industry and some of those vendors because obviously the experienced industry knows what's expected and will be holding these companies accountable. But it's different.

MR. TRACY: One insight, sir, what I found fascinating is a lot of these big-name companies used to be perhaps have been purchased by other

entrepreneurs. They don't necessarily understand that big QA book of there. I haven't touched that since I bought the company, so the understanding of the importance of that, again, is just critical and some insights we've gotten from our managers.

CHAIRMAN KLEIN: I would imagine that those companies that have let their in-stamp expire probably have new people that were not there when they had their in-stamp.

MR. TRACY: We're getting a lot of inquiries by the way of how do you get an in-stamp. Who do you contact, et cetera? Refer them to the right people and let them talk to the QA managers here.

CHAIRMAN KLEIN: Well, getting back to the Digital I&C and the new simulators. Commissioner Lyons' enthusiasm for that is only slightly greater than mine, but it's definitely in that area.

In terms of looking in that area, obviously there's a lot of experience in other industries including the Navy program and other countries. So I assume that you all are looking at all of those areas in Digital I&C and simulators. Is that correct?

MR. BORCHARDT: The technical staff with responsibility for that has been working with all those other entities, both domestically and internationally to gather all the experience we can.

MR. REYES: We recently hired -- several SLS positions were filled by very experienced engineers in Digital I&C, including one individual that was extremely involved in the conversion of some of the nuclear submarines and the Virginia Class design of submarines in terms of diesel control rooms, et cetera, et cetera. We have -- part of the hiring, we have brought an individual from the FAA and we have brought individuals with those experiences from other industries and they are now on board. We are enhancing our skills by bringing people who were there and done it to be part of the NRC team.

CHAIRMAN KLEIN: Good. Commissioner Jaczko, any more questions?

COMMISSIONER JACZKO: I don't have anymore questions.

CHAIRMAN KLEIN: Commissioner Lyons?

COMMISSIONER LYONS: No more questions. Thanks for a good briefing.

CHAIRMAN KLEIN: Again, thanks for the briefing and what you've accomplished. I think since the last briefing a lot has happened and I'm sure before the next briefing we expect the same activity that has occurred for the next one on accomplishments that you've made. Keep up the good work.
Meeting is adjourned.