UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

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UPDATE ON CUMULATIVE EFFECTS OF REGULATION AND RISK PRIORITIZATION INITIATIVES

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TUESDAY

MAY 19, 2015

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The public meeting was convened in the Commissioners'
Conference Room, One White Flint North, 11545 Rockville Pike, Rockville,
Maryland, at 9:00 a.m., Stephen G. Burns, Chairman, presiding.

PRESENT:

STEPHEN G. BURNS, Chairman

KRISTINE L. SVINICKI, Commissioner

WILLIAM C. OSTENDORFF, Commissioner

JEFF BARAN, Commissioner

STAFF:

ROCHELLE BAVOL, Acting Commission Secretary

MARGARET DOANE, Esq., General Counsel

MARK SATORIUS, Executive Director for Operations

LAWRENCE KOKAJKO, Director, Division of Policy and

Rulemaking, NRR

JOSEPH RIVERS, Senior Level Advisor on Security, Division of Security Policy, NSIR

STEVE RUFFIN, Project Manager, NRR/DPR

JENNIFER UHLE, Deputy Director for Engineering, NRR

ANTONIOS ZOULIS, Reliability and Risk Engineer, Division of Risk

Assessment, NRR

ALSO PRESENT:

JOHN BUTLER, Senior Director of Strategic Programs, Nuclear Energy Institute

OTTO GUSTAFSON, Director, Regulatory and Performance Improvement, Palisades Nuclear Plant

DAVID LOCHBAUM, Director, Nuclear Safety Project, Union of Concerned Scientists

MIKE MEIER, Vice President of Regulatory Affairs, Southern Nuclear

9:02 a.m.

CHAIRMAN BURNS: Well, good morning, everyone, and I want to welcome our external panelists as well as staff and members of the public who are here this morning. The focus of today's meeting is a discussion of cumulative effects of regulation, including the staff's identified lessons learned and possible approaches for implementing the Risk Prioritization Initiative.

As you may know, the Commission has a voting paper before it addressing these issues. And today's discussions will aid our deliberations on the options presented in that paper numbered SECY 15-0050, which is publicly available on the NRC's external website.

We'll begin discussions this morning from the external panel which will touch on industry efforts to address cumulative effects, experience from two of the pilot plants for the Risk Prioritization Initiative and perspectives also from Union of Concern Scientists, one of our other external stakeholders.

External panel includes Mr. John Butler, Senior Director of Strategic Programs for the Nuclear Energy Institute; Mr. Mike Meier, Vice-President of Regulatory Affairs for Southern Nuclear; Otto Gustafson, Director of Regulatory and Performance Improvement at the Palisades Plant; and Mr. David Lochbaum, Director of the Nuclear Safety Project of the Union of Concerned Scientists.

Following the external panel questions we'll have a brief break and then hear from the staff.

I look forward to hearing the presentations and the discussion with the Commission. Would any of my fellow

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Commissioners like to say anything to begin? (No audible response) CHAIRMAN BURNS: Then, Mr. Butler, would you begin with your presentation? MR. BUTLER: Mr. Chairman, Commissioners, thank you for this opportunity to speak on our activities to address prioritization. We've worked very hard the last couple of years to put together a process I think has some great value. First slide, please. The COMSECY that Commissioners 10 Apostolakis and Magwood put out in 2012 captured the essence of what we're trying to accomplish I think very well. The statement I have on this slide is 11 12 really what we're trying to achieve. When plants have the capability to do the 13 activities that have the greatest safety import, that can actually improve safety 14 guicker. So that's what we're trying to accomplish 15 We believe the process that we're looking at can 16 accomplish this in two different ways, which are also identified on the slide. 17 The first is to allow plants to prioritize their own activities, to allow them to 18 bring into play unique design-specific aspects of each design and to factor that 19 into the importance determination for the issues that they are dealing with. 20 But secondly, we believe that it's also an opportunity for the 21 NRC to use this process up front in your determination of the importance of 22 the various activities that you're dealing with, to use that to identify how best to 23 use staff resources and time and, by comparison, industry resources and 24 time. So we think there's an opportunity in both cases and we're glad to see that the COMSECY that you're looking at actually addresses both activities. 25

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Next slide. I kind of touched on this already. The value

proposition of the process is to allow plants to implement activities that otherwise, when you're not looking at their safety impact, might be delayed. We've seen this in a number of cases where plants have delayed activities that have some real safety value because they're dealing with a lot of other regulatory-driven activities. So we're looking for a process that is blind to whether it's a plant-initiated or regulatory issue and focuses solely on the safety impact of the issues and to use that to prioritize which activities are done first. In the end this results in a faster safety improvement.

