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TECHNICAL SESSION 1: AGENCY EFFORTS TO ADDRESS THE CUMULATIVE EFFECTS OF REGULATION

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TUESDAY,

MARCH 11, 2014

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Technical Session 1 of the Regulatory Information Conference convened in the Grand Ballroom of the Marriott Bethesda North, 5701 Marinelli Road, Rockville, Maryland, at 1:30 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

(1:30 p.m.)

MR. KOKAJKO: Good afternoon and welcome to the session on cumulative effects of regulation.

My name is Lawrence Kokajko. I'm the Director of the Division of Policy and Rulemaking in the Office of Nuclear Reactor Regulation. And I would like to thank you for choosing this session and thank the panelists for accepting our invitation to be here today.

Before I begin, I have a housekeeping chore I need to take care of. And as a courtesy to the presenters and other conference participants, please silence your electronic devices. If you need to leave the room during the session, please wait for a break between speakers or leave as silently as possible. Please note the exit door location in case of emergency.

During the question and answer portion of the session, feel free to step to the aisle microphone to ask your question, or, if you prefer to write your question on the cards provided, NRC staff will collect them to be read from the podium.

Questions that are not answered during the session will be posted along with the answers on the NRC RIC website after the conference.

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This session is a workshop format. Once the panelists provide brief opening remarks, the session will be an open discussion between the panelists and the audience. I will start by asking some opening questions from each panelist to get things rolling, and I would also like to encourage a dialogue between the panelists.

I encourage your active participation today, so start preparing your questions now.

Let me now provide a brief background on the cumulative effects of regulation, also known as CER. CER is an agency cross-office program that describes the challenges that licensees or other impacted entities face while implementing regulatory

positions, programs, or requirements. CER can potentially distract licensee staff from executing other primary functions that ensure safety and security. In essence, it is an organizational effectiveness challenge.

Safety is of paramount importance to the agency's CER efforts. The staff believes that CER enhances safety by establishing implementation schedules that address resource constraints, and thus eliminating distractions that can arise from limited resources.

I like to think of it as if I have one dollar for safety, where am I going to spend that one dollar? CER is not about eliminating requirements, and CER does not consider financial constraints. The cost of regulations is considered as part of NRC's regulatory analysis process and is used as a decisionmaking tool.

One exception to this is when a regulation is needed to ensure adequate protection of the public health and safety. In this case, costs are considered only if there is more than one way to obtain the same level of protection. As many of you know, the CER effort officially began in 2009 when the Commission directed the staff to consider whether the schedule for implementing the new emergency preparedness rulemaking

and future rulemakings should be influenced by the aggregate impact, which is now known as CER.

Since then, the staff wrote two Commission papers on the subject, SECY-11-0032 in March of 2011 and SECY-12-0137 in October 2012. Today you will hear a description of the rulemaking process improvements established in these papers, as well as the current Commission direction on CER.

For power reactors, we also have what is known as the risk prioritization initiative, or RPI. RPI is the staff's effort to respond to Commission directions started -- or stated in a November 2012 COM SECY developed by Commissioners Apostolakis and Magwood, and it was entitled The Proposed Initiative to Improve Nuclear Safety and Regulatory Efficiency.

RPI focuses on operating reactors only. And the purpose of the initiative is to enhance safety by applying probabilistic risk assessment information to determine the risk significance in an integrated manner on a plant-specific basis. The staff is exploring options for achieving the initiative and will develop a Commission paper that describes options and the staff's recommendations. The Commission will then vote on whether to implement such a process.

NRC staff believes that RPI, if

implemented, would be a useful tool that operating reactors could use to address CER.

As I stated earlier, CER is an agency initiative, and the Office of Nuclear Material Safety and Safeguards is exploring a fuel cycle centric integrated schedule to help address CER at fuel cycle facilities. This integrated schedule will use important security and safety information to establish generic implementation schedules for NMSS fuel cycle regulatory actions.

And, finally, I'd like to point out that the NRC recently added a member of the Organization of Agreement States to the NRC's CER Working Group to better identify the CER needs of the states. We look forward to working more with this organization.

With this as prologue, I would like to ask Shana Helton of the Division of Policy and Rulemaking, for her opening remarks. Shana?

MS. HELTON: Thank you, Lawrence. And I'd just like to note that there are several seats open in the front for those of you who are standing at the back.

My name is Shana Helton. I'm Chief of the Rulemaking Branch in the Office of Nuclear Reactor Regulation. My branch has the responsibility to lead

the agency's efforts on the cumulative effects of regulation, and we help coordinate the papers that we send to the Commission on this topic.

I would like to echo Lawrence's appreciation for all of the public participation that we have had on CER to date, and we look forward to continuing the CER conversation today and more in future public meetings.

Ultimately, CER will enhance safety, as Lawrence noted, by ensuring new requirements are implemented in an achievable manner considering resource constraints and allowing licensees to maintain focus on items of greatest import. This is why we are all here talking about this topic today.

Lawrence mentioned two Commission papers the staff has authored describing rulemaking process enhancements. Primarily, we have increased the amount of public interaction during the regulatory basis stage. We are now publishing draft guidance with the proposed rule and final guidance with the final rule, so it is clear to all involved exactly what it is going to take to implement the requirements.

In our proposed rule that we issue for public comment, we have specific questions targeting feedback on CER-related concerns. And, lastly, during

our latter stage of developing the draft final rule package, we held a meeting to discuss the implementation dates, given what is on the plate in front of licensees and other stakeholders as well, I should mention.

Currently, our efforts are focused on recent Commission direction to continue to develop and implement outreach tools that will allow NRC to more completely consider the overall impacts of multiple rules, orders, generic communications, advisories, and other regulatory actions on licensees.

Additionally, we are gathering input on the effectiveness of the NRC's CER process enhancements that we have enacted to date. As Lawrence mentioned, we have been directed to engage with the Agreement States broadly on CER, and it is a pleasure to have Mike with us here on the panel today to provide that perspective.

And, lastly, we have been engaging with industry to look at past case studies and see what the accuracy of our cost information and schedule estimates used were in those studies. We recently had a public meeting on January 28th in that regard.

So with that, I will conclude my opening remarks. I really appreciate the strong attendance

that we have at the session today, and I look forward to hearing everybody's questions.

MR. KOKAJKO: Next we have Joe Giitter. Joe?

MR. GIITTER: Okay. Good morning. Or good afternoon, rather. Sorry. I'm the Director of the Division of Risk Assessment, and my division is leading the effort to respond to the Commission's SRM to explore the use of PRA to enhance safety and improve regulatory efficiency which you have already heard we refer to as the Risk Prioritization Initiative or RPI.

I have to apologize for the RPI. At least it is not RIP. But it -- I guess we ran out of acronyms, and we -- so for those of you who may have gone to Rensselaer Polytechnic Institute, I apologize. But anyway, we do refer to it as RPI, and it is what I'm going to be talking about.

We do have several staff within my division that are supporting the effort. And they are actually fairly excited about it, and they are excited about it because it is an opportunity both for the staff and industry to put safety first, to focus on those things that are most safety significant.

Most recently we observed, along with staff from the Division of Policy and Rulemaking, we

observed plant-specific tabletop exercises, a draft prioritization process that was developed by industry. And what I like about the prioritization process -- and we are still evaluating it, but it does build on existing processes that we already have in place, the SDP process, 50.59, the maintenance rule, other well-established processes we have.

And to me that is one of the appealing things about it, because I think if this -- if a method is going to be successful, number one, it has to be easy to -- or simple to implement, not overly complex. And I think it also has to be transparent. It has to be clear how we come up with the results that we do.

One of the reasons that we are interested in this effort is it provides for a process where we can identify those activities at each plant that are most important from a safety perspective. And as I said, that really resonates with the staff, and it does it in a way that I think traditionally we -- you know, just looking at things deterministically, we may not come up with the same answer.

So I think using risk as a tool to do that is an effective way to ensure that we are focused on those most safety significant items.

