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CONTEMPORARY NUCLEAR POWER PLANT/REGULATORY ISSUES

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WEDNESDAY,

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Technical Session W22 of the Regulatory Information Conference convened in the Grand Ballroom of the Marriott Bethesda North, 5701 Marinelli Road, Rockville, Maryland, at 3:30 p.m., Lawrence Kokajko, Moderator, presiding.

PANELISTS:

MARISSA BAILEY, Director, Division of Fuel Cycle Safety and Safeguards, NRC

JOSEPH GIITTER, Director, Division of Risk Assessment, NRC

GREG HALNON, FirstEnergy

SHANA HELTON, Division of Policy and Rulemaking, NRC

LAWRENCE KOKAJKO, Director, Division of Policy and Rulemaking, NRC

DAVID LOCHBAUM, Union of Concerned Scientists

MIKE WELLING, Chair, Organization of Agreement States

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

(3:30 p.m.)

MR. JOHNSON: Good afternoon, everyone. Hi, Jack. Hi, Eric.

Welcome, everyone, to the regional session on contemporary nuclear power plant and regulatory issues. Please take your seats. Please close the doors.

It really is an opportunity for me to moderate this session. I consider it an honor to participate on the panel, along with the NRC's Regional Administrators, as well as two very capable industry leaders. And I look forward to the discussion that we will have this afternoon.

Before I begin the introductions and before we begin the panel, I do want to remind you that as a courtesy to the presenters and to the panelists, please do silence your electronic devices. Also, if you need to take a break during the session, please find a way to do so in a manner that minimizes disruption. Thank you in advance for that.

The panelists today really need no introduction. And so, we will spare you a lengthy introduction for them. We are certainly joined by Bill Dean, who is the Regional Administrator from Region I;

Vic McCree, who is the Regional Administrator for Region II; Cindy Peterson, who is the Regional Administrator for Region III; Marc Dapas, who is the Regional Administrator for Region IV; Maria Korsnick, who is the Acting Chief Executive Officer and Chief Nuclear Officer for Constellation Energy Nuclear Group; and Danny Bost, who is the Executive Vice President and Chief Nuclear Officer of Southern Nuclear Company.

Well, as we begin the session or before we begin the session, I want to provide an opportunity to start where, really we started the session, the executive session this morning. As a number of people have noted, and certainly as we discussed in that session, both the industry and NRC senior managers had an opportunity to travel to Japan on almost, for us, almost leading up to the third anniversary that we marked on the 11th of March.

We as a group from the NRC, speaking for the NRC, traveled as a group of senior managers and found that visit to be highly impactful. And I know that the industry Chief Nuclear Officers also found that trip to be very valuable.

And so before we begin the detailed questions, I would like to provide an opportunity for

the panelists to spend a few minutes to talk about a few of their perspectives, based on that trip. And so, I will start with Vic and then ask Cindy to go next. We will ask then Marc to go. And then Bill, would you go? And then we will go with the industry, Maria, and then Danny last.

So, let me just turn over the floor to Bill. Please begin, Vic.

MR. McCREE: Thanks, Mike. The first thing I would like to do is thank Mike Johnson for his foresight and vision and courage, actually, to take all of his direct reports out of the country for about seven days on an unprecedented visit. This was the first time that all of the reactor direct reports to Mike Johnson have taken a trip such as this. And again, I want to thank Mike for that.

As you can imagine or perhaps already know either from the CNOs in this room who visited last fall or others who are aware of what happened in Japan almost three years ago, this was an awesome, awesome experience. And at times, I was humbled and overwhelmed by what we saw, particularly at Fukushima Daiichi and Fukushima Daini. And even three years' later, the damage from the seismic event and the tsunami was still evident and it was very sobering, as was

indicated again this morning driving through the towns that had been abandoned.

During our visit, we had the opportunity to meet with regulatory officials, and the new regulator, JNRA, as well as industry officials, including folks from the Tokyo Electric Power Company, TEPCO, who were actually at the site on the day of the event and the days following.

And among the things that made a lasting impression upon me was their moving personal accounts of what transpired again that day and during the days following. As we listened to their descriptions of what happened, you could hear the anguish in their voices. Their personal impact was really evident, even through the translators you could just see and feel that.

Some of those folks worked for days without knowing whether their families were alive or not or where they were. And again, it was truly moving. They worked under some very hazardous conditions. Many talked about the fact that they thought they were going to die at any moment. The radiation levels were very, very high. And their professionalism, their dedication, their perseverance were just very apparent and just reminded me, as a regulator, how important it

is that we make the right decisions to ensure that U.S. operators are never placed in a similar situation.

At this morning's plenary, mike mentioned the three collective or shared lessons learned. And in case you didn't hear them, they were one, to assure that U.S. plants and the NRC are prepared for the unexpected. Secondly, to ensure that the lessons learned from Fukushima are implemented, they are maintained, and they are exercised going forward. And thirdly, that NRC and the industry appropriately deepen the technical expertise that we need that was so necessary and demonstrated at Fukushima Daini.

And on a personal note, I gained a much deeper appreciation for the stakes involved and hazards associated with the industry that NRC regulates and that the industry operates. And I believe it is very important that we establish and we cultivate a culture, a safety culture, if you would, that recognizes the possibility that an accident can happen and that we put in place measures to, whether it is equipment, processes, procedures, or people, to make sure that we can prevent or mitigate any adverse consequences, should that occur. And I believe in doing so, the health and safety of the public will be ensured and the environment will be protected. Thanks.

MS. PEDERSON: Good afternoon. One of the things that I wanted to reflect on and share with you today is the striking visual images that we saw as we drove up to Fukushima Daiichi. It was a beautiful day, when we should have been expecting to see people out and about. But as we drove through, you noticed cars in the driveways. You noticed product on the store shelves. But there are no people around. And when you think about it, it was basically a manmade ghost town. These people were no longer there. They had been evacuated. And they were just ordinary people living ordinary lives, never expecting to have to move on. They trusted the operator. They trusted the regulator to keep them safe. And these accidents were just a huge breach of the public trust.

They had expected to live there for their lives. Now, granted the doses were at the point where there were deaths or significant doses to the population. You could say evacuation worked. But when these people trusted in the organizations around them, the licensee and the regulator, I'm sure they never expected to have to leave their homes.

Three years' later, those places are still vacant. Some folks may never return to their homes.

And as I thought about if we had a similar

situation here, what it must have been like for the officials to have to tell their local populations that they had to move and they may never be back. And as folks, like we are, that work for the public can't quite imagine how difficult that must have been in the Japanese communities that had to be evacuated.

I certainly gained a greater appreciation. I mean we all exercise these processes. We train on these processes. We know these kind of things can happen. But when you see it first-hand, and you see the impact on the people that were there, it was really a very, very sobering experience and one that I truly hope none of us in this room or our colleagues ever have to face.

MR. DAPAS: Good afternoon. There were a number of things that resonated with me and left a lasting impression from our trip to both Fukushima Daiichi and Fukushima Daini and as a result of our discussions with the various operators and site management that were involved in the event response.

But one thing I wanted to share with you in particular and similar to Vic's accounting or discussion of the impact from talking to the various operators and site managers, I had a similar reaction when you listened to the first-hand accounts of the

individuals that were involved in providing for a response, the extraordinary challenges they face, the continual setbacks, the tremendous difficulties that they had to overcome. It was compelling in terms of the resiliency and perseverance that was demonstrated by those TEPCO employees.

You know examples of some of the daunting challenges, three teams that were dispatched in order to be able to operate the air operated valve and the motor operated valves in the vicinity of the torus in order to establish a containment venting path and they are dealing with aftershocks and safety relief valve lifting.