Next slide. So the process that we're talking about was designed in 2013 and actually piloted at six different sites in 2014. The process for each of the pilots, they looked at approximately 20 different issues, a combination of plant-initiated and regulatory issues. The results show that in many cases there was a combination of importance for the regulatory issues. And the same thing was seen for the plant-initiated issues where some were high in safety importance; some were very low in safety importance.

The process calls for a number of steps. One of the first steps we'd look at is for the regulatory issues we bring forward a process which we call the Generic Assessment Expert Team, which is a team of experts that looks at the issue in a generic sense. This is done primarily for the site process to identify what the key attributes of each issue are, not bringing in the site-specific aspects, but just generically what are the key attributes of the issue? That's used to facilitate the site-specific evaluation because you've already done some evaluation with some experts and that allows you more quickly at the site bring in the site-specific aspects and to see how they play into the importance of the issue.

At the site, when the site's looking at it, you bring together an expert panel of personnel who have detailed knowledge on the plant and various aspects of the plant operation. You bring them together. And the way I like to look at it is you're looking at an issue through the same lens. And we saw a lot of value in having different personnel with disparate views of an activity looking through the same process lens and coming to the same conclusion in many cases.

Each issue that's looked at through the process is evaluated against five different attributes: safety, security, emergency preparedness, rad protection and reliability. So each issue gets an evaluation against each of those five attributes.

Next slide, please. Now as I mentioned, there's a generic aspect of the process where we look at issues from a generic sense to try to identify what the key attributes are. We see some value in applying this within the NRC to evaluate emerging regulatory issues. And again, we were glad to see that as part of the SECY paper.

The pilot process demonstrated a lot of value with the expert panel bringing a range of views and expertise and experience together to look at an issue again through that common lens to come to a conclusion through a structured process. There were instances during the pilots where we had issues that were -- a plant-initiated issue that had a lot of interest at the site.

In fact, one of the expert panel members was a champion of the process. They took it through this process and in the end came to a determination that the plant issue they were looking at really didn't provide much value and decided to drop it. But the important aspect was that one of the champions of this issue going into this process in the end saw the lack of

value of what he was trying to achieve and voted with everyone else that it wasn't an issue of high importance. They actually made some changes in how they were pursuing that activity.

So we do support the NRC pursuing this expert panel internally. We think that will assist efforts to effectively and efficiently address emerging regulatory issues, and we hope the Commission votes to pursue that.

Next slide, please. So a bottom line first. We do support the recommendations in the SECY paper, the endorsement of the industry prioritization process. We want to pursue that and we want to pursue that as quickly as possible. We are ready to roll this out to the industry starting off with a work shop. And as soon as we can get some level of endorsement from the staff, we'd like to pursue that. The prioritization of emerging issues is part of Option 2. We're encouraged with that being pursued by the staff. We'd like to see a little bit more definition. We hope that if the Commission approves that recommendation that there is some—that the Commission identifies what your expectations and desires are with that process so that we know where that will be going.

The Option 3 of the SECY where you're attempting to -would pilot the use of this prioritization process as part of a rulemaking, we're
in favor of that. We do think the process would provide some common
guidance on how to identify implementation schedules. The identification of
implementation schedules as part of rulemakings is nothing new. So what's
new about this process is using the actual prioritization process to support the
schedule.

The last point I'd like to make is that so far we have limited

our prioritization activities to operating plants, but there's really nothing unique about this process that limits it to operating plants. So we'd like to see some expansion, some work done to develop, to expand this process into other business lines. So we hope that we'd have the Commissions' support in doing that.

And with that, I will end my prepared remarks.

CHAIRMAN BURNS: Okay. Mr. Meier?

DR. MEIER: Thank you. Good morning. Today I'll be not only representing Southern Nuclear, but also the industry. We appreciate the opportunity to discuss our thoughts on this important initiative.

Next slide. I wanted to sum our thoughts in just a few words, and that is a proper allocation of resources improves safety.