We have conducted -- back in December we

did a generic tabletop -- or we observed a generic tabletop exercise of NEI's draft process. That was in a public meeting. And we -- as I said, we recently observed two plant-specific tabletops, and there is a third one at Summer that is going to take place later this week, and we are going to have staff support that.

We are planning to issue a trip report that summarizes the results of those tabletops, and it will be publicly available. It should be noted that the main goal of the NRC is to ensure safety, and that continues to be a focus.

When we go back to the Commission in response to the SRM, we will provide a number of options at some point in time, and those options will also look I believe at incentives to further enhance PRA.

But as Lawrence said, this is not an effort for licensees to defer regulatory actions indefinitely. The goal is to focus activities on those things, those activities that will result in the most safety significant enhancements while still meeting the NRC's regulatory requirements.

That concludes my remarks.

MR. KOKAJKO: Thank you, Joe.

Marissa?

MS. BAILEY: Thanks, Lawrence. I'm

Marissa Bailey. I'm the Director of the Division of Fuel Cycle Safety and Safeguards in the Office of Nuclear Material Safety and Safeguards.

I will just briefly talk about the efforts within the NRC fuel cycle program to manage the cumulative effects of regulation.

For us, managing CER really needed to begin with getting a big picture look at everything that was on our plate, all of the regulatory initiatives on our plate. So to that end, we developed what we call the fuel cycle integrated schedule of regulatory activities.

The integrated schedule provides a one-page graphical overview of the major regulatory activities in the fuel cycle program, the drivers for those activities, and the major milestones over the next four years. It is essentially a planning, scheduling, and communication tool, and our goal is to review this schedule with our stakeholders on a periodic basis to discuss the status of the items on the schedule, to adjust the timing of milestones if we can to avoid where they might overlap or any pinch points, and in some cases to adjust the timing of those milestones so that they do align for effectiveness or efficiency.

Overall, our goal is to make the integrated schedule a very useful tool for managing the cumulative efforts of regulation and managing our work, and to ensure that our licensees and us are focused on those activities that have a clear connection to safety and security.

We want this to be a useful tool, as I've said before. So in terms of next steps we are exploring strategies for ranking the items on the integrated schedule, making adjustments to those -- to the schedule, and also developing a participative and transparent process for issue resolution.

So I'd just like to conclude my opening remarks by saying that we at NMSS are very committed to holding quarterly public meetings on this subject and making the integrated schedule a useful tool for managing CER. And we would very much like your participation in our public interactions on this topic.

So thank you very much, and I look forward to your questions.

MR. KOKAJKO: Thank you, Marissa.

For an industry perspective, I'd like to introduce Mr. Greg Halnon from FirstEnergy Corporation. Greg?

MR. HALNON: Thank you, Lawrence.

I was coached that sometimes my inside voice gets a little bit too loud, so I had to write my stuff down to prevent that. But if I stumble, it's because I'm struggling with my inside and outside voice. So I apologize for that in advance. Well, maybe I don't apologize, because sometimes the inside voice is more right.

The industry is focusing on safety and reliability. You've heard a lot about safety, but we really think that reliability is a key thing, reliability of the grid, because eventually, as the base load plants continue to drop off, whether it be coal, nuclear, the grid reliability is key. It is key for safety of the nuclear plants. We all rely on that also.

We have a very mature industry at this point. We have matured a great deal in our training and our safety culture and our technical knowledge of the whole process. Certainly, you can look at the difference between TMI 2 back in 1979 and where we are now. It's tremendous.

So there are three paths that the industry is pursuing to address cumulative impacts. You can see that we already agree with the NRC on what it's called. They call it cumulative effects; we call it cumulative

impacts. So, you know, here we are already working on that.

It's not just regulation. It's we do we do focus on that a lot, but it's not just regulation. The regulatory actions is a key piece. The second one is the inspection program burden. And the third piece we are working on is our own industry self-examination of our administrative processes.

For the regulatory actions, we are off to a reasonable start. As Joe was saying, the new process draft is complete. Tabletops are in process, and we are looking for six full-blown pilot plants in May to actually prioritize the projects and the regulatory requirements to see where they fall out in the spectrum of safety and reliability importance.

We do consider Fukushima actions on the table, but not the ones that are being ordered for adequate protection. Adequate protection is a special case, and we won't put those on the table.

For the inspection program burden, we are talking a lot about substantive cross-cutting issues. Those are the first ones we are going to be looking at. We think that our corrective action program and our safety culture assessment processes have matured way beyond the need for substantive cross-cutting issues,

notwithstanding the fact that many don't even think that they are effective in what they are originally supposed to do.

From the industry self-examination perspective, we recognize that over time our approach to the administrative portion of many of our programs like corrective action program, work management, how we deal with human performance, and the leadership functions, need to be made more efficient. So we are assessing and streamlining those.

So this is the struggle I have with my inside and outside voice. Let's talk a little bit about that.

We concentrate a lot on process, because in nuclear that's what we do. We love process. So just putting a new process in place in itself won't fix the cumulative impact that we are trying to fix. It is important to have the throughput of these processes efficient, right, safety-informed. I'm not trying to lower that.

But the main reason that we are having problems right now in regulatory burden, inspection program, even within ourselves in the industry, is our behaviors. Our behaviors -- on the government side, it's behaviors that simply like cause a plant to

forcibly shut down because suddenly GDC 17 is reinterpreted to mean that you can't have the back feed as an accredited offsite power source. It is behaviors that we put in 50.54(f) letters that say voluntary, and then tells you to mitigate beyond design basis events.

It is behaviors where it takes four years to resolve a tech spec issue that if you have a drip under the reactor vessel, and you watch it for 400 years, it might drain it below the level of fuel, that we suddenly have a tech spec compliance issue. Those types of behaviors are what is killing it.

It is when friction no longer exists during an earthquake when you have two large casks stacked on top of each other. It is the irresponsible use of our democratic process of public input where we just have a one-dimensional agenda that costs a lot of money just to show that it's not necessarily what we want at this time.

On the industry side, it is our misuse of the concept of continuous improvement. We have allowed ourselves to change and expand our programs and administrative requirements to be monsters, and that's what we are trying to do on the industry side is pull back on that.

These behaviors are the ones that are

really hurting the U.S. industry, nuclear industry. We must -- here is the bullets that we must do. We must restore the sanctity of the design basis and the legal standing of our licensing basis. We must allow technical realism to solve issues. We must responsibly use the public input process. Understand that safe is safe, safer is margin, and there is a cost for margin.

Understand that adequate protection is the law. If we are adequately protected now, then rulemaking right now is margin. And then we have to credit the uniqueness of the American process and the American culture.

So we are on our way. We are doing a good job on this new prioritization process to manage and inform our projects. We are looking -- starting to really talk about this taboo subject as how much continuous improvement is too much.

And we have still a long way to go to make sure that our regulations that are there to maintain healthy safety margins are in the right spot at the right time. We need this for the future building of the next generation of nuclear energy plants, and, more importantly probably, the standard of living that we all like, but with a reliable grid of electricity.

I guess I'd better stop with that. Sorry.

MR. KOKAJKO: Thank you, Mike. I appreciate that.

MR. HALNON: I'm Greg. Thanks.

MR. KOKAJKO: I mean, Greg. Excuse me. I'm going to Mike, though.

MR. HALNON: Although you can credit that to Mike, if you want.

(Laughter.)

MR. KOKAJKO: I have to tell you, I wish I was now a panelist, after your presentation. Anyway, thank you, Greg.

I'd like to get the agreement state viewpoint. We have Mr. Mike Welling, Chair of the Organization of Agreement States. Mike?

MR. WELLING: Thank you, Lawrence. I would like to begin by thanking the NRC for this opportunity to be here to present today and for inviting us to be part of the CER review process.

For those of you who have never heard of us, the Organization of Agreement States represents the 37 states that have entered into agreements to license and regulate radioactive material users in their states. As of November of 2013, the Agreement States had almost 18,000 licensees, while the NRC only had

3,000.