And one individual indicated that he thought he was not going to get back without the loss of his life, not knowing whether family members were safe as a result of the earthquake and tsunami, dealing with high dose, high temperatures. The environment was certainly very, very challenging. You are in a control room. You have no power, so you have no lighting, no instrumentation. And the efforts to use car batteries to power instrumentation to obtain indications on reactor pressure vessel level and temperature, as well as containment pressure, those are just some examples of some of the challenges that the

TEPCO operators and response managers found themselves having to confront. I would describe those as the use of heroic actions.

And I think in understanding what the operators and managers faced, the quote from Ikuo Izawa, who was the shift manager for the Fukushima Daiichi Units 1 and 2 during the event, he said to us when he was giving us a briefing when we were at the TEPCO headquarters in Tokyo, the impact of the tsunami was totally bigger than that what we expected, trained, prepared for, or believed was possible. It was unimaginable. We must always be prepared for the possibility that something much bigger can happen.

So from my perspective, the significant take-away was being prepared for potential beyond design basis events means that we ensure that the people, and I say we, both the industry and our role as a regulator, we ensure that the people, processes, and equipment, as well as the infrastructure are in place such that we don't find ourselves relying on heroic actions to ensure plant safety.

I would offer if we find ourselves in that situation, we have failed as a regulator and we have failed as an industry. And so I feel that really underscores the great importance of ensuring that the

Fukushima lessons learned and the required actions are fully implemented, maintained, and exercised. Thank you.

MR. DEAN: So between what you heard from Mike and Dennis this morning, if you sat in on their plenary session and then what you have heard from my fellow Regional Administrators here in the past few minutes, there is plenty there that have resonated with all of us. And what they have expressed eloquently describes many of the things that resonated with me.

But there is a couple of things that I wanted to share with you and one is somewhat duplicative of what you heard from Commissioner Ostendorff this morning regarding how well this agency and industry have worked to frame what are really the important issues that we should be working on in the aftermath of the Fukushima accident.

And I truly came away from our visit to Japan with a strong belief that we indeed did do a very good, the Near-Term Task Force in terms of framing the issues for our consideration; the efforts of the Japanese Lessons Learned Directorate and the Steering Committee in terms of providing the Commission their views of what ought to be the priorities in the Tier 1 areas and then the Tier 2 and Tier 3; and then the

Commission's endorsement of that approach.

So, I am fully aligned with what you heard from Commissioner Ostendorff, that we did pick the right things and my visit to Japan reinforced that in my mind.

The second thing that I took away, besides the things that you have heard already from my peers up here is the importance of our incidence response program and the training of our licensed operators.

The incident response program that exists in this country is pretty robust. We frequently exercise biennial exercises involving our state and local officials. And organizations that work with the licensees and FEMA and NRC's oversight and evaluation of those exercises provide us with a fairly strong framework for assuring public health and safety, if, indeed, those events that we don't believe will occur may occur. And so it is important to sustain that robust incident response program.

And with respect to our licensed operators, it is very important that we don't overburden our license operators, particularly in terms of training and procedures that will distract them from their focus on safe plant operation in the here and now. And so we have to be very careful in terms

of the balance with which we apply training and procedural requirements on operators for these very, very infrequent and likely never to occur situations so that they can assure that they sustain their focus on what they need to know to operate the plan safely now, and particularly the events that would be more predictable to occur so that we can prevent any sort of event that could create core damage from occurring.

Thank you.

MS. KORSNICK: Thanks, Bill. I attended a trip with the Chief Nuclear Officers across the United States back in the September time frame, both Danny and I did.

My reflections of that time really fall into three categories: my deep respect for the response teams at both Daiichi and Daini, the value of training, and the importance for defense-in-depth and beyond design basis scenarios.

The respect for the response team was somewhat stated here. It was amazing to me the number of attempts and failures and challenges that they had really at both Daiichi and Daini and the number of creative solutions that they tried and attempted. The tenacity that they had under such extremely stressful conditions was really, really noteworthy to me. And

as we stated, we practice our emergency response plans frequently and I have confidence in them. But it was something else to really be in the midst of it and appreciate that as a leader you might be sending somebody into harm's way in terms of the course of the accident, in terms of trying to get things in a better condition. And he shared that honestly with me that says, I asked this team to go out and I didn't know if I was ever going to see them again. And so that really, as a leader, puts things in perspective for you.

The value of training. We take training very seriously here. The number of hours of training that we have not only for our operators but for all of our craft and engineering talent. It really left a deep impression upon me how important it is that we continue with the value that we do have of our training programs, especially the hands-on familiarity that we have with our plants and with our systems.

And in terms of the defense-in-depth, given that we have all the redundancy that we do have, all the procedures that we do have, the reality is, even with all that, we need to absolutely be able to provide the basics under all conditions. And that is water and power. And with those two ingredients, there is no question that we will be able to safely manage our way

through. And that is why the value of our solution here in the United States with our flex program, I have high confidence because I watched them do it on the fly, if you will, at Daini and how successful that they were. And that we need to put our operators in a position where they have those tools, if you will, in the tool kit, and they are ready under any conditions.

Danny?

MR. BOST: Okay. Getting to go last, they covered all of my stuff. You guys, I am not going to go back through everything that they talked about. For 25 CNOs to band together and go to Japan to see a first-hand account of what happened there, that was unprecedented. We thought it was important. We thought it was important that we go and get that first-hand account of what happened and why did it happen and gain a deeper understanding.

We all had read the reports. We have all got all the timelines. We have all went through that stuff but we very much wanted to go see it. So, kind of like Cindy said, it was pretty overwhelming. When you start getting in close to the plant and not to the plant, close to the plant, you start seeing the effects. Pretty overwhelming stuff there. I am not going to go back through it. I thought Cindy did a pretty good job

of talking through that.

Vic talked about the moving personal accounts. We heard the same thing. In fact, that is one thing that I brought back with me. When you look at our emergency response organization, what we tend to do is we go find somebody that is very technically savvy and they can get through these flowcharts. And they are the best technically at getting through these flow charts. But if you go listen to these moving personal accounts about when I sent somebody out there, I wasn't sure if I was sending them to their death or if they were coming back, you realize the amount of leadership that you need to have in that emergency response organization.

So, I brought that back with me. That is something we are working on but we need to improve the leadership capability in our emergency response organization. It is not just a technical answer, a technical business. You have got to have that leadership piece.

And the last thing, with the FLEX mods that we are all doing, it will work. It will work. If you look at what happened there and why it happened and you look at what we are all doing at our sites for flex modifications, it will work. So, I feel very good

about the changes that we are implementing for FLEX and the benefits that is going to bring to us.

MR. JOHNSON: Thanks, everyone. Let me just ask, seconds anyone?

MS. KORSNICK: Actually, I would.

MR. JOHNSON: Okay.

MS. KORSNICK: There was one thing I did want to mention. One of my first impressions really is that it is not over yet and I don't mean that the cores aren't being safely cooled, because they are. But the accident really isn't over yet. If you see the number of tanks that are stored on-site with radioactive water inside and the challenge is that they have, even today, many years after, in terms of how to deal with that water and I would say that until we understand and they are able to manage that large volume of water that are stored on-site in those tanks and they are building more each and every day to store additional water, the accident isn't over and we shouldn't feel that it is over. And we should work as best we can to help them not only process that but safely discharge it.

MR. JOHNSON: Maria's point resonates with me conversations that we had yesterday or I guess two days around with the regulator, NRA. We learned

in fact that as they continue to decontaminate the plant, there is a concern, for example, that they might undergo an activity that would result in dust, that 3dust being carried offsite and potentially recontaminating land that has been released. And so they will face those kinds of issues, continuing as they move forward.

So again, great insights from the panel. I didn't dare start this panel without an opportunity for each of the panelists to share their insights. Thanks. Great insights.