Next slide. I want to start with this common ground of agreement on this concept, and I used a few references here on the slide. From the Union of Concerned Scientists, quoting, "The misallocation of limited resources can undermine nuclear safety." NRC here, I have a couple. "We need to focus resources on activities most important to safety and security," and "Activities should be consistent with the degree of risk reduction they achieve." I would say that Southern Nuclear and the industry are agreed that proper allocation of resources does improve safety.

Next slide. I want to discuss our pilot programs. As John mentioned, we did have pilots at six different sites. Overall the pilots demonstrated the effectiveness of the NEI process. Southern's pilot was at Plant Hatch. There we had 20 different projects we evaluated and ranked using this guidance. Only a handful were considered for deferral based upon being low to no safety significance. And this process was observed by the

Nuclear Regulatory Commission.

Next slide, please. An example of one that was rated low was the degraded grid transformers, a modification of Plant Hatch's electrical system. It ran through the process and came up with a very low priority. It was of very low safety significance. This project would take up to \$40 million worth of resources that can be better spent on items that are of higher safety significance. As such, Hatch does anticipate submitting a commitment change.

Next slide, please. In the area of emergency preparedness and security, the guidance provided by NEI is very robust. The pilot at Hatch demonstrated this in cyber security, which was completing Recommendation 8. In summary, cyber security ranked among the highest priorities. It was actually No. 3 out of the 20.

Next slide, please. This security example gave confidence to us in the NEI guidance that was provided, and emergency preparedness would work in the same way.

Next slide. NEI guidance also provides a basis for rescheduling activities as a result of this prioritization. Insofar as backstops, which has been discussed before, we believe at least two backstops exist today. It is not only the NEI guidance, but also the NRC's existing processes to ensure safety.

Next slide, please. In conclusion, the NRC and the industry are compelled to effectively allocate resources. As I said in the beginning, we are in agreement with the goal: focus resources on safety significant activities. And the pilots demonstrated the effectiveness of the NEI process. We at Southern Nuclear want to expand this process for the

 rest of our fleet.

I would say in conclusion the industry agrees with the NRC SECY recommendations. This concludes my presentation.

CHAIRMAN BURNS: Okay. Mr. Gustafson?

MR. GUSTAFSON: Thank you. Entergy, and Palisades specifically, was one of the six pilot plants previously discussed by Mr. Meier and Mr. Butler. Entergy is actively involved with cumulative impact industry initiatives through leadership on the Regulatory Issues Working Group as well as the national utilities group and both the Pressurized and Boiling Water Owners Groups. Consequently, we volunteered with pilot plant participation was requested for the Risk Prioritization Initiative. Entergy stations represent all designs and most locations. Palisades specifically is four years into its extended period of operation which currently ends in 2031.

Palisades was chosen due to the station's current regulatory burdens associated with things you would expect in an operator in its extended period of operation. Aging management associated with Alloy 600. Materials Reliability Program 227, adoption of risk-informed initiatives. Palisades is in transition on NFPA 805, as well as the GSI 191 risk-informed initiative, as well as emerging industry issues.

Next slide, please. In terms of the pilot, we initially went through subject matter expert selection. We had 12 subject matter experts associated with design engineering, system engineering, information technology, as well as security and project managers. And these people were trained and completed the importance evaluations associated with PRA input and guidance from the pilot project lead. Those importance evaluations were heard by members of the Integrated Decision Making Panel.

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The selection of the Integrated Decision Making Panel included senior station managers, most of which were SRO, senior reactor operator licensed with significant Palisades and industry experience. It consisted of 11 members chaired by myself and also included station managers from Operations, Engineering, Project Management, Security, Radiation Protection, Regulatory Assurance, Production and Outage. Additionally, we had the benefit of having a senior PRA engineer and our equipment reliability coordinator participating as part of the Integrated Decision Making Panel.

In terms of training, the site subject matter experts and Integrated Decision Making Panel went through extensive training, approximately 4 hours per person, 100 person-hour worth of training. Based on Train the Trainer we had received from NEI on the Risk Prioritization Initiative guidance. All subject matter experts and IDP members went through that training, as well as Just-In-Time and dry runs prior to holding the panels.

Palisades, as part of this effort, selected 20 projects from a list of over 200 from your Asset Management Plan. Selection criteria focused on those that would best exercise the NEI draft guidance; In other words, attempt to test all the importance categories: safety, emergency planning, radiation protection, security, as well as plant reliability associated with plant project initiatives.