This is also posted on our website, and I'm going to read it to you, just so you understand. The OAS is a progressive professional society whose members and activities constitute an invaluable resource to the regulation of radioactive materials and radiation safety across the nation. Together, through committed, collaborative partnerships with state and federal agencies, and other professional organizations, we will improve regulation of radioactive material, create a unified culture that values its members' participation and opinions, and ensures OAS stands strong in representing its members who regulate the majority of radioactive material facilities within the United States.

So, as you can see, we have a strong opinion as far as when it comes to regulations as we regulate 18,000 licensees in this country. So we do appreciate this opportunity to participate.

MR. KOKAJKO: Thank you, Mike.

And, finally, I would like to introduce Mr. David Lochbaum with the Union of Concerned Scientists for an NGO perspective. Dave?

MR. LOCHBAUM: Thank you. There for a while I thought I was on the wrong session, because I

have little interest in the cumulative effects of regulation. My interest is in the cumulative effects of non-regulation, but I have come to believe that that is the other side of the same coin.

The NRC needs to be like a nuclear Goldilocks, enforcing -- establishing and enforcing regulations that are not too harsh nor too lax. A harsh regulator places an undue burden on plant owners. A lax regulator places the public and workers at undue risk. So the trick is for that regulator to be like nuclear Goldilocks -- just right.

To protect the owners from harsh regulation, there are a number of mechanisms the NRC has, like the backfit rule when new regulations are considered, and its associated regulatory analysis to make sure there is a need for that new regulatory requirement. Likewise, factors like the committee to review generic requirements look at proposed activities to make sure they are not introducing new regulations or new requirements outside the regulatory process. So that protects against harsh regulations.

The other side of the coin, there are things like the notices of enforcement discretion that provide a thorough analysis of a deviation from a regulatory requirement that is approved by the NRC only

when a formal analysis shows that it is justified for the time and the conditions warranted. So that protects the public from lax regulation.

But those activities on either side of that coin really are done on an individual basis. And there is also a need, as this CER undertakes, is to look at the cumulative effects of those things. The analogy I use is from experience I know I can survive a single bee sting, but I'm not sure I'd want to try 300 bee stings in short order -- one of the reasons I don't juggle beehives, among many reasons.

CER needs to look at cumulative effects -- hence its name -- to see if individual things that are evaluated properly don't impose undue burden from their collective -- from their collection. And for that we applaud the initiatives that the NRC is doing and the NRC is participating in to provide that protection against harsh regulations to the aggregation of individual items that were each ruled okay individually.

What concerns us is that there doesn't seem to be equal rigor for the other side of the coin -- the cumulative effects of non-regulation. The tracking that is being done in fuel cycles and that NRR is looking at -- new requirements, new regulations, what do they

cause, or is there clearly an effect on the industry that needs to be considered? But who is keeping track of the non-regulation items? Which plants don't meet fire protection regulations or in some stage of transitioning under NFPA 805? What plants don't meet or haven't fully satisfied or closed out GSI 191? Which plants have inspector findings that are identified, reveal a safety problem, that aren't yet fixed?

For a CER to work, it really needs to consider all items, not just the ones that are imposing undue harm. They need to include safety issues that are known but not yet resolved as they apply to individual plants. If you fully considered the list, then I think you would have a great process, as Lawrence pointed out, of where to focus -- which things getting done first pay the greatest dividend for reducing burden while at the same time maintaining or restoring safety.

If you only look at one side of the ledger, you are really doing safety a disservice. So we like the program. We'd like to see it expanded to also account for known safety problems that are not yet existed. We think it would help prioritize properly which ones get closed out faster rather than just

closing something out to satisfy some schedule or detail. So it's a good process. It just needs to be expanded.

Thank you.

MR. KOKAJKO: Thank you very much, Dave.

I'd like to have the panelists ask a question to each, just to try to flesh out some of their efforts to date from their perspective, and I'm going to start with Shana. Shana, can you describe some recent examples of rulemaking process enhancements that address CER?

MS. HELTON: Sure. There are several examples to pull from, so I'll try to be brief in the interest of the questions you have for the other panelists. The first example that I would point to is in 2011 we issued the final rule for emergency preparedness requirements, and that is a prime example where late during the rulemaking stage we had a public meeting focused on implementation.

We had participation from members of the public, including licensees, industry, states, state and local governments, and we had a number of requirements that we were putting in place with that rule. As a result of the feedback that we got from a variety of different parties at that public meeting,

we suggested to the Commission that we adjust, I would say, I think about six or seven of the 12 or so requirements in that rule, adjust those implementation dates in response to the feedback received.

And what that did was it ensured that state and local governments, which had conflicting priorities in some cases with the NRC requirements, as well as licensees, we were able to balance all of those considerations, so that when we actually issued that rule requirement there was a full consideration of the spectrum of activities that everybody was dealing with.

I'm sure that anybody who has been following any of our rulemaking activities in response to the Japanese lessons learned efforts have noticed that we have been very proactive in seeking public engagement all through the rulemaking process.

I mentioned earlier that we have enhanced our public participation during the regulatory basis development stage, and in a few cases we have even issued advanced notices of proposed rulemaking, held public meetings at that stage. We have issued draft regulatory bases documents and sought public comment.

These are all things that we do for the sake of getting a better idea of what is the problem that we are trying to solve with the new requirement that

we are going to be putting in place, and to try to understand how that would fit into existing requirements. And that is all part of our CER effort.

Then, lastly, I will just touch on one example that has led to rulemaking. We recently sent a paper to the Commission -- not so recently now, we are in 2014, but in 2012 we sent a paper to the Commission on filtering strategies, and attached to that paper was a pretty well-developed regulatory analysis.

We don't often do regulatory analysis as a matter of practice for issues that are in the policy development stage. But knowing that this was an issue that required a lot of structured, reasoned thought, the regulatory analysis is the perfect process that we already have at the NRC to do that.

So you would know it if you went back and looked at what we call SECY-12-0157, that we went ahead and did a regulatory analysis and we had multiple interactions with people outside of the NRC. And that is, again, all stemming from CER. We recognize that in order to best solve a new potential regulatory issue, the best way to do it is to have a lot of public interactions up front, so that when the rule requirements go final hopefully they are requirements

that everybody can live with.

MR. KOKAJKO: Thank you.

Joe, I'm going to ask you, you know, how RPI could be a useful tool in the effective implementation of a CER approach. But I also would like to maybe follow up that question after you finish, so please.

MR. GIITTER: Okay. Thanks. As we have talked about, we view RPI as a tool for implementing CER using risk insights. But to really clarify that, let me give you an example.

And I want to go back to something that David Lochbaum said, and I think David had a lot of good points. We do need to consider all items on the plate, and some of those items are compliance, strictly compliance. And I'm probably going to be burned at the stake before I leave here, but sometimes if you look at things strictly from a compliance perspective you miss the big picture, because there are some things that are strictly compliance that may not -- let me put it differently. There are some compliance things that may be less safety significant than things that are not related to compliance.

And I'll give you a good example of that. When I observed the tabletop a few weeks ago at one of

the utilities, they were looking at a number of different issues to prioritize. NFPA 805 was one of them, reactor coolant pump shutdown seals, which would protect the plant from a station blackout. They looked at implementing the fatigue rule, Part 26.

But they also looked at modifications that were identified by the licensee that weren't required by the NRC. And an example of that was modification of a circ water pump, and that circ water pump was aging. And even though the circ water pump in and of itself wasn't safety-related, if that circ water pump failed, it could be a significant initiator for that plant, which is risk-significant.

So I think for this to work -- I agree with Dave. I think for this to work you do have to look at all things on the table, and you need to do it holistically. You can't just look at those compliance issues. You have to look at plant-initiated changes that are safety significant. And that's why I believe using risk insights is the best way to do that.

MR. KOKAJKO: Thank you, Joe.

I'd like to ask a clarifying question and ask you to address it a little more fully. And I will probably ask Greg and Dave to ask -- provide their perspective as well. If an item grades out as low year

after year, why must it be implemented at all? This will continue to detract from safety, all for the sake of low safety compliance. And let's assume for a moment it's our NRC regulatory requirement.