So, let's begin the session. I want to just tell you that the session is intended to be on contemporary nuclear power plant regulatory issues. To identify topics of interest, of course, we communicated with the industry, Chief Nuclear Officers that posed questions for our panel, we collected as well questions that we thought might be asked. And we have developed more questions that really represent, I think a compilation of the questions from the list that was provided. And each of the regional administrators will respond to one of those questions and will ask one of the industry reps, Maria or Danny to respond to those questions.

But I just want to remind you that this

session really is intended to generate discussion, questions from you. So, I would invite you to, as we begin working through the questions, if those questions generate questions in your mind or if there is some other question that you think we ought to ask, please jot those down on a card that will be supplied to you and we will get them brought forward and get those teed up for the panelists.

So, let's get into it, if you will.

The first question deals with safety culture and substantive crosscutting issues. The question is: What is the NRC's perspective on how the adoption of common nuclear safety culture language will affect the assessment of substantive crosscutting issues? Include the effectiveness of the SCCI process or NRC openness to a different approach.

And I would like also, for the industry representatives, then, what are you perceptions regarding the effectiveness of SCCI.

Bill, would you start with the answer, please?

MR. DEAN: Sure. So, those of you who know me probably are not surprised that I spent a lot of my formative years in front of the television watching cartoons. And so one of my favorite cartoons

was The Adventures of Peabody and Sherman, which is now a full-length movie. You may want to go out and see it. I haven't seen it yet. But I want to take you in the Wayback Machine for a couple of times as we talk about this.

So back in 2008, the Commission directed the staff, through a staff requirements memorandum to take an evaluation of the agency's safety culture policy and to evaluate it to see whether there was any unique aspects of the burgeoning security area in the post-9/11 environment that ought to be incorporated into the safety culture policy, as well as looking at expanding the safety culture policy to incorporate a broader set of licensees and certificate holders within the agency. Up until then, it really was sort of focused on nuclear power plant operations. And the sense was we ought to really expand safety culture to the whole suite of licensees who we have authority over.

And so that was done and over about a three and a half year period, the staff did what I believe a really phenomenal job in terms of engaging with a wide variety of stakeholders. And not only industry and INPO but they talked to fellow regulatory agencies here in the United States. They talked to international counterparts. They engaged the public and other

industries to ultimately develop a safety culture policy statement that had ascribed to it nine traits. And that was issued in June of 2011.

The other thing that that endeavor revealed was there was really a challenge in terms of the nomenclature and the language that existed within the industry between how the NRC talked about safety culture, how industry or INPO talked about safety culture, that there was a true need to harmonize that language and be able to come up with common language that, whether it was the regulator or the regulated entity, we knew we were all speaking from the same sheet of music.

And so, that was a very important byproduct of this effort. And in December of 2012, INPO put out a document INPO 12-012, Traits of a Healthy Safety Culture. Now I talked about wanting to harmonize them. They had ten traits. Our safety culture policy has nine. So, we didn't achieve nirvana there but I will say the one area that was different, the one trait that was different in INPO was one that was a fairly important one to INPO dealing with decision-making.

And I will talk a little bit about aspects of these traits. All the aspects from that decision-making trait have been incorporated into the

NRC's Lexicon. So, in reality, we have captured that but we just have nine traits and INPO has ten in their document.

So, now let me take you into the Wayback machine to 1999. The director of oversight process formation incorporated this concept called crosscutting areas, CCAs, human performance, problem identification resolution, safety conscious work environment and those remain today. We have not changed those since the beginning of the reactor oversight process. But what has changed over the past decade and a half is how do we take those crosscutting areas and how do we incorporate them into our assessment of plant performance?

3The intent of these crosscutting aspects and the aspects assigned to each of these crosscutting areas was to be able to provide some early warning signals, as you will, for licensees. If through our inspection process we determine that a number of our findings had elements of one of these crosscutting areas, we will provide that information to the licensee so they could look at that and see if there was some trend there that they needed to address.

Now, unfortunately, the crosscutting issue process has been beset with a lot of issues,

inconsistency in how they were utilized in the different regions, a high degree, potentially, of subjectivity in terms of how you characterize something as a crosscutting area. Really, not much regulatory teeth, even if we identified a substantive crosscutting issue in terms of what we could do with it as a regulator.

And so there has been a lot of debate and angst over the use of substantive crosscutting issues over the years. And I think there might be another session on the ROP enhancement project. But over the last year or two, there has been actually two independent activities. One, directed by the Commission, which specifically said take a relook at substantive crosscutting issues and see if they make sense and then also the Agency's own independent ROP enhancement project.

And so we are in the process of digesting the recommendations from both of those groups. So, you may see some more changes in terms of how we utilize crosscutting areas. And I know that we have had meetings recently with industry and we are very open to other potential alternatives in that regard.

But for the here and now, at the end of 2013 was the last year that we had the crosscutting areas

as previously designed. And what we have done is we done a crosswalk to now leverage the new traits that are identified in the agency safety culture policy into the new approach for how we do assessment of licensees' inspection -- licensee findings through our inspection process.

And so in the end of cycle letters that just came out very recently, there was a paragraph in there that described this transition. In terms of what its impact might be, my understanding is from a back of the envelope evaluation of doing this crosswalk, there might have been maybe one or two sites across the country that perhaps would have gotten a theme identified in their end of cycle letter under the new criteria that didn't exist under the old criteria.

So, I see no real impact on how we apply. I think the real benefit is that now we are all speaking from the same sheet of music in terms of what do we mean when we talk about various aspects under safety culture?

MR. JOHNSON: Thanks, Bill.

Danny? Again, the question is safety culture, substantive crosscutting issues, your perspectives regarding how well it works or any thoughts related to that.

MR. BOST: Thanks, Michael.

For us to get to common language, I mean to have a common nuclear safety culture language was a positive development for us from an industry perspective. I mean we are having to keep two sets of books. We have got one set of books that we use for the ROP language and we have got another set of books that we use for our NEI INPO safety culture monitoring program and commitments that we made there. So, we are having to keep two sets of books. So, we get one set of books now that we can keep track of things. So we see that as very positive. I see that as positive.

Bill, you talked about a number of issues and implementing the substantive crosscutting issues and I agree with that. It is somewhat of a subjective process. It is very difficult to see how it is effectively identifying a weakness or a degrading trend. And if you go through and look at how we are using it and this would be the NRC industry, I mean we are spending significant resources trying to decide do we open up substantive crosscutting issue. If we do open it up, how do we address it and how do we close it? And it is just a tremendous amount of resources that we apply to that program and it is detracting from resources that could be placed on matters of greater

safety significance.

If you look at what we do, I mean our CAP program has advanced greatly since we implemented substantive crosscutting issues. And we also have implemented our nuclear safety culture monitoring that we do. So, I mean I think we can take those two programs and get done what we are doing under the SCCI program now. So, I mean what I would recommend is take a hard look at can we use the CAP program at the sites and our safety culture monitoring program that we do with oversight and use those as opposed to the SCCI program?

MR. JOHNSON: Okay. Anyone with additional thoughts? Okay.

All right, the second question really relates to the Government Accountability Office report that was recently issued that you might have seen. And that accountability report really looked at inconsistencies or tried to get into what would be causing inconsistencies and implementation of the reactor oversight process across the regions.

And so the specific question is, what processes, measures, or approaches are used to ensure reliable and consistent implementation of the reactor oversight process across the regions.

Cindy, would you start with the answer,

please?

MS. PEDERSON: Sure, thanks. My Wayback doesn't go quite as far back as Bill's, but I am going to go back in history just a touch.

In 2000, as you know, the reactor oversight process was created with a significant difference in how we had done assessment prior to that time. But the ROP was developed to be a reliable and efficient way to assess licensee performance and for determining appropriate regulatory response.