Since the focus was on testing the process, several projects were already in progress with committed resources or near-term regulatory due dates which limited our ability to act on those prioritization results, but we certainly would see that in the future if we were to exercise the process again.

Next slide, please. So here's an example of 9 of the 20

projects that we reviewed in terms of their importance evaluation. You can see they ranked based on whether they were safety, emergency planning, radiation protection, security or reliability, where they were in the guidance. There is an even match between -- we had 10 regulatory projects we looked at and 10 plant improvement projects that we looked at.

Once the importance evaluation was done, the Integrated Decision Making Panel met once again to look at the priorities and to aggregate based on the guidance. So there is an extensive pair-wise comparison that is done. So we're looking at relative importance of each of these projects in order to determine the best allocation for those resources.

Next slide, please. In the end, based on that prioritization, we took a look at where we had originally set our project due dates and where with the pilot exercise we would have adjusted them had we done this in advance. And there were quite a few that would change. I'd like to draw your attention to a couple associated with the risk insights that the plant gained. We were well aware of a risk associated with fire in our NFPA 805 transition, but based on this exercise we would have looked to move up our incipient fire detection in some of our higher risk fire areas. In addition, we would have also looked to move up the effort to combine our emergency operating procedures and our Severe Accident Management Guidelines into one procedure to enable the operators to respond more effectively to a beyond design basis event.

Next slide, please. So in summary, what we found as we exercised the pilot, which was observed extensively by staff with a diverse set of experience, we found the process to be rigorous and repeatable. The process questions built into it are similar to 50.59 evaluations and the panel

review format is similar to maintenance rule reviews. We ask these questions for each project and come to importance evaluation conclusions.

We do value the use of risk insights in terms of assigning our priorities, and that was a major learning for a lot of my panel who are also on the Plant Health Committee and allocating resources to the point where whether we go forward with this or not I think the staff at my site learned quite a bit, and also established good working relationships with engineers and PRA engineers that they wouldn't have otherwise. And so, that bridge has helped already inform some of the decision making at the station.

Certainly the process provides a nuclear safety basis for allocation of resources supporting the goal of reducing station risk and it focuses internal stakeholder discussions. The process output details for each category initiate those focused discussions around alignment on priorities. And we've seen those conversations carried forward, as I had said, in Plant Health Committee and other operational focused committees.

And then finally, it is also a focus for external stakeholder discussions. Provides us this process, provides us a common basis for relative importance understanding so that we can have those conversations with the staff, with the senior residents, with the residents. So we appreciate it. And this concludes my presentation.

CHAIRMAN BURNS: Thank you. Mr. Lochbaum?

MR. LOCHBAUM: Good morning. We appreciate this opportunity to share our views on this subject. As you may have already noticed, I'm often in the role of whining about this or complaining about that. I'm pleased today to be generally supportive of this plan, albeit with some caveats.

Next slide, please. Monitoring the process to date reminds me of the discussions 20 years ago about Notices of Enforcement Discretion, and more recently about safety culture. While I cannot quantify the benefit, I believe the discussions about cumulative effects of regulation and risk prioritization have already helped the NRC staff and the industry reach better decisions and will continue doing so.

Next slide, please. This NRC staff observation from last year's pilots might suggest that the lowest ranked safety or security item trumps the highest ranked reliability item. We don't think that this is or should be the goal. We think the goal is a process that allows items to be properly ranked and implemented in a timely manner.

Next slide, please. The challenge is in using this process while protecting against its abuses. NEI's guidance document does a very fine job in meeting this challenge. We recommend supplementing this guidance with two measures to guard against abuses. The first is an additional factor during the prioritization process. The second involves better definitions of the risks for the existing safety and security ranking factors.

Next slide, please. Last year's pilots were one-time exercises that did not test the ongoing feature of the process. In other words, the pilots tested the prioritization process, but not the implementation portion of the overall process. Both portions are equally important to a successful outcome.

Next slide, please. Deferring a low- priority modification at Davis-Besse year after year invited a safety significant near miss. Low priority is fine as long as it doesn't equate to no priority.

Next slide, please. Five factors were considered when

prioritizing items during the pilots last year. We're recommending adding time as a sixth factor. How long an item has been unresolved should also be considered to protect against chronic deferrals. A time factor would increase the importance of unresolved items each year until they ultimately got resolved. This backstop is needed to prevent abuses. The current steps in NEI's guidance document would facilitate or enable chronic deferrals. After all, if it's low priority this time, it will be low priority next time and every succeeding time. A more reliable and robust measure is needed to protect against chronic deferrals.