MR. GIITTER: I think that's an excellent question, and, you know, it's something that we are looking at. Maybe the answer is that it doesn't, but we need to make sure that that's the case. And that is one of the things, you know, that we are currently looking at right now as we prepare options for the Commission.

MR. KOKAJKO: Greg?

MR. HALNON: Well, from our perspective, I think that's one of the key points that we are disappointed right now with the present process because we have been told that what we're working on cannot take something off the table. And it may be basis to go start an exemption process or some other type of process, but those processes in themselves have a tremendous burden on our staff because of the extensive requirements to develop information and go forward with it.

So we would like to get there. We would like to get to the point where we have one process, prioritizes things, all the projects that we need to

do, both regulatory and non-regulatory, and the ones that are below the line don't need to be done.

Now, I understand that line is, you know, a negotiation process based on a lot of factors. But we really want to be able to get things to fall off, so that we have our resources put on the most significantly safety and reliable projects.

MR. KOKAJKO: Dave?

MR. LOCHBAUM: If there's a regulatory requirement on the books, they went through a process to establish it. And turning a blind eye to it or just voting and deciding not to care about it can't be an option. There are legitimate ways to take that off the books or eliminate that 50.59 for individual licensing requirements, petitions for rulemakings for larger ones.

We're going back and revisiting the regulatory analysis and the basis for the requirement in the first place. If things have changed such that that's not as important or is not as necessary as it was when it was established, then by all means go through the process and remove it. But just ignoring or turning a blind eye to it cannot be an option to -- even if it's unanimous, everybody in NRC and the industry agree that's not the right process to achieve

that outcome.

MR. HALNON: Can I just add -- I promise not to agree with Dave a whole lot, but the regulatory analysis -- and we're working on that. I mean, we agree that we've got to work on that, get it more precise. That's got to remain valid through the entire process. In other words, if something changes, it needs to go back and it needs to be looked at.

If you get to the end of the project and you say, "That regulatory analysis is not even valid anymore because of the changes," then we have failed the whole process. And I'll bring us back to the QC-QV addition for the fatigue rule, Part 26. We were told in a public meeting that that regulatory analysis -- the people who did it said, "That's not so good. Don't even look at that. Let's go forward and put QC-QV in the fatigue rule."

And we were just silent. I guess we couldn't believe it. I mean, if it was that bad, then why are we even proceeding without a valid regulatory analysis? So that's a key point.

That's the last time I'll --

MR. KOKAJKO: Shana, would you like to address the regulatory analysis?

MS. HELTON: I would. Thank you. Yes,

and I'm really glad to hear so many people say the words "regulatory analysis," because I have been in rulemaking for four or five years now. And when I first came to the organization, you know, pretty much the perspective that we had in the rulemaking staff was this was something that we put a lot of time and energy into. We did our best to make assumptions, given the information that we had, but we just didn't have enough information.

And it was always published with the proposed rule. We always sought public comment. And very little times did we actually ever receive public comment on the regulatory analysis. So I think this recent focus, looking at this existing regulatory tool, I agree with Dave Lochbaum completely that we do need to tighten up our efforts in the area of regulatory analysis. And we are proceeding with that. We are having these case studies to look at past regulatory analyses to see if there is any lessons learned that could help us do them better in the future.

There is a separate effort, not under the umbrella of CER, that we have going on to update our cost-benefit guidance so that some of the tools and assumptions that we use in our regulatory analysis can be brought up to date and improved if necessary.

So that's the comment that I wanted to make. Thank you.

MR. KOKAJKO: Thank you.

Let me turn to Marissa Bailey from NMSS. Marissa, can you describe some of the major activities in the integrated schedule for fuel cycle regulatory actions?

MS. BAILEY: Sure. Thanks, Lawrence. There are actually 19 or 20 activities that are currently highlighted in the integrated schedule, and I'd just like to highlight three of them. The first one is natural phenomena hazards. And just some background information because I know a lot of you are not in the fuel cycle program area.

But after Fukushima, we conducted inspections of our operating fuel cycle facilities to ensure that they had adequate strategies for mitigating the impact of emergency events. For one facility, we found a potentially safety significant issue, and we took immediate steps to ensure that that facility didn't operate until corrective actions were implemented.

For the other fuel cycle facilities, we identified generic unresolved issues that are not safety significant, but it did relate to how the

licensees were addressing natural phenomena hazards in their integrated safety analysis. So one of the items that is in the integrated schedule is our process for developing a generic letter and the implementation guidance to bring to closure those unresolved items that we identified during our post-Fukushima inspections.

Another activity that is in the integrated schedule is cyber security. We are evaluating the need for establishing requirements for cyber security in fuel cycle facilities. And to that end, we have engaged in extensive dialogues with our licensees to make sure that we have a good understanding of their digital assets, what the vulnerabilities are, and what the consequences are.

Our overall goal for cyber security is to provide reasonable assurance that the digital assets associated with the safety and security of fuel cycle facilities are adequately protected from cyber attacks.

And then the third item that is in the integrated schedule is the revised fuel cycle oversight process. We are in the process of revising the fuel cycle oversight process to make it more risk-informed, performance-based, transparent, and predictable,

essentially trying to incorporate some of the elements of the ROP into the FCOP, such as the use of cornerstones, a significance determination process, and also an action matrix.

This is an enhancement to the oversight process. The oversight process is good enough in inspecting fuel cycle facilities, but we believe that these are worthwhile enhancements because it will help us focus our inspection resources on more -- on the more safety-significant items.

But because these are enhancements, the pacing of the activities are on a slower track than -- and so this is a multi-year effort with multiple opportunities for public interactions.

And the reason that I picked these three activities is because, first, I think they illustrate the broad scope of activities that is in the fuel cycle program that we are trying to address in the integrated schedule. You know, we are trying to manage a broad scope of activities in the fuel cycle program.

I think these activities also illustrate how we are trying to focus our priorities or our actions on those things that have maybe more immediate impact on safety and security, which is why the fuel cycle oversight process, for example, is on a slower track

than the other activities.

And then, the third thing I think is that it illustrates that we are trying to address the impacts of non-regulation, if you will. And I think our efforts on cyber security illustrates that. There are currently no regulations, no requirements for cyber security in fuel cycle facilities.

I think we are responding to the current environment where cyber attacks are a real possibility. And so we are trying to make sure that before we move forward and address this area that we do understand what the vulnerabilities are and what the consequences are.

MR. KOKAJKO: Thank you.

Greg, one of the questions from the audience is, why doesn't the industry provide more comments on CER? I suspect that what they mean is providing more comments on regulatory proposals and things like that?

MR. HALNON: Well, that's kind of a real general question. If there was one specific one, I could get into -- but I was going to make a comment that, you know, like the regulatory analyses and other things that we're looking for comments on, it's very difficult to do any kind of quantitative or even precise comments on something you are not sure what the target is yet.

Sometimes the language comes out and it's totally different at the end of the process. So it's very difficult to do an estimate on something you don't know what exactly you have to do.

The other piece of it is the comments on CER. I think we are fully engaged with that. I think we've got, you know, a working group at NEI that is working hand in hand with the NRC on the process. As Joe mentioned, they are part of the process in the pilot plants.

So I'm not sure if there is, you know, lack of comments there in the public, or it's just a lack of, you know, feeling that we are not making, you know, full engagement.

But back on the original language, if I'm reading it right or listening to it right, it's on the regulatory analysis because a comment was made that we are not getting a lot of comments on the regulatory analyses.

And that is mainly because we don't know what the target is just yet. I mean, we could go off and do estimates, but we need something -- when you give something to an estimator, they've got to know what they are doing. And general language doesn't always get it, so it's difficult to do that.

We recognize the difficulty. That's why we want to work with the NRC on trying to figure out what the best way to do this cost-benefit analysis is.

MR. KOKAJKO: Okay. Thank you.

Mike, I just wanted to ask you, what is the biggest hurdle to the Agreement States incorporating regulatory requirements?

MR. WELLING: Well, even though we call ourselves "Agreement States," there's 37 states that have a unique regulatory process that they must follow. So it's hard for the Agreement States to do the same thing, and some states, due to their administrative process, take almost five years to implement regulations.