We all use the same procedures. We all use the same guidance documents. And for those things of higher significance, we also include more people. We include the Office of Enforcement or NRR as appropriate. So, for things of greater significance, our process has increased checks and balances.

Now, the ROP was not created to be an assessment tool for regional performance. It was focused on licensee performance. But that said, we can use it as an input into looking at how we do our own business because we are, certainly, a believer in continuous improvement.

Now the topic of reliable implementation of the ROP or, as some may say, consistent implementation has come up multiple times, including

here in this RIC forum over a number of years, and certainly in the GAO report that Mike mentioned. So, it is something that we have been working on for a number of years, specifically starting in 2010, the regions in consort with headquarters started what we called the ROP reliability initiative, where we started taking on various pieces of our program to look for greater reliability in our application of the process.

Certain things that we did were, for example, increasing our sharing of inspectors across the regions, benchmarking at the staff level. We also had branch chiefs go to different regions to benchmark and see how they did business.

We also created a forum for discussions of various ROP topics, as an example, application of substantive crosscutting issues and how did each region do that. And we made some checks and adjustments. And we also, of course, looked at our documentation, our own inspection reports.

And then more recently, we did a comprehensive review of the problem identification and resolution inspection and looked at how the regions all did business.

Now, since we have received the GAO report, we have also taken some further actions and those are

very actively being worked right now. I do want to note that the focus of this are on the lower risk, less significant. As the GAO pointed to, those seem to be the area where they concluded there was less consistency. And we acknowledge there is some greater variation on those lower risk, less significant findings.

So, we wanted to look at how to maximize our examination. So, we looked at what procedures seemed to have the greater differences. And we identified the following four procedures for intense review. That is the component design basis inspection, operability evaluations, equipment alignment, and maintenance risk assessment.

We are currently in the process of evaluating some results of some exercises we conducted. The exercises took minor and green findings. We put them in a format where inspectors and branch chiefs could review them and come to their assessments. And then those assessments are being compared and we are looking for themes. We are looking for insights.

We don't have those insights yet. Those assessments haven't been finished. But those assessments and those recommendations will also be worked with NRR and NSIR in the regions. But some

possible outcomes of that could be increased training maybe on the underlying requirement, if you see some lack of clarity there, or on existing guidance. I think it is probably likely we will see some changes in guidance to try to make it more clear and more apparent, so we can have greater application.

But I think we need to keep focused on we can't expect that there will be a common outcome. We are measuring or trying to do our best to measure licensee performance. And licensees aren't all performing in the same way. So, we shouldn't have an expectation that we are going to have these same outcome. And that is why we have kind of steered away from the consistency and talked more about reliable application of the ROP. And I, too, would put a plug in for the two ROP sessions that are coming up tomorrow morning. Session number 35, talking about those enhancement projects. Thanks.

MR. JOHNSON: Thank you, Cindy. Maria, you may have perspectives regarding differences seen between regions. Interested in your thoughts.

MS. KORSNICK: Yes, thanks, Mike. We actually have, as an industry, seen a similar trend as to what was identified in the GAO report in terms of seeing some differences across the region. Some

examples of this are some over-reliance on URIs or unresolved issues in one region, say relative to another.

We have other examples of 10 CFR 50.72 and 50.73 reportability and seeing some of those differences as it is applied across regions.

We also have seen, in some cases, where we have some newer inspectors that have a lesser understanding of some of the older plant licensee bases. And, therefore, they have a tendency to really want to address everything under a more current perspective. So, those are some examples where I think we do, as an industry, see this variability across the regions.

There are a couple of vehicles for us to create that discussion. There is the regulatory users groups. NEI has an ROP task force. And we also just recently formed, again, within NEI, a working group, regulatory issues working group. And these are all forums where we have an opportunity to discuss and create conversation with the NRC about apparent inconsistencies that we are seeing in the application of the ROP, as well as the conduct of inspection and enforcement activity.

In addition, I guess I would point that the

NRC region staff does use technical interface agreements or TIAs to ensure that the NRC headquarters is involved in resolving technical differences and issues that might otherwise be resolved inconsistently.

And I think recently you guys announced that you will take actions to make the TIA process a little more transparent. And I think that would be helpful.

MR. JOHNSON: Thank you very much. Anyone want to weigh in with additional comments?

Okay, this next question really relates to the use of contractors by licensees and oversight of contractors. And so a specific question I will ask Marc to answer and again Maria, from a regulatory perspective, how well has the industry been doing with oversight of contractors? And from an industry perspective, what are some of the challenges in determining the proper level of contractor oversight?

MR. DAPAS: Thanks, Mike. Mike had asked earlier when we were providing our significant take-aways or impressions from our visit to Fukushima Daiichi and Fukushima Daini if we had any seconds. And I had one thought and I had planned to talk about it in the context of this question.

There was a particular impression I had and I think Dennis Koehl talked about this in the special plenary session, and that was the extensive use of contractors at Fukushima Daiichi and Daini, where when the contractor staff had to evacuate the site, the workforce that remained did not have the skillsets to implement or to conduct a number of work activities. For example, installing and connecting instrumentation, installing temporary power supplies and terminating cablings, et cetera.

So, I thought that was particular of interest and I am sure the industry looks at to what degree does that apply to their sites when you are looking at implementing FLEX in your on-site staffing analysis, et cetera.

But here regarding regulatory insights with respect to the use of contractors, I particularly appreciate the opportunity to answer this question because we have had some significant events and conditions in Region IV that have resulted from challenges with inadequate control of contractors.

I think everyone recognizes that the licensees retain ultimate responsibility for activities affecting quality that is prescribed by 10 CFR Part 50 Appendix B. And certainly contractors can

be effective for highly specialized or infrequently performed evolutions, where it may not be practical for a licensee to retain the resources to perform in-house.

And then you have the aspect, I would call, of what I termed contractor oversight cascading effect. You like to see contracts for specialized work activities and then they end up contracting with a separate engineering organization to provide an independent review because the licensee didn't possess the on-site engineering expertise to perform the oversight function.

And I think most significantly is this perception regarding contractors as experts. And that impression can create some additional challenges in providing contractor oversight. I was talking to site management at one site in Region IV about controlling contractors and a significant event that had occurred at that site. And one of the observations provided by site management was that what is the expected quality or pedigree of contractor deliverables? When you contract with an organization and they have extensive experience in that area, what is it reasonable to expect in terms of a deliverable and how much oversight do you need to exercise? And it was my understanding from talking to that site vice president that there has been

some discussion in the context of INPO in trying to understand what is the right balance and how intrusive does the licensee need to be.

I think another challenge that we see with use of contract organizations for licensing and design-based modification activities, it can be problematic in that the in-depth knowledge of design-basis documents does not then reside within the licensee staff. And that can complicate things like 50.59 reviews for plant changes. It certainly complicates inspection activities and potentially emergency response.

So, I would offer we have certainly seen challenges with the control of contractors and there are, certainly, organizations that have done a very good job in that regard. But there are challenges there and certainly an area that I think the industry needs to ensure that they continue to devote an appropriate level of attention.

MR. JOHNSON: Maria?

MS. KORSNICK: Yes, thanks, Mark. Well, just to state the obvious, I mean we, absolutely as the license holder understand that we own the performance of our contractors and we take that very seriously. And the relationship with the contractor starts well

before they are actually on-site to perform any work. And I think that is very important.

If you look at the contrast with our employees who are there with us each and every day, you have an environment where you can impress upon them the right standards for safety and for human performance and the right values. And you don't have that luxury when you are working with a contractor. So, you have to take very deliberate steps as you integrate a contractor into the broader workforce. And as I stated, that starts well before the job at hand.