Next slide, please. The safety and security factors that are currently in the process need better definition of what risks are being determined. For example, is the risk of a fire detection or suppression problem determined from that condition or from the compensatory condition when fire watches and other compensatory measures are employed? Likewise, would the risk of a security program non-conformance be from that state or from that state associated with the compensatory measures that are put in place? That was evidenced during the pilots last year. Additional guidance is needed to ensure more people get the right answers to such questions.

Next slide, please. Since we've presented this data to you by letter dated March 4th, the NRC staff and TVA have each provided me with reasons for the risk gaps. The NRC staff told me that they use a more qualitative than quantitative process to evaluate flooding problems. TVA told me that their risk assessments gave significantly more credit for non-proceduralized manual action than the NRC permits. Something must be done to get the industry and NRC risk assessments at least in the same

book, if not on the same page. For example, the NRC should develop an inspection procedure like 71151, Performance Indicator Verification, to routinely evaluate how licensees are ranking and resolving items.

Next slide, please. We support the NRC staff's recommendation in the SECY paper to proceed with Option 2. We note that the NRC has always allowed licensees to seek and obtain changes to implementation schedules. We believe that Option 2 provides for a more informed and consistent process. We oppose Option 3. We're concerned that licensees could submit plant-specific schedules for implementing new rules at the last minute of the proposed rulemaking public notice period. For the public to first read about delayed implementation of safety upgrades in the final rule language is not transparent. Instead, we think Option 2 could be expanded to also cover activities required by rule. Thank you.

CHAIRMAN BURNS: Thanks. We'll start the questioning this morning from the Commission with Commissioner Svinicki?

COMMISSIONER SVINICKI: Well, good morning, everyone, and thank you, not only for your presentations, but I'm aware that over the last couple of years there's been a tremendous amount of effort put into this and there have been a number of public meetings where Mr. Lochbaum's organization and others have participated. So I'm grateful for all of that.

I want to acknowledge that there has been a careful consideration of a lot of these issues. There are many notation vote papers, what we call our SECY papers, where generally within the four corners of the paper as a decision maker I can understand the totality of what it is that I'm

being asked to approve. This is not one of those papers. So I want to acknowledge up front that I think that in order to really understand what has formed the staff and the industry's thinking it's necessary to read more of the write-ups about the pilots. And I'm not entirely through that record yet.

So I'll make some characterizations of what I think I understand about this process. They will seem probably a bit pointed, but I want to say at the beginning; and everyone will forget I said this, is I really have not determined where I stand on the various proposals in the staff's paper.

Here's the first thing that I ought to confess is that after working nearly 25 years in Government and around large bureaucracies it is rare that the answer to the acknowledgement of a problem or some acknowledgement that things can be done better -- it's rare that the solution lies, in my observation, in another committee, in another process put on top of the process that you have.

As I've read these documents, I agree that there's this wonderful unanimity. And today of all days Mr. Lochbaum's not going to complain, so here I'm going to play that role today, I guess.

(Laughter)

COMMISSIONER SVINICKI: There's wonderful unanimity. The ACRS letter says we endorse the use of concepts to focus licensee and regulatory efforts on issues that have the most important benefit to safety. My note is "Who's not for that?" So there's wonderful alignment on that.

I think I'm getting hung up on the fact that we have processes right now -- some of them come under law, like the Administrative

Procedure Act and other things. We have a process to achieve most of these universal goods. And so, if it's not working, the thing to know about me is my bias is it's a little thing called root cause analysis. I'd rather go and fix it in the process we have. So it's just the way I approach problem solving is maybe a little bit different.

Now, the peril in that for people like me, and I'm self-aware enough to know this, is that it makes you look like you're one of those people where the perfect is the enemy of the good. And if there is an issue, you're not practical. Even Mr. Lochbaum's presentation said there aren't infinite resources. And if there could be a more efficient process wherein people could choose to come in for targeted narrow relief -- frankly, we have an exemption process. I'm back to this pesky idea that we actually have processes to address these things. And maybe they don't work perfectly. I have a preference that we would maybe go look at those.