So from an Agreement States' perspective, we need to prioritize the regulations that are coming to ensure public health and safety. Those take precedence as the burden to the states is to get them through the process first and foremost before any of the regulations come in place.

MR. KOKAJKO: Thank you.

Dave, I wanted to ask you two questions. One is, what are your views on the risk prioritization initiative as outlined by Joe? And also, do you agree with the remark that the industry's gap processes are

mature enough to eliminate substantive cross-cutting issues?

MR. LOCHBAUM: I'll take the second part first. Yes. In fact, even if they weren't, I'd get rid of the SSCIs because they provided no value. So even if it was the old days, the TMI days, get rid of that because that just -- that just -- but I do think they have matured, but I'd get rid of them anyway.

As far as the risk prioritization, as I mentioned in the opening remarks, we felt they needed to be expanded to include areas where plants are known not to meet federal regulations that are on the books like -- transitioning to NFPA 805, Generic Issue 191, issues like that that we know plants have a ways to go yet. There is a regulatory analysis that says they are safe when they get there, but they are not there yet. That needs to be on the list. That needs to be accounted for.

And I agree with Joe's comment that there will be times when compliance items aren't at the top of that list or aren't even above some of these other issues. In those cases, I also agree with Joe that transparency is very important. If you provide the explanation for why this isn't being done or is not going to be done until later, that keeps anybody else

from ascribing motives for that delay.

If you don't provide those kind of reasons, I will be glad to substitute motives for why things are being delayed. You probably aren't going to like the motivates that we will assign to those reasons, but if you provide good, solid reasoning for why something is not happening or why it's happening after a non-compliance issue, I think you can be successful. And I think you'll achieve the goals that have been laid out.

MR. KOKAJKO: Thank you.

I'd like to address this question for Joe and Shana. What should industry expect regarding the probable outcomes of CER and the risk prioritization initiative? And with regard to regulatory relief and the timeframe for regulatory relief?

MR. GIITTER: I take it this isn't one of your questions?

(Laughter.)

MR. KOKAJKO: This is not one of my questions. This is from the audience.

MR. GIITTER: Good question. It's a very good question, and I really can't give a -- I can give a guess, but we have a process to follow. And, you know, we are -- there is progress being made both on

the part of industry and on the part of NRC. We have observed, as I indicated, a number of -- well, one generic tabletop and at the end of this week it will be three plant-specific tabletops. But then the plan is to actually go back to the Commission and let them know that we plan to participate in the pilot, and, you know, we need to make sure we have Commission buy-in before we go too far down the road.

We also need to inform the Commission and Shana can talk a little bit about that -- that we are combining the two initiatives, CER and what we call RPI, into one initiative.

So assuming that all -- you know, the Commission gives us the green light on that, then, you know, for those plants that pilot this activity they would presumably be able to make decisions about scheduling the items that are evaluated. But it would only be for those plants that pilot it.

And then, you know, once we have confidence, then we would need to go back probably to the Commission and make sure they agree with this broader concept being applied to the entire industry. So it's not something that is going to happen in weeks certainly. It will probably take many months, and I'm a little reluctant to give you, you know, a guess on

when that might be.

But the more focus there is on this, both at the NRC and on the part of industry, and comments and feedback from our stakeholders, the more likely that we are going to be able to move forward on something that will put safety first in making decisions about where we put our resources.

MR. KOKAJKO: Before I come -- let me ask Shana to also tackle that from a CER perspective.

MS. HELTON: Sure. I think Joe hit the nail on the head, and I just would add on to that that the CER is really something that we have been applying from an agency perspective. So you've heard Marissa talk about some of the activities happening with fuel cycle or process enhancements for rulemaking have been put in place across the board for every rulemaking that we do, regardless if we're talking about operating reactor licensees, fuel cycle facilities. It's just for everybody.

The RPI effort, which Joe and his team have the lead on developing, the way that we have been thinking about it is it has been evolving since the Commissioners wrote their tasking memo on that topic -- is that this is a tool that we could potentially use to help with CER for operating reactors. So that

is very focused in the reactor arena.

Joe alluded to a paper that is going to describe the staff's vision for how RPI fits in with the broader effort of CER. We are working on that paper, anticipate it is going to be delivered to the Commission in the coming months, but we don't have a specific timeframe for that that I could give today.

And in that paper I think hopefully we will accomplish a few objectives, and we are still working on that in-house, so I can't go into too many details. But I think we will be directly addressing the question that was raised in that paper, so I will just say to stay tune.

MR. KOKAJKO: Thank you.

MR. LOCHBAUM: Lawrence, can I make a quick comment?

MR. KOKAJKO: Yes, please.

MR. LOCHBAUM: I just want to remind, mainly for you guys, a quote out of SRM for SECY-12-0137, "NRC management should carefully monitor the CER approach to ensure no significant unintended consequences occur." So we need to probably have that conversation, what is an unintended consequence, as we get through those, especially maybe before the pilots, because we don't want to add more work, right? We

want -- this is to reduce the burden, not to add to the burden.

MS. HELTON: Right.

MR. KOKAJKO: Thank you for your comment.

Yes, sir.

MR. RICCIO: Hi. My name is Jim Riccio. I work with Greenpeace. I'm just wondering if you think this effort -- this goes to scheduling. Do you think you could deregulate these standards quickly enough to make this industry economically viable?

MR. KOKAJKO: I'm not sure who that question is to.

MS. HELTON: Lawrence?

MR. RICCIO: Anyone?

MR. KOKAJKO: I would -- go ahead, Dave.

MR. RICCIO: Maybe Mr. O'Hanlon from FirstEnergy. I hope the irony of FirstEnergy on a deregulatory --

MR. HALNON: Yes. I'm Irish, but it's not O'Hanlon. It's Halnon.

MR. RICCIO: I'm sorry.

MR. HALNON: Right now, I mean, from an economic viability, it is not just regulation that is causing the issue that we are seeing in the industry now. Certainly, reducing the regulatory burden is

going to help. You know, we have a lot of market issues going on. We have rules within our regional transmission operators that are going on. A lot of dynamics there.

Can we do this? Yes. Can we reduce the burden of regulatory so that it helps? Yes. And we're on our way there. We have got to keep the momentum going. We've got some momentum going right now, and we need to keep it going with these pilots, and then beyond that.

But your question is a good one. I'm glad you raised it, because I had the point to make about keeping that momentum up and making sure that we do this with all urgency and not just let it be another process that takes four or five years to get through.

Thank you.

MS. HELTON: I would also like to chime in on that, and I'm glad that Greg had the first crack at answering your question. It's a very good question. I think industry is best poised for keeping the industry economically viable, and I would just remind you that the mission of the NRC is not to maintain the nuclear industry as being economically viable. Our mission is focused on ensuring adequate protection of public health and safety and security.

So we are coming at this CER and RPI effort with that in mind, at the forefront of our minds.

MR. KOKAJKO: Dave, do you want --

MR. LOCHBAUM: Just considering this is the third anniversary of the Fukushima accident, if these safety problems don't get fixed before a U.S. reactor goes up in flames or has some disaster, just as no nuclear plants are operating in Japan, they could lose the entire fleet if they don't get -- they don't properly manage safety.

So whatever it takes to get the safety -- the compliance issues resolved before that, it is kind of like a race between whether economics closes them or the next disaster closes them. Hopefully, if they've got to pick between those two, I'd rather have economics take out the fleet than a lot of Americans paying a high price.

MR. RICCIO: And just from a public perspective, we don't think things just fall off the table, because I'm sure the folks at FirstEnergy didn't think that boric acid crystals on top of a desk were all that important.

MR. LOCHBAUM: Fair enough.

MR. KOKAJKO: This is to Greg, and perhaps this is continuing with that same theme. What estimate

does FirstEnergy have as to how much cumulative impacts cost nuclear power operators?

MR. HALNON: I don't know. It's a lot. When we look at the -- if you look backwards -- and business plans normally look forward, but if you look backwards, we see about a seven percent increase in our regulatory cost, if you will, each year. And so -- each year, so let's just take the past five years that has been -- do the math, 35 percent increase in regulatory cost. That is displacing other things.