A couple of things that we do to facilitate that is, in fact, meeting with members of the management team of the contracting organization. And so an example for that is a refueling outage is an area where we bring in several contractors. And for our vendors, we meet with them well in advance of that refueling outage and we talk about the standards that we have and how are we going to impress those standards and, in some cases, use contractual language for incentives or penalties based on human performance and safety performance so that they can take it as seriously, obviously, as we do, as they are impressing the same message on the folks that work for them.

And then in addition, we have a very

rigorous process as we bring folks on-site and especially if they are going to play any sort of supervisory role, where we conduct oral boards, if you will, ask them questions and make sure that they have sufficient rigorous understanding of the standards in our practices before they are even allowed to perform that role as a supervisor.

And as Mark stated, as an industry, we have worked together with INPO and have provided or produced some industry guidance relative to contractor oversight and ownership. I would guess just about at any station that you go in the United States, it would be very similar. And that would be any contractor would have an on-site sponsor. And that on-site sponsor's role and responsibility is to make sure that they are very familiar with the rules and the standards of the station.

And then of course, span of control is important, too. So, you need to make sure that you have the right level of supervision overseeing the contractors, so that you have the right level of span of control. And that is something that we monitor very closely, to make sure that we have the right level of engagement and oversight.

But even with all that prescription, it is

a challenge for us, obviously, each and every day to ensure that we are in fact being rigorous and intrusive, after you have paid for this subject matter expert to come in and do some work for you, that you value their subject matter expertise. But you also need to make sure that it is being brought into your organization in a way that is within your guidelines and policies.

Thank you.

MR. JOHNSON: Thanks, Mark. Thanks, Maria.

I am going to again offer the opportunity for seconds, if anyone feels compelled. It's like herding cats in Japan. I don't know why we are so -- just kidding.

So, this next topic, 50.59, is one that has been, of course, important. That regulation is important for us and for licensees. Of course 50.59 reviews and inspections, 50.59 have gotten visibility, let's just say, in the last year and a half, greater visibility in the next year and a half. And this next question really relates to the recent results of 10 CFR 50.59 inspections.

And I am going to ask, actually, Vic, to tee up to answer this question. And actually, Danny, I will ask you to start first. The question is: As

a result of recent 10 CFR 50.59 inspections indicate the need for prior NRC approval for replacement parts that have digital components. In some cases, this could delay safety improvement to stations.

Are there opportunities that could provide licensees the ability to more rapidly address digital obsolescence issues?

So, Danny, the subject of 50.59 and those inspections.

MR. BOST: Okay. Yes, I will go first. That's fine. We will give Vic the last word.

So, 50.59 is real important to us. I mean that is what authorizes us to go and make changes to our facility without having to get prior approval. It's a big deal for us. Our plants are getting older. We are going out and we are replacing components and we are upgrading components and we are making our plants more reliable by replacing these older systems.

And what we are finding out is some of these newer systems will have some type of digital logic piece or something on it. And Michael mentioned the 50.59 inspection that was performed at another facility, not at one of mine. But we are getting ready to change some cards at our Farley station. And we were going to do that last spring, spring of 2013. We had to put them

on hold because they needed prior NRC approval. That is what the 50.59 inspection concluded was the digital devices need prior approval before you can go put those in.

So, you know a year later, I still don't have them in and I would like to get them in this fall but I still don't have a clear path there, yet. We are getting closer. We are trying to work that. But broadly speaking, going forward, we are going to have this in a lot of different areas of our stations. And if we go through and put these types of controls on getting additional reliability in the units, then we are really going to be retarding, getting the units modified, getting them upgraded, and getting them in the shape that we need to have them in.

So, it is hurting reliability of the units. So, we need to take a look at this digital piece. Is this what is intended? And I am not going to get down into the nuts and the bolts because it really doesn't matter. The bottom line is, we would like to be able to go out and have a program -- don't know what the program looks like but we would like to be able to upgrade our stations without having to get some prescribed preapproval so that we can get them upgraded and more reliable sooner. I mean, that is where we want

to get to.

MR. McCREE: Thanks. And Mike, we are trying to be disciplined because one of the feedbacks that we had gotten from this session is that we haven't allowed much time for Q&A from the floor. So, we want to do that.

I recall from the plenary session this morning one of the last questions to the panelist was what are your top few key technical safety issues going forward. I remember Tony mentioned that digital obsolescence was one of them. So it is an important issue.

You did advise everyone to turn their phones off, right?

MR. JOHNSON: Please silence your phones.

(Laughter.)

MR. McCREE: That's a clear sign.

So, Danny alluded to the finding last year at one plant, it was a 50.59 mods inspection that did identify that a complex programmable logic device, a CPLD, a software-based device had been installed through an inadequate 50.59 screening. It did require a license amendment request because of the potential to introduce adverse consequences, unlike fixed logic devices or circuit cars, which most everyone uses.

And this isn't a new issue. The industry recognized it almost more than ten years ago. In 2002, NEI provided guidelines for digital upgrades in NEI-0101, based on an EPRI Technical Report. And NRC issued a Regulatory Issue Summary 2002-22 that endorsed or at least okayed the use of this as an acceptable approach to upgrading to digital software-based devices.

It did include a disclaimer, though. It indicated that it cautioned against using this guidance for safety significant applications such as the reactor protection system or engineering safeguard, SFAS systems. And in this case, it was introduced into a solid state protection system. So, there was a concern. And there was, perhaps, a misinterpretation and not just by one, but perhaps several licensees because the vendor did provide a sample screening approach, 50.59 screening. And again, there may have been some misinterpretation of the NEI guidance.

Since that time, we have been engaged with the industry and PWR owners group very closely on this issue. We have received in our evaluating for acceptance review a topical report in this area. We are making a lot of good progress on it.

NRR does plan to issue an information

notice in this area very soon, accompanied by an enforcement guidance memorandum that will address this issue, as well, again, to make sure that we know exactly what is going on. And there are some provisions of that that I know we have talked with NEI about.

And we also understand that NEI is planning a revision to NEI-0101 or the accompanying 50.59 guidance, 9607 that will also help in this regard.

In the end, I believe it is up to licensees to do adequate 50.59 screenings. I believe that part of our regulations has been -- it is well understood. I believe it has been used well. We don't typically identify a large number of issues in this area. However, this is an area where we can do better. So, we will continue to work with you on that.

MR. JOHNSON: Okay, very good. Thank you.

This next question comes from the audience. I'm excited for that. Let's start with that question.

The question is: With five plants starting to decommission and five plants being constructed, what extra steps are the regional administrators taking to provide good communication models with the plants? And can or will you apply those

models to the rest of the fleet?

And so I will open it up for the regional administrators to touch on. I think Bill, Cindy, Marc, but also Vic, in any order.

MR. DEAN: Well, let me just start. Since we have had recently the opportunity to engage in decommissioning activities associated with, believe it or not, Crystal River, which is a Region II site, but it was recently transferred to Region I ownership because of a reorganization that we did some years ago, where basically Region I handles all the materials, related activities for the entire East Coast, including all the Region II states.

And so we have applied some pretty, I think, basic communication tools. We have had management meetings with the decommissioning management team from Duke. That occurred not long after we took over responsibility for Crystal River. There have actually been several public meetings that have been held in the vicinity of Crystal, and one which I was really happy to see was conducted by the licensee. I would encourage licensees that are going through the decommissioning process to conduct their own public meetings to talk to the public and explain to them what the process is going to be and how you are going to

manage activities during decommissioning in a safe manner.

And we have also had use of webinars as a means to communicate with the public. And I know that Cindy has used webinars quite a bit in Region III. And so we have stole that tactic and technique from her.