Oh, by the way, the Commission is deep into Project Aim right now and it's very difficult for me to look at any of this laying aside a broad agency commitment which we're embarked upon now to look at many of our standing processes and to look where we could be doing better. We're making a pledge to look at non-value-added or low-value-added activities. We're making an organizational pledge; we being NRC, to look at things that maybe our level of effort activities — that it would be better if we maybe didn't commit any more resources and kind of cut our losses on some things. So we're about to embark on kicking off a number of staff initiatives to do that. So if the Commission approves the staff's recommendation here or some variation on it, those activities are going to be done alongside these other searching process efficiencies we're going to be looking for as an agency.

I'm kind of back in the starting block and hung up. I'm also hung up on process issues that have to do with things that it's my primary obligation to think about as a public official, as a decision maker on this paper. I have to think about the overall coherency of NRC's regulatory program across the country. We have large fleet operators. We have single unit operators. If I enshrine a mechanism whereby the fleet operators are going to have the resources to come in and basically push back against regulatory requirements that may have been poorly justified or carelessly analyzed from cost-benefit — and then other operators may not have the resources to bring to bear to do that. So over time I don't implement a coherent regulatory program that requires the same things. And in communities across the country they find a varying implementation of my regulatory program.

At bottom, I have some issues about kind of creeping Government scope. Unless I'm missing something, the implementation of this initiative may forever and inextricably blur a list of activities that I have no authority to compel. So projects that operators might implement with then things that under my legal authorities; and I'm sorry to get legalistic about this, but we can only do what we have the legal authority to do.

So if an operator comes in and has a whole list of activities, some of which are initiatives that reduce risk that they can undertake, but also on that list are things that either through some disciplined backfit and cost-benefit we've decided are substantiated and we're going to impose, what happens if NRC staff accepts that analysis and you decide not to implement one of the voluntary issues on that list? Do we go back to the starting -- can I take enforcement action against you for some investment that I have no

authority to compel you to do if it was the basis upon which I let you defer something that was mandatory for five years? How do I deal with that in enforcement space?

Some of these things may eventually involve a license amendment request. Do hearing rights attach to this kind of shadow process; which I know is a very pejorative term, but I feel like we're going to have rulemaking and oversight processes and licensing processes, and then we're going to have a committee that will meet and kind of be the shadow regulator. Is the process we have now -- is that all to make the public feel good, that they have an opportunity to be a part of that and the real decisions get made -- and Mr. Lochbaum touched on this on transparency.

But I have a lot of legal issues to extract here. I don't know that any of those have been addressed. And it seems like there's going to be a lot of redundancy in those two processes. So if the view is that we could simply be more effective in rulemaking and other things where again a lot of these goods are so universal in the NEI presentation. Formation of an NRC expert panel to make recommendations on proposed regulatory actions is an important step. Well goodness sakes, I mean, we've been involved in rulemaking and licensing for decades now. If we need an expert panel to be better at that, it would seem to me that's maybe more of a Project Aim thing. That seems like a very foundational gap that we suddenly need an expert panel. So things like that, to be honest with you, leave me scratching my head.

And by the way, I've often been a little puzzled at the role of this group, but when I came here there's the Committee to Review Generic Requirements. So this would be in addition to that. Could we just maybe

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change the scope of the Committee to Review -- doesn't it sound like the Committee to Review Generic Requirements would be an expert panel to make recommendations on proposed regulatory actions?

So I'm back to my skepticism about the fact that a new committee or a new process is the way to fix these problems. But what I'm trying desperately not to do is to be idealistically against again an efficient well-defined process that allows people to come in and ask for relief that they justify on a safety basis. But I think I've given you a very good flavor of my struggle over this thing. In meeting with the NRC Leadership Team over the last couple of years I know they have struggled with this. They are a bit closer. They have monitored the pilots. They're closer to the issues. And it may be that they were able to make themselves comfortable with the resolution of these issues that I've not been able to do.

I would like someone from industry though to address this question of are you comfortable that when you submit a proposal that is a combination of things that you're just going to do voluntarily with mandatory commitments, that if you fail to follow through on any of these voluntary investments that I can take action against you as the regulator? Are you comfortable with that?

MR. BUTLER: Well, let me tackle that problem this way:

The process that a plant would use to change a schedule currently is no different than the process they would us to change a schedule under this prioritization process. What is changed is the basis upon which you justify changing that schedule.