As we get our plants older, we have obsolescence, and to worry about -- we have aging components to worry about. We have other things that we have to do also that have a like -- and like Joe was saying, and have a downstream effect on safety through the risk of initiating events and other things.

So, you know, we look at that as big picture. And when you have regulatory requirements come down, they will displace other things. It's a finite -- we have a finite amount of money.

So, actually, to quantify the cost is difficult, but we can see the trend. And the trend is not slowing down. It is actually increasing, possibly, probably, you know, you'll say because of Fukushima. That's probably correct. But the point is

that over the next five to 10 years costs continue to extend up, and we need to make sure that we spend that correctly.

MR. KOKAJKO: Okay. Thank you.

Dave?

MR. LOCHBAUM: Yes, I would just -- typically, the annual budgets for nuclear power plant operation are called O&M, operating and maintenance costs. We flip that and look at what is -- what we call M&O. Bad management and lax oversight have cost the industry more money than regulatory compliance has.

If you look at Davis-Besse and the costs it cost both the plant and the industry, Fort Calhoun has not been generating a lot of electricity the last couple of years, not due to CER or anything like that, due to bad management. So it -- you know, yes, there is a cost associated with this. That's like the paint on the outside of a grenade; it's really the shrapnel that is the big issue, not the lead-based paint that you -- that the grenade is painted in.

MR. KOKAJKO: Thank you, Dave.

This is a question to all the panelists, and you can probably answer lengthy or short, depending upon your point of view. Does anyone on the panel

believe Fukushima was caused by too much regulation?

I'll start with you, Dave.

MR. LOCHBAUM: Well, I can't speak for the entire panel, but this member of the panel doesn't say so, doesn't believe so, no.

MR. KOKAJKO: Marissa, you start it.

MS. BAILEY: No. It was caused by an earthquake and a tidal wave.

MR. KOKAJKO: Joe?

MR. GIITTER: I would just say no.

MR. KOKAJKO: Shana?

MS. HELTON: I agree with the rest of the panel.

MR. KOKAJKO: Greg?

MR. HALNON: Yes. I don't know the Japanese regulatory structure very well. You know, if you are asking the question from the realm, would more regulation have saved it or less regulation have saved it? I think that's probably an unfair question at this point.

MR. KOKAJKO: Mike, do you want to provide an Agreement States point of view?

MR. WELLING: No, thank you.

(Laughter.)

MR. KOKAJKO: Greg, I wanted to ask you,

concerning the risk prioritization initiative that is going on at the power plants, can you discuss some of the factors that go into NEI's draft prioritization process? And will licensees put emphasis on non-safety-related issues such as cost concerns?

MR. HALNON: Well, cost is definitely a piece of this, but it's not part of -- an input to the process. I mean, if we look at the safety and reliability aspects of each of the projects -- and Joe's illustration earlier on the circ water pump is a perfect example of how a non-safety-related component, non-safety-related project can work its way into being fairly high on the risk significance from the standpoint of the PRA, so that -- that pretty much, if you just kind of analyze that example, it pretty much tells it.

We also look at cyber security aspects and radiation protection perspective also. They also kind of weight -- have a weighting factor in there. So when you add all of those things together, the cost is not a factor in this prioritization process, because we don't want cost to overwhelm the safety aspect. So the risk performance or the risk significance of it is what the key is.

MR. KOKAJKO: Shana, how are the

regulatory analyses -- it says, how are the regulatory analyses issued for public comment? I suppose that means, you know, are the regulatory analyses issued for public comment? Can you describe that?

MS. HELTON: Sure. I'll say that in recent times I think we have been -- even early in the development of a proposed rule or a regulatory basis, having some public meetings focused on the content of the regulatory analysis.

Typically, what we've done throughout the years is we will refer to the regulatory analysis in the Federal Register notice. I will say that I don't believe we always publish in the Federal Register the regulatory analysis.

They tend to be lengthy, and there is quite a steep cost for publishing documents in the Federal Register. But they are always available and referred to in ADAMS, our public document access, which is highlighted in our Federal Register notice.

So part of our CER process enhancements and rulemaking are drawn to ask questions in our Federal Register notice that direct the public's attention to these regulatory analysis documents, because we have historically had difficulty getting feedback. You heard Greg talking about the industry's reluctance to

provide feedback during the proposed rule stage on our regulatory analyses.

Well, this is really a prime opportunity that I think industry is missing, and other members of the public as well, because this is the document that we send to our Commission, accompanying our proposed rule package, and that helps inform our decisionmakers as to whether or not to proceed with a proposed regulatory action.

So getting that early public feedback on regulatory analysis is critical. I think those really help us identify the alternatives to rulemaking. And, again, I am just speaking within the realm of rulemaking. We can do regulatory analyses for other actions, but we have been focused to date on rulemaking, and we are just now considering expansion to other processes.

But, you know, this regulatory analysis is a key tool for decisionmakers. And as much as it can be informed, that is just going to help the process out. So we do have those questions now in the Federal Register notices that try to direct attention to these documents in our ADAMS public document system.

MR. KOKAJKO: Thank you.

Dave?

MR. LOCHBAUM: Yes. Just -- I understand Greg's point about it's difficult to comment on those because what is -- the target is not real defined. We have the same problem. It's difficult for us to comment at that stage because it's not real clear what is going on.

For years we have been advocating that the NRC should issue draft regulatory guides around that same time, because that really defines what -- the expectations the NRC is trying to achieve and the ways it would accept to achieve those. Absent that, it is very difficult to look at a regulatory analysis and see whether it is good, bad, or indifferent. So it's hard for us to justify the resources to submit comments on such vague notions.

MS. HELTON: And that's a really good point. So that's another reason why, as part of our process enhancements for CER, we are making sure and we are holding to a very tough standard that every time we issue a proposed rule we've got draft regulatory guidance accompanying it, so that everybody who is looking at the proposed rule fully understands what it is going to take to implement those requirements.

So the impact that that has on the NRC in developing these new requirements oftentimes it will

take us a little longer to get a proposed rule published in the Federal Register, because there is a lot more work going on to really define what that means and getting the guidance available as well.

MR. KOKAJKO: Thank you.

Joe, this is for you. Prioritization has many facets in addition to safety, such as money, technical resources, time, individual units versus the fleet. How are these other factors considered in principle in the -- your prioritization initiative?

MR. GIITTER: There was an effort years ago that the industry and NRC undertook, and it considered a number of factors. And in my view, it became overly complex and difficult to implement. And while those are factors, I think my view anyway is simpler is better.

So I would -- I think if we focus on safety, and based on, you know, using risk insights to determine that, and other qualitative factors as appropriate, I think that's the best way to go, because I think if you try to introduce too many other variables it becomes overly complex.

MR. KOKAJKO: Dave or Greg, would you like to address that, too?

(No response.)

Okay. Shana, this one is for you. Is filtered vent: a) adequate protection, b) margin of safety, or c) excess regulations?

MS. HELTON: Those are some terms that are a little bit different than what we usually deal with, except for the adequate protection term. So I believe that it should be clear filtering strategies is not a matter of adequate protection. The Commission voted on SECY-12-0157 I think is the reference to the Commission paper that we sent with the policy issue on vents.

So, as an outcome of that, there was an order issued -- that is, an adequate protection order -- to make hardened vents also severe accident capable. Certainly, the way that we are proceeding today, if we do wind up doing a filtering strategies rulemaking, we would probably be considering insights from that order.

But for the large majority of the rulemaking effort, separate from that order, we are looking at, does it pass the backfit rule, 10 CFR 50.109? So that is why in that effort, which I referred to earlier, we are really making sure that our regulatory analysis, which is going to include our considerations of backfit, is well thought out and has

as much information from the public process as possible, because we will be looking at that issue in terms of, is it a substantial safety enhancement? If it is, then does it pass the cost-benefit test in the backfit rule?

MR. KOKAJKO: Yes, sir.