So, I think, obviously some basic things. I don't think that there are things that are necessarily greatly different than what we do to try and communicate with operating plants, but they do carry that different cache. And, of course, those of you who are familiar with the decommissioning process know that there are actually scheduled or required meetings that take place during certain stages of the decommissioning process that are already pretty well dictated.

MS. PEDERSON: Maybe just to add a little bit. It is really always case by case on developing a communication strategy for a site or for the issues. And so I think we try to model what it is we need to communicate, based on what our stakeholders are interested in. So, we work closely with our public affairs staff, who happen to be right here, to try to discern what level of communication would be most appropriate.

So, we certainly communicate with the

licensee but we also have government to government meetings, if that is appropriate for the topics in the area. As Bill mentioned, we have used a lot of webinars as a good tool to get out information to our various stakeholders, public meetings, whether it is a formal meeting or it is an open house because we think people will be more comfortable in asking questions and communicating with us.

So it really is, whether it is an operating reactor decommissioning or materials facility, we try to create a communication strategy that fits the topics that the stakeholder are interested in.

MR. DAPAS: I would just like to offer a perspective in dealing with San Onofre Nuclear Generating Station. I know a number of you in this room can probably appreciate the very interested external stakeholder environment that exists in the State of California. And we have gone to, I would offer, great lengths to ensure that we are communicating with the public, such that they have a clear understanding of how we are implementing the decommissioning process.

We did conduct a public meeting, I think it was back in October or November, where we went through the decommissioning process. We had a senior manager, Larry Camper, that led that discussion.

We have also made our inspection reports available to a number of people that have requested it. They have been added to the Listserv. And as Cindy said, I agree it is a case by case. And we have a civic communication plan. We are trying to engage the stakeholders to ensure they have a clear understanding.

And then I think the licensee recognizes the importance of ensuring that they are openly communicating with members of the community. In the case of San Onofre, they have established a community engagement panel and have generated a charter to provide for input for interested stakeholders.

I think the degree of public interest dictates how frequently we conduct public meetings and outreach, to ensure that we are adequately communicating the information and the results of our inspection activities. And we have had instances where state officials have requested to accompany our inspectors on various inspection activities. And there is a protocol that we go through to provide for that.

So, I would just underscore that the approach that we adopt is really a function of the external stakeholder environment and the interest in ensuring that our inspection results are transparent

and clearly understood.

Thanks.

MR. McCREE: So, just quickly, Mike, thanks. The question asked for communication models for the five plants being decommissioned and the five plants under construction. So, I think that communication first starts internally. We have to get alignment within NRC, within the Region, the headquarters program offices on first how we are organized, who has the lead, if you would, lead role in communicating. We have to have frequent interactions to make sure that there is a shared understanding internally on what we are doing, why we are doing it, and how we are doing it.

And the same holdss true on our engagement with our respective licensees. And we have set up the organization within Region II for those plants under construction. A good while ago, I see Loren Plisco back there. He certainly played a key role in getting us organized the right way.

We have frequent discussions, frequent public meetings, certainly, for Watts Bar. We have the Watts Bar Restart Assessment Group and there are meetings that are coordinated -- that are held quarterly and they are joint meetings between Region

II and NRR and the licensee. And they are held either near the site or in Atlanta, or here in headquarters.

And similarly, the two AP1000 sites are under the construction reactor oversight process. So, we are following that model in terms of the public meetings that we have to have for that process as well.

MR. JOHNSON: Okay, was there anyone else who was going to weigh in on that question?

All right, this next question, I think, may be intended to be a little bit provocative. I will ask it.

Given all of our comments on Fukushima and the importance of those issues that we need to work on, why are we allowing inspectors to reopen licensing-basis questions that were resolved years ago and have little to no safety significance? It doesn't align with what all of you spoke about, nor what the Commissioners stated in their comments about aggregate regulatory impact.

So, I am going to ask Marc, if you would start with that and then we will see if others want to weigh in.

MR. DAPAS: I asked for the opportunity to respond to this question because I do have some sites in Region IV where site management has communicated

this very point to me during my visits to the sites here, as I was transitioning to my responsibilities here in Region IV. And there are a number of factors that come into play here.

I think it is very important that we have a shared understanding regarding what is the potential safety significance of an issue. Sometimes you are dealing with pre-GDC plants. Sometimes in the licensing documentation, there may have been a meeting between the licensee and the NRC and there is not a lot of specificity regarding the discussions and the conclusions.

And other issues that we have dealt with is retrievability of the licensing documentation. An inspector brought an issue forward with one licensee regarding tornado missile protection. And the licensee's response was well, that is not in our licensing basis. And the context here was either horizontal or vertical protection. And the senior resident, without a lot of effort, conducted some research. And sure enough, in the licensing basis documentation with reference to the facility needing to be protected against a vertical tornado missile hazard.

So, I think there is a couple of factors

that come into play. One, it is important that the inspectors are not dedicating time and effort to issues that have relatively limited safety significance. And I see the importance of the branch chief exercising appropriate oversight in understanding the issues that the inspectors are identifying and assuring there is agreement that that issue is of potential significance such that it warrants some additional follow-up. But I also think licensees have a responsibility to be able to retrieve the licensing basis documentation that does disposition the issues.

And I have examples there where we had inspectors who were bringing some issues forward and the licensee's response was well, we already know we have challenges in that area. But if the inspectors have a question regarding operability or the adequacy of a 50.59, they can't just say okay, the licensee is aware there are challenges in that area and not address that.

So, I guess in summary what I would say is it does take an effort by both the licensee and the NRC to ensure that we understand whether there is an issue of particular safety significance and whether we are dedicating an appropriate level of resources to

evaluate that.

But for me, it is an issue that is on my radar screen and I know that there are some challenges in that area that we need to make sure we get our arms around.

MR. JOHNSON: Danny, I will start with you and then also, Maria. I ask, given, Danny, your role with respect to cumulative effects of regulation and in the context of Fukushima as the question was posed, do you have a perspective you want to share regarding issues be dealt with in the mind of the person asking the question at a low level, given the issues that we are dealing with, with respect to Fukushima and other nuclear issues.

MR. BOST: Yes, Mike, I do have a couple of thoughts and then I will let Maria add on.

You know, once a compliance issue is out there on the table, to me that is one thing. But we seem to be applying a lot of resources and inspection hours and a lot of work, to me, in the areas that are not as safety significant. And that is the ones where we probably ought to have them directed on the items that are safety significant.

I mean, once you have got a compliance issue identified, I mean we, as licensees, we have got

to go fix that. We have got to go make that right and that is ours to go do. We just want to make sure that we are not distracted from what our focus should be every day, the safe and effective operation of the units. That is where we want to be. And we don't need to have our operators distracted. There is only a certain number of management attention units that we have at the sites as well. So, we are very -- we are protective right now over what are we going to add. What are we going to do different? What are we going to start doing from this day forward? We are still having additional programs that come out over the last decade. We have had additional rules that have been passed. So, we have got additional inspections. We have got additional scope to worry about.

So, I do understand the question. I know why they asked the question. We just need to make sure we got our resources focused on what is important and what is going to bring the best safety and the best value to both the regulators, as well as the stations.

MS. KORSNICK: Yes, thanks, Danny.

Well, we talked about five plants being decommissioned and five starting up. And we also talked about Fukushima. And I would just paint in that picture the real onus is on both of us to be effective

and efficient and to ensure that we are spending our time wisely. And I think there are cases where things get kicked up and we spend time, energy, and effort on those. When you have this volume of things that you are dealing with, it is very easy to get task-focused and just keep running down the path and you sort of lose sight of what is the most important thing.