Now, as part of that basis if they're saying we're going to do -- by delaying the schedule we are allowing time and resources to do something else, a plant-initiated activity, that is part of the

basis upon which the staff would review and accept that schedule change.

So it is in effect a change in commitment if something significant changes that supported the basis for the schedule change.

COMMISSIONER SVINICKI: Well, I mean, I just -- we won't resolve this here today, but I just have to I guess decide how I feel about that. That logic writ large means you could open a free medical clinic in your community, which with my legal obligation to look at public health and safety that may be a wonderful benefit to public health and safety, but I can't within the construct of my authorities on nuclear safety and security regulation -- I can't let that be a factor in my decision making to let you defer a plant improvement because you're going to open a free medical clinic.

And I know that's not the scope of what you're talking about here. I'm just trying to kind of expand the logic to say that is kind of the logic basis is that you would come in with voluntary commitments to do virtuous and enhancing things and I'm going to use that as a basis.

And I guess I'll close with this, but at bottom I think I've been pretty consistent in prioritizing or having an insistence that NRC exercise its very disciplined process through a cost-benefit backfit. And that I'll also be very judicious in determining things to be matters of adequate protection, because that is the strength of our system, is that it's a very disciplined rigorous process and it's a tough wicket to get through. So I think that if we've let that process become undisciplined so that things are so irrelevant to safety that they can be deferred for five or seven years, I would like us to go back and look at why we impose that in the first place. And that's really the kind of root cause that I would take. I can let you respond super quick because I'm over my time.

MR. BUTLER: Real quick. One thing I don't want to lose here, when we talk about issues, a lot of times we're not talking about the full issue. There may be something that a plant has worked on. They've already addressed the safety-significant aspects of an issue. That's already done, put away. And there's always that -- the administrative aspects that linger. That may in many cases be what remains and is what's considered for prioritization. Can that final one percent which has no safety significance be delayed in favor of something that has higher safety significance? So I want you to keep that in mind.

COMMISSIONER SVINICKI: Okay. Thank you. Thank you, Chairman.

CHAIRMAN BURNS: Commissioner Ostendorff?

COMMISSIONER OSTENDORFF: Thank you, Chairman.

Thank you all for your presentations.

I must also state, as Commissioner Svinicki did, that I have some of the same concerns that she has very carefully and thoughtfully articulated here. And I think since this is a public meeting there's some background that perhaps is important to get on the record, because only two of the Commissioners here have had the experience with this piece going back to the beginning of where this effort came from.

So one of the key things that I wanted to just state; I think many people, but maybe not everybody understands this, we basically merged this meeting because we merged the paper for really efficiency purposes for good reasons a while back, yet I personally see the CER piece as being very, very separate and distinct from the risk prioritization piece. And so I look at these as two completely different animals.

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And I fully support, along with Commissioner Svinicki being

involved in all the decision making on the CER, efforts of the last few years.

And I think those efforts -- to have a more thoughtful approach before we put

something in place is absolutely critical, as my colleague stated. And the

engaging stakeholders early, the draft guidance going out early, all those

steps are just absolutely essential because we should not be passing

regulations that are of no or low safety significance.

So I go back to our dear colleagues Commissioner

Apostolakis and Commissioner Magwood and going back to the 2012, 2013

time period when Dr. Apostolakis was interested in exploring with industry the

use of PRAs that would have some higher fidelity that might be a tool to really

achieve the risk prioritization of safety actions or upgrades at individual plants.

I wanted to ask a question on this. I believe that maybe

one of those fundamental precepts at the time this was originated has fallen

by the wayside. I believe that the industry position has been that industry is

not in a position to come through and have basically a high-fidelity PRA

approach industry-wide that would facilitate the Risk Prioritization Initiative.

That's my understanding from the SECY paper and from discussions, but I

may be not up to date on that. Does anyone want to respond to that on the

PRA?

DR. MEIER: Yes, sir, that is correct. What we saw in the

pilots when we used a risk-informed type of prioritization provided by NEI it

was very effective. And at this time we don't see -- it's not necessary to have

any type of PRA model. Actually it would not exactly help us we believe in

that prioritization.

COMMISSIONER OSTENDORFF: Okay. Well, I would

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just comment. Like Commissioner Svinicki, I have an open mind and I'm not criticizing anything done by industry or the staff here, but I'd say that an entering assumption by Dr. Apostolakis three years ago when he crafted this proposal was trying to encourage higher quality PRAs across industry and trying to incentivize industry to do that. So I just want to say that one of the fundamental assumptions is no longer on the table. I mean, that's just a fact.