MR. BLANCH: My name is Paul Blanch. I'm an energy consultant, previous Millstone employee, and very much involved with the industry over many, many years. And I have heard the word used "adequate protection" on at least two occasions in this session. And to me, and I'm not sure how much there is agreement, but adequate protection is assurance that you are in compliance with your license conditions or current licensing basis.

I think there's more -- maybe we ought to focus not on cumulative effects of regulation, but more so on the cumulative effects of regulatory compliance. We saw certainly at Davis-Besse, you know, literally dozens of items of non-compliance which both Davis-Besse missed and the NRC missed, and we have seen some of the lessons learned task force, and so on and so forth.

But, in my opinion, it is really -- what we need to ensure is even though we have regulations

out there, we don't ever look at compliance. I have talked to many inspectors. Some believe the FSAR is an absolute requirement; some believe that the general design criteria of 10 CFR 50, Appendix A, is an absolute requirement; others don't.

The reactor oversight process does not look at regulatory compliance. They don't compare either the FSAR, SER, or any other documents that are part of the current licensing basis.

My concern is not the regulation. My concern is more compliance with the regulation. And the most vivid example I have -- we have regulations, and I look at 10 CFR 50, Appendix A, and back in I believe it was 1991 or '93, the Commission determined that Appendix A wasn't applicable to certain plants.

So we have regulations out there, and by Commission directive, without rulemaking, they have just determined it wasn't applicable. So how do we assure adequate protection if we have no idea what the degree of compliance is with the regulations? I know that's a multi-faceted question, but I'd like to hear anyone that cares to respond to that statement.

MR. GIITTER: Yes. I would disagree with your premise that the oversight program doesn't look at regulatory compliance. That is precisely what the

regulatory oversight process looks at.

And with regard to Appendix A, some plants were licensed prior to the general design criteria. So although they may not specifically have that as part of their licensing basis, it is in fact -- they probably have something that is similar to it, a precursor to it. But some plants were licensed in fact before 10 CFR 50, Appendix A, was issued.

MR. KOKAJKO: Anyone else on the panel who would like to address the comments?

MR. HALNON: I can only say that the adequate protection I referred to is that of the Atomic Energy Act. So, I mean, it is similar to what you said but not quite the same.

MR. KOKAJKO: Thank you.

I wanted to ask a question. Joe, the RPI process that you are envisioning, how is it different from the old ISAP process that the agency embarked on back in the early '90s?

MR. GIITTER: I think that remains to be seen to a certain extent. The ISAP process was the process I was referring to before that, in my view, was -- you know, when we went back and we looked at the lessons learned from that process, there were a tremendous amount of resources that were involved on

the part of the NRC. It looked at more than just safety or risk. It looked at a number of other factors.

And, quite frankly, I think it got into -- it had the NRC where it was trying to get into the decisions that the licensee made to an extent that was probably not appropriate. I guess my feeling is that licensees are responsible for safely operating their plants, and they need to make the decisions on which things are most safety significant based on guidance that we agree to.

And I go back to the example of the circ water pump. I would hesitate to try to second-guess -- you know, if a licensee believes that they have a circ water pump that needs to be replaced, I don't want to be in the business of trying to second-guess that. I'm going to take their word for that.

Again, what we're looking at here is scheduling. We are looking at focusing on those things using risk as a metric that are most important from a safety perspective. And so it is kind of a long answer, but I think the ISAP process, I think it was overly complex. I don't think it was well understood. I'm not sure it was very transparent. And for all of those reasons, I think what we are looking at today is a better

process.

The other thing I would add that is -- it does borrow on processes, as I said earlier, that are well understood, well known, the SDP process, 50.59. So licensees and the NRC already have familiarity with those processes and have confidence in those processes. They have worked well over time, so I would hope that this approach has a better chance of success than the ISAP process, which did not succeed.

MR. KOKAJKO: A related question, Joe, in terms of the risk information, what is the pedigree? And how much information is necessary to support this process? On the plant side.

MR. GIITTER: Yes. Based on what we've seen, I mean, the NRC would prefer to see PRA information as up to date and as complete as possible. Although I think in some cases that based on what I saw at the tabletop that I witnessed there is going to be some cases where you have to rely on more qualitative insights rather than quantitative insights. And I think that's appropriate, as long as there is a good technical basis for it.

But I do think in general, because of a lot of the voluntary initiatives out there, like NFPA 805, for example, and risk-informed Tech Spec Initiative 4B,

for example, that the completeness and quality of PRAs has improved probably more in the last five years or so than it has in probably the last couple of decades prior to that.

There is more PRAs out there that are Reg Guide 1.200 compliant, and there is a number of licensees who will be doing seismic PRAs. And so I think PRA is a bit -- is a more reliable tool than it was 20 -- I know it is a more reliable tool than it was 20 years ago. But I do think there is going to be situations where, you know, the issue of concern doesn't lend itself to a PRA model.

Probably a great example of that is the fatigue rule. And for something like that, you are obviously going to have to use qualitative insights, and that's where I think this other methodology that looks at things like 50.59 is appropriate.

MR. KOKAJKO: One of the things that -- the COM SECY from Commissioners Apostolakis and Magwood was about incentivizing the use of PRA. I wanted to ask, Greg, what about that? What can be done to incentivize the use of PRA in the -- with the licensees?

MR. HALNON: Well, if we all believe it, and truly believe that something is not going to happen in twice the age of the earth, and we just shouldn't

have to worry about it, that would incentivize me not to -- I mean, to use it, and actually put something away, not have to do it.

You know, we are dealing -- even at the new plants now, we are talking, you know, ten to the minus seven to eight type of thing. So let's agree that that is not going to happen. I mean, you can always say there is a minute possibility. We are dealing with floods now that in the flooding hazard reevaluation we are not allowed to use PRA to take events off the table that aren't going to happen.

So we have to deal with floods that are going -- never going to happen, we've got to be able to tell you how we're going to protect against them. And it's an ugly picture in some cases. So allow us to use the PRA to actually screen things off the table. That would be a great incentive for us.

MR. KOKAJKO: Dave, would you like to address that?

MR. LOCHBAUM: Yes. I think you could repeal the Price-Anderson Act, federal liability protection for the owners, and then the insurance underwriters that they have to go to would be very interested in what the risks are that they are undertaking, and that would help boost PRA quality. So

that would provide financial incentive for quality PRAs, and also protect the American public better, which would be a collateral benefit.

MR. KOKAJKO: Joe?

MR. GIITTER: I just wanted to comment on something Greg said. We have to be careful as move forward that we are not risk-based. And even though I do think risk can provide very important insights and is a very useful tool, you get to the issue of floods that are a very low probability -- and I understand that's probably a bad example because I'm not sure how well we are modeling doing probabilistic risk assessment of floods.

But I think to be truly risk-informed we need to think about defense-in-depth and safety margin as well. So that is why I think the mitigation strategy work in FLEX is extremely important, because it is there to protect you against the unforeseen. Even if you don't think there is going to be a high -- you know, a ten to the minus eight frequency of a particular flood, if something unforeseen does happen, you are going to have the means of ensuring critical safety functions are maintained.

MR. KOKAJKO: So the answer is no.

Steve Dolley.

MR. DOLLEY: Thank you. Steven Dolley with Platts. Just following up on that, I was wondering if any of the panelists could comment on whether the entire very complex and very -- you know, ultimately very disastrous Fukushima scenario would have been estimated under PRA to fall below a ten to the minus seven or ten to the minus eight threshold. I doubt it would have been below ten to the minus eight. Was it below ten to the minus seven?

MR. HALNON: Yes. I don't know the answer to the question.

MR. DOLLEY: Would it, therefore, come off the table if it were?

MR. HALNON: Well, again, if Fukushima had a PRA, I don't know about it.

MR. DOLLEY: No, that's not what I'm asking. That kind of scenario.

MR. HALNON: Again --

MR. DOLLEY: I mean, if you're talking about using PRA to take things off the table, that's what I'm trying to get at. Would this be the kind of scenario which could potentially come off the table?

MR. HALNON: I guess I can't answer your question because I'm not sure what scenario you're talking about. Are you talking about an earthquake

followed by a 35-foot wall of water?

MR. DOLLEY: An extended SBO that resulted in a triple meltdown.

MR. HALNON: Every PRA is going to be different in that respect based on plant considerations. You have to see what the grid around the plant looks like, what the topography is, what -- there is a tremendous amount of stuff that goes into it. So I can't tell you. I mean, your scenario doesn't -- I haven't analyzed the Fukushima scenario with the PRA to any of my plants. My plants have a PRA; each PRA stands on its own based on the plant characteristics. That's what you have to look at.

MR. DOLLEY: Does anyone else on the panel have any insights on that?

MR. KOKAJKO: Dave?

MR. LOCHBAUM: Yes. I think Joe spoke to something that -- depending on how the process worked that could address that question. If the PRA was backstopped by a defense-in-depth evaluation, for example, certain security -- you know, terrorist actions, sabotage, you can't really do a PRA on that.

So you're going to have to use some other mechanism to determine -- well, the things that from PRA that seem to be very low likelihood, you might also

use that companion tool to see if at the same -- are we not going to do anything, or that companion tool that you are using for security and other events could say, well, we need to do this. Even though it's ten to the minus seven, ten to the minus eight, it might be still a good idea to do it.

So I think Joe's outline, depending on how it worked out, could address that point.

MR. DOLLEY: It could provide some margin, but you still have the question about what needs to be considered in the design basis and beyond the design basis.

MR. LOCHBAUM: Yes. Exactly.

MR. KOKAJKO: Marissa, I would like to ask, how is risk information used in NMSS? And how might it be used in the CER framework?

MS. BAILEY: Well, let me talk about the fuel cycle facilities. The risk information -- the use of risk information is really built into the regulatory framework. Fuel cycle facilities are required to conduct what is called an integrated safety analysis, which is a systematic look at the hazards at the facilities, whether that's external hazards or facility hazards, the likelihood of that hazard and the event sequence that that might cause, and then the

consequence.

And then after you go through that, the licensees are required to identify the items relied on for safety that they would put in place to mitigate or prevent the consequences of that accident. So from that perspective, risk information is used to manage the safety programs of fuel cycle facilities. It does not need to be a quantitative type of risk analysis. It can be qualitative, it can be quantitative, it can be something in between.

And I forgot the second part to your question.

MR. KOKAJKO: How might it factor into CER in the fuel cycle framework?

MS. BAILEY: Well, I think that's sort of the next step for us for managing the cumulative effects of regulation. You know, we now have the integrated schedule, so we've got a big picture look at all of the activities or all of the major activities within the fuel cycle program.

And so the next step is taking a look at, is there some strategy that we can use to do a relative ranking of those activities? And can we use risk information, whether it's qualitative or quantitative, to help us rank those activities? I think it's really

more for new initiatives that are coming, because the activities that are already in the integrated schedule were already in the process of doing them.

So the next question, then, is for, you know, new regulatory initiatives. Can we come up with some sort of strategy to clearly define what the issue is, what is the risk that we are trying to address, and then put some sort of a relative ranking to how we move forward in addressing that issue or that initiative.

So it's -- you know, it's kind of not a very firm answer, but I would say that's sort of the next step for us, managing the cumulative effects of regulation and incorporating that into the integrated schedule process.

MR. KOKAJKO: Thank you.

Greg, Dave Lochbaum asserted a little while ago that perhaps it was internal matters that drove up a lot of cost of operations by the licensees. Is the industry doing anything or has any initiatives to address internal improvements?

MR. HALNON: Yes. When I mentioned the industry self-examination of our processes, work management is one of those to try to reduce and streamline the administrative process so that we do a better job of figuring out what preventive maintenance

and predictive maintenance to do and when. And we are really looking at it from an as-found perspective.

If we find something that is not as good as it should have been, and we are going to increase the frequency of the PM, if we find something that is a lot better than what we -- has a trend of being better, then we are going to reduce the frequency of the PM and use that as insights into how that program gets done. So that should help making sure our resources are hitting the right things and making sure the right equipment is being worked on and the right frequency.

I'm not sure if that was the full answer to Dave's question, but that's part of the aspects that we're doing.

MR. KOKAJKO: Mike, I wanted to -- not to leave you out.

MR. WELLING: That's fine.

(Laughter.)

MR. KOKAJKO: Can you give me some perspective from you as far as the Agreement States Program goes at -- you know, what is impacted by the cumulative effects of regulation? And what would you suggest that you can work on, but also things that you would engage with the NRC on?

MR. WELLING: The Agreement States have a

unique perspective in that we have limited staffing and budgets due to states deciding what a good quality pay scale is and what good quality staffing numbers are. So from our perspective, we have to prioritize our issues, because not only do we license, regulate, inspect, do regulations, do emergency response, as a daily basis, so we have to manage those daily needs to ensure we meet the adequacy compatibility to maintain our agreement.

So from an Agreement States' perspective, we are trying to prioritize the regulations to ensure that ones we're working on, that we have to enhance our -- to protect public health and safety, and nothing less.

MR. KOKAJKO: Okay. Thank you.

I would like to ask each of the panel members if they would like to provide a closing comment before we adjourn. Shana?

MS. HELTON: I'd just, once again, like to thank everybody for their participation today, and to say that this is certainly not the end of the conversation. We have public meetings in the works, so please stay tuned on our public meeting website, because we do appreciate all of the public feedback that we get on cumulative effects of regulation. This is

not an issue that the NRC can tackle on its own, and I appreciate the session today.

Thank you.

MR. KOKAJKO: Joe?

MR. GIITTER: Yes. Just one final point, and I alluded to this earlier. The focus has been on the cumulative effects of regulation on industry. But there is another side of it, and that is the cumulative effects of work on the NRC staff right now.

And, you know, just speaking for my division, the Division of Risk Assessment, we are extremely busy, and we want to focus on those things that are most safety significant. So this has a benefit for the NRC as well as for industry.

MR. KOKAJKO: Marissa?

MS. BAILEY: I guess I would pretty much repeat what Shana and Joe had to say, that the conversation really isn't over. We are very committed to managing the cumulative effects of regulation. It doesn't mean that it is an excuse or it's a way of alleviating the requirements that are currently in place. It is really making sure that we manage our work, so that our focus and the focus of our licensees are on those things that have a clear connection to safety and security.

We are committed to making the integrated schedule work as a way of managing the cumulative effects of regulation, and we are looking at ways to making it better and making it a more useful tool.

So thanks.

MR. KOKAJKO: Thank you.

Greg?

MR. HALNON: We think it's real positive that we -- I think everybody is aligned around the need to do -- to manage the effects and to make sure we do the right things first relative to safety and reliability. So we are really encouraged with Joe's participation and the pilots and the others.

We think that we are going to learn more, we are going to -- as Mark Satorius said this morning, we need to stay agile and take our learnings and factor them back into process and keep the momentum going, so that we can work through this and get something in place clearly by summer or the end of the year would be good.

MR. KOKAJKO: Mike?

MR. WELLING: Well, I just want to thank the NRC again for allowing us to participate. We look forward to coming up with some good ideas in regards to CER.

MR. KOKAJKO: Okay. Dave?

MR. LOCHBAUM: I also appreciate the opportunity to be on this panel and talk about this subject. And hopefully the focus -- sharpening the focus is seldom a bad thing, and I think there are some very good things that could occur along the way.

Just make sure that some of the safety focus doesn't get dropped along the way, and I think we end up at a good place. But, again, there is some work to do yet, so you could also detour off in a bad place. Hopefully, that won't happen.

MR. KOKAJKO: Thank you, Dave.

I would like to thank the panelists for being here today and sharing their viewpoints. I would also like to thank the audience for attending today and listening.

And, more importantly, I'd like to thank Tara Inverso, who helped coordinate this session, because without her it wouldn't have come together as well as it did. So thank you, Tara.

(Applause.)

This adjourns the session. Thank you.

(Whereupon, at 3:00 p.m., the technical panel discussion was concluded.)