And I think the challenge in this case, really, is on both sides. It is on the industry side, as well as it is on the regulatory side, to make sure that we are focused on the most important stuff; we are being as effective and efficient as we can; and create dialogue when we find in fact, these examples. If we think that we are sort of chasing after something that is not really value-added, I think the real onus is on us to create the right conversation to say I am looking at it differently. Glad to fix it, if it is something that needs to be fixed, but really let's not spend undue time if it is not value-added.

MR. DAPAS: If I could just add one real quick point to that. What Maria said really resonated with me in that I do know some examples where when I was at the site and I asked the licensee, well, have you elevated this concern and the answer is no. And I would offer what Maria said underscores the

importance of ensuring if you feel that the inspectors are engaging in an area that, as you described, is not value-added and would result in an unnecessary expenditure of resources to result, that needs to be elevated such that we can step back, look at that, and reaffirm either it is something that we need to pursue, or, if necessary, quite frankly, opportunity for some coaching and calibration.

MR. JOHNSON: Okay, this next question actually stays with a little bit the theme regarding inspections and issues, significance of those issues. And we haven't said significance determination process yet, I think, in this discussion.

The question is: What insights can you provide on experience with the application of the SDP when evaluating events involving operator actions?

And I am going to ask, I think, Cindy, if you would start with that.

MS. PEDERSON: Yes, thanks. This was one that we thought might come up. So, we did some polling with our SRAs, as well as people that have been dealing with the SDP process. And it is not an easy area when we are talking about human reliability. And it is an area when we do have regulatory conferences that we have a lot of discussion about what appropriate credit is.

And so when we look back at our risk analysts, we have a certain set of tools that we use. That is our SPAR-H model. Our folks have training in that and they are the ones that exercise that program, as well as peer reviews. Our SRAs don't work in isolation.

So, we are getting multiple risk analysts that put their heads together because it isn't a cookie cutter approach. There are judgments involved. And I think what we tend to find is the more difficult areas is operators recovering unknown situations, things that they don't have procedures for, things they didn't necessarily have training for, where they would have to do more diagnosis, figure out what to do, how to approach it and so forth. And so our assessment of that hasn't always aligned with industry's assessment of that, where industry tends to give a little bit more credit for that, and we probably are a bit more conservative on it.

But it is an area where we don't have a lot of hard and fast easy to point to data. And so there is some judgment involved and it is an area where we do our best set of assumptions and our best set of reviews.

The point I guess I would offer to you is

the earlier you have insights, provide them and have our risk analysts talk with your risk analysts because often, we can come to come to some common understanding. But there will be times when we agree to disagree. But the earlier we can have those interactions, the better. Unfortunately, sometimes these interactions have been very late in the process and it makes it more difficult for all of us.

Anything to add?

MS. KORSNICK: Yes, I guess I will reflect on that. I had some personal experience with that in 2013.

So, I will reflect on it a couple of ways. I appreciate the rigor of model that the NRC uses. I do think that there are valid justification to adjust the numbers used when you are talking about procedures and training, ample crew staffing, this kind of thing. And so, I do think we need to create some openness relative to sort of all the processes that we do utilize and, in some cases, I think play a significant role.

My personal experience through this one, I guess I would also offer it appears to me that we create an undue weight for automatic actuation of systems. And I guess I would ask for that to be really looked at.

In the case that we found ourselves in, you know you could have put a system on automatic, which, quite frankly, if it had automatically actuated, could have actually created a much more challenging situation to deal with. And so in this case you, and in some cases, purposely don't want to have something on automatic because you want thoughtful operator action to evaluate the situation and make sure that you want something or you don't want something.

And by doing that and crediting that thoughtful operator action, it actually worked against, if you will, the formula, let me just say, that you get sort of more credit with the automatic operation.

So, I think this very much is a case where there is never going to be one formula that is going to work, when we talk about human reliability analysis. But I think there does need to be more openness to relative to some of the credits that can be applied and not just a floor or a ceiling, if you will, for the number.

MR. JOHNSON: Okay, we have got a couple of questions that relate to Fukushima either the Near-Term Task Force recommendation. In this case, recommendation for the seismic evaluation, I will give

you that question in a second. Also, a question that relates to what we were able to see in Japan regarding the use of or the installation of filtered severe accident-capable vents, filters on those vents for BWRs.

And so let me actually start with that. The question is: During the visit to Japan, did NRA talk about its mandate to require filtered severe accident-capable vents on BWRs?

Given the commissioner's decision not to support the NRC staff recommendation for identical safety countermeasures for USBWRs, please comment on your comfort level with "it can't happen here."

I think I recognize this handwriting.

(Laughter.)

MR. JOHNSON: The answer to the instant question is no, we didn't actually probe with the Japanese regulator in any depth their regulatory requirements. I think the comment earlier this morning or one of the speakers earlier this morning sort of drew the parallel to the response that the Agency took or the country took actually following 9/11 and how serious it was for us because it happened here and what we recognize as really the role or the posture that the regulator in Japan is taking with respect to its

seriousness, given what they faced.

We did see at Kashiwazaki Kariwa, for example, that they are installing filters. In fact, they are installing two filters; a filter that is below grade, actually, because of local prefecture when it was concerned about that. And so we do know, at least based on what we were able to see there, that there are filters being added.

We were surprised, or at least the impression that I had was, how small that footprint was. And I hadn't actually appreciated the size of the footprint. And so, I think we were, as a group, sort of impressed by that.

You know I do what to recognize that the Commission does have the issue, did decide on the issue. Ultimately, the Commission will have to decide on where we end up with respect to the recommendation. And it could look like, actually filters or it could look like use of filtering strategies or a combination of the two of those.

So, that is how I would leave the answer to that question. I do want to pause and see if anyone would add anything. Maria, you have had really close involvement on this. So, what would be perspective?

MS. KORSNICK: Yes, thanks. So, I told

Danny it was his to answer.

(Laughter.)

MS. KORSNICK: So yes, I have been very engaged with this, as you know, across the industry. And I guess I just wanted to be very clear, it has always been our perspective that we very strongly support filtering. There is no question on the need for filtering and we are very passionate about it.

Our challenge is that there is more ways to accomplish that than simply an external filter. And our passion has really been to make sure that that filtering works. And by putting the right tools in the hands of our operators, we are ensuring absolutely that we are maintaining containment. And if we are maintaining containment, then it can be used as a reservoir, if you will, for filtering.

And so we are very passionate about the fact that it needs to be filtered. Our challenge is, again, not to be locked in. There is only way to do it and we feel very strongly that there are other ways to accomplish it. In fact, other ways that put the operators in a position where they absolutely know they need to add water and keep that core cool because, ultimately, that is the solution set that maintains containment and that is the focus.

MR. JOHNSON: Thanks, Maria.

This other question related to Fukushima and Near-Term Task Force Recommendation 2.1, the seismic hazard reevaluation, is that licensees' seismic hazard submittals are due March 31, 2014 and NRC prioritization is due April 30, 2014, only 30 days. How will the NRC work with the 2.1 Seismic Industry Task Force to assign Group 1, Group 2, Group 3, for priority plants and will consideration be made to keep the industry seismic resources on existing seismic PRA projects already underway pre-Near-Term Task Force Recommendation 2.1?

So again, a very good question related to how we are moving forward. And the person raising the question has the dates just right.

We worked considerably with respect to making sure that we are clear on the part of the NRC but also in terms of working with the Seismic Industry Seismic Task Force, that we are clear about what we need to see, in terms of that submittal on the 31st of March and how we expect that submittal to be factored in or considered by the NRC, in terms of us making a near-term decision with respect to prioritization and a near-term decision with respect to what, if any interim actions are needed for those plants and where they are

necessary.

I think rather than try to answer the details of the question, I won't do it justice. I will say that we have considerable interaction. We issued a letter. NRR issued a letter actually to the industry that talks about our expectations with respect to, for example, operability and reportability. That letter is certainly publicly available. We call it the Leeds Letter but I am told that Jennifer signed out the last one I know. But it is still called, we still refer to it as the Leeds Letter.

But I think that provides clarity with respect to sort of the immediate decisions that licensees have to make. There is a more detailed approach that we will use in terms of stepping through the decisions that we have to make. We have begun sharing that. We will share that broadly. We are sharing it internally. We will certainly share that. In fact we had an interaction in the last couple of days about how we roll that out from a communications perspective. We do want there to be clarity with respect to how licensees would respond.

And we are, in terms of looking at -- there will be a product from the NRC that provides that binning, if you will, that was very similar to a letter

that provided binning for the case of the initial work that we did on flooding, the flood reevaluation. There will be a very similar and we will interact with the working group in terms of how we set those bins up, being mindful of the fact that we do really want to make sure that we get after, if you will, the plants -- we consider where the plants fall out in that bin, based on the priority that we see arrive at, based on what is provided in the reanalysis.

So, I will just try to leave it there. And I will indicate that there are folks in the room who can provide additional answers and there will be more information coming with respect to that.

I want to switch gears and talk about Part 37.

MR. BOST: Hey, Michael, can I add one thing to that discussion you just had?

MR. JOHNSON: Please do. Yes, sir.

MR. BOST: It is really from the point of prioritization. I mean if I look at where I think our units are going to wind up, I have got a pretty good feel for what priority they are going to fall in and where they are going to be and what we are going to do.

But if you look across the nuclear fleet, I mean we need some help with prioritization. You know

that. We have been talking about having to go do these SPRAs. So, we are going to go do seismic PRAs. We know that is where we want to go and we know there is a limited resource in providing those. So, we are just asking that we take a look at how many of these are going to be required, who needs to do them and when they need to have them done and lay off that prioritization, effectively. I think that is something that would help the industry out a lot in getting these things done in the right order.

MR. JOHNSON: Yes, absolutely, Danny. In fact, the way in which we approach the -- we have sort of been alluding to the follow-on steps and, for example, the use of the expedited approach. For example, the way in which we structured all of that is to recognize that there are some things that can be done nearer term. We want to screen out and then screen down, and have actions in place to buy the time that we need for plants to do a seismic PRA for that small subset, hopefully smaller subset of plants that have to do a seismic PRA. So, we have built that approach in mind, again, with actions to take -- interim actions and actions through the expedited approach for plants. And if you do that, you buy that time.

MS. KORSNICK: Yes, we have been working

together, as you know, Michael, very hard on this. I am hoping to say that we can reflect back on this one and it will be a success story of both the industry and the regulator in terms of ensuring that we are using effectively our resources and we are spending those on the ones that need it. And at the same token, given credit for previous analyses, like IPEEEs, to use the results of that to say based on that, I don't need to spend resources on this one over here.

So, a lot of hard work has gone into this prioritization and the screening process. And, I think, a job well done on both the regulator and the industry's part.

MR. JOHNSON: Okay, so we have five minutes. I think that is time, maybe for one more question. It will be Part 37. And the question is: What impacts are you seeing as a result of preparations for the new Part 37 Rule at operating reactors?

Bill, do you want to start?

MR. DEAN: Sure. So, let's go back on the Wayback Machine one more time. So, the events of 9/11 led to a flurry of activity by the Agency, in terms of putting out a number of orders to a variety of licensees, both reactor materials, licensees, in terms of enhanced security measures that we expected them to

take. So, some years ago, we issued Part 73, the Revised Security -- Power Reactor Security Rulemaking. And when we issued that, we had a bit of a leap in the gain realization that oh, by the way, this rule applies to Part 50 licensees and there is a number of decommission sites that are basically ISFSIs, Independent Spent Fuel Storage Installations, that fall under Part 50 and the rule applies to them as well.

And that led to a flurry of activity and probably some unnecessary regulatory burden on some of those licensees in order to try and resolve that issue through the appropriate regulatory processes.

So, Part 37 is basically the codification of the increased controls orders that were issued for materials licensees. And so it is being called the Materials Security Rulemaking. Well, low and behold, again, sort of late in the game, so this demonstrates that even though we talk about being a learning organization, maybe we are not as good as we can be sometimes, that power reactor licensees also had a piece of the pie.

Now, that doesn't mean that our Part 37 Rule specifically addresses Part 73 and basically exempts licensees from having to apply Part 37 requirements, but basically within a protected area and

taking credit for the licensee security plan.

But what we didn't think about was that there are outside of the protected area at nuclear power plants certain large components, many of them stored in robust structures, things like steam generators that were removed from the plant or reactor vessel heads and so on. So, these huge monstrous components but they meet the requirements of Part 37 because they contain Category 1 or 2 quantities of material.

And so, here we are with the rule coming into implementation on March 19th, working to get out an enforcement guidance memorandum that will provide some relief to the nuclear power plant industry, relative to these large components so that we can appropriately not cause them to be in violation of Part 37 because of the sort of the late thought that those needed to have the same sort of controls as materials licensees.

So, that EGM, I think, is going to be out, if it is not out already, it should be out fairly soon.

MR. McCREE: We concurred.

MR. DEAN: Yes, it has been concurred but I am not sure if it has been publicly released yet.

So, we are working with industry. I think there has been a couple of meetings in the very recent

past to talk about this. I guess I would be interested in Danny or Maria's views in terms of how they feel that dialogue is going.

MR. BOST: I got one thought and Maria, I will let you have it.

The biggest thing to me is that if we have got a Part 73 rigorous security program at the plant, then we shouldn't be applying for Part 37 on top of Part 73. To me, that is the biggest thing. We have got overlapping programs. Part 73 is robust. We know it is good. So, we have got it inside the fence.

So, I think we should support a change that says hey, if you have got Part 73, then Part 37 does not apply.

MS. KORSNICK: Yes, I agree with Danny's request. I do think ultimately we need to look at that and the industry would support a change to Part 27 that would exempt, based on our already robust physical security measures that we have I place.

You did mention the large components, like old steam generators and reactor vessel heads. There are, in some cases, some sites that also have some Category 1 and 2 material like resins and those kinds of things that are located in the owner-controlled area. And so those are things yet that we need to

ensure are covered under this Part 37. But I do believe NEI has taken the appropriate action and they have an industry template for these plans to be completed. And it is expected that all of the sites will in fact have a Part 37 security plan in place by March 19th. So, I think the immediate items will be in place. But I do think as an opportunity for us to step back, again, going back to where we focused on the most important stuff, and make sure there was a need for Part 37 to be applied, as opposed to just taking credit for our already robust security plan.

MR. JOHNSON: Okay, we are out of time. I have one more question that I held hoping we would be out of time so we wouldn't have to deal with it.

(Laughter.)

MR. JOHNSON: And I am happy to say we didn't ask it and we won't answer it. But the question is: If a situation like Fukushima occurred in the U.S., how would the regulator, and I would extend that to how would the industry deal with the build-up of large quantities of contaminated water. And again, we will answer that question as we answer questions that don't get asked in session. But that question, I think, points to the fact that with respect to Fukushima, we will continue to learn lessons. I think

it was an eye-opener because I think Tony mentioned in the earlier session just the quantities of waste water and how do you deal with that, the decisions that Japan is making with respect to allowing people back in. All of those things that they will have to work through will be opportunities for us to learn and to look and to see whether the things that we need to do with respect to either our posture as a regulator or things that industry would need to do.

So, it is a good question. We will answer it.

I want to just pause and say thanks to the panelists. I think you all did a wonderful job.

(Applause.)

MR. JOHNSON: Thank you for your attendance.

(Whereupon, at 5:01 p.m., the foregoing proceeding was adjourned.)