So let me go to Mr. Butler's slide 5. I have a question I wanted to ask you, and then I'm going to ask others to respond. And again, it's also similar to the questioning from Commissioner Svinicki. This concerns the formation of an NRC expert panel. I share Commissioner Svinicki's concerns that this panel perhaps would have a blurred responsibility compared to what our existing processes have for going through the rulemaking process.

And so I don't want to talk about proposed regulatory actions because that's part of something else, but as far as the existing regulations that are in place, would this proposed panel -- I'll ask everybody to comment on this. Would this proposed panel have a role in reordering or disagreeing with industry's site-specific prioritization list for upgrades? I'm trying to understand how industry sees and the UCS sees this panel operating.

MR. BUTLER: I'll try to answer that, but it's probably a question that's better answered by the NRC panel when they're up here. But

COMMISSIONER OSTENDORFF: Let me caveat. The NRC staff in their slides will say that this panel is perhaps purposefully not well-defined at this stage. I'm not criticizing. I'm saying that it's not

1 well-defined. So maybe a better question is how would you see the panel optimally operating in their role? David, you want to start with that? 2 3 MR. LOCHBAUM: I guess I view the panel's role to supplement the industry's imitative. The industry's taking risks or items on a 4 plant-specific basis and ranking those. And we support that notion. 5 6 We think the industry -- or the staff's panel could 7 supplement that with how issues affect the fleet. Certain issues may only 8 affect one or two plants. Some issues that are on the NRC's table affect a 9 larger population. So I think it really needs to properly implement issues in a 10 timely manner. You need to look at the global or wider aspects in addition to 11 the plant-specific. So I think the expert or the NRC's panel would address the fleet-wide or the larger issues of --12 13 (Simultaneous speaking) COMMISSIONER OSTENDORFF: So with that construct, 14 15 Dave, would you see the NRC expert panel, if there were such a panel 16 established, as having the authority as a regulator to mandate a different 17 prioritization scheme submitted by an industry licensee? 18 MR. LOCHBAUM: I'm a little leery about the word 19 "mandate." That's --20 COMMISSIONER OSTENDORFF: Well, we are a 21 regulatory, so I mean --22 MR. LOCHBAUM: I like inform other -- whoever within the 23 NRC has the authority for that issue. I think that expert panel could inform 24 that decision, but I don't think that should take away from whoever currently within the NRC is making those decisions. I see it more as an advisory panel 25 26 or to inform that decision rather than to replace it or substitute for them.

COMMISSIONER OSTENDORFF: I'll let others respond

as you desire.

MR. BUTLER: I think Dave makes a very good point here. The expert panel as I envision it from reading the SECY paper would be primarily focused on emerging issues, new generic communications, new rulemakings. But in serving in an advisory role, if a plant comes in with a proposal to change a schedule and they use the prioritization process as the basis, that review of that would reside primarily with the office which has control of the issue that we're talking about rescheduling. But I could see the expert panel providing an advisory role as appropriate to advise that office on a proposed schedule change.

COMMISSIONER OSTENDORFF: Okay. Well, my reading of the paper is a little different from that. I think what's been presented to us is that this panel would also form some judgment on existing regulatory requirements. And I'll ask the staff if I've read this incorrectly, but I think that the panel -- and maybe it's a little mushy here, but I believe they may have more experience of responsibilities from what the Option 2 write-up is. It says this panel would -- well, I won't read it. It's too long. But I think that requires maybe further definition and discussion.

MR. LOCHBAUM: Well, I guess I couldn't -- I don't divorce those issues because an emerging issue can impact what's already on the plate. And I think it's good to integrate --

COMMISSIONER OSTENDORFF: Yes.

MR. LOCHBAUM: -- the full realm of things. So I guess I didn't see that as being that different, that it would only focus on emerging issues in a vacuum without awareness of what else is on the plate.

COMMISSIONER OSTENDORFF: No, I read the emerging issues would be part of the subject matter as well as existing regulatory requirements in the order in which those requirements would be met. That's how I read it.

Let me ask one other question here. In the context of Fukushima actions; and all of you have been involved in these at some level over the last few years, when an individual plant has had an issue and they wanted to reschedule completion of a certain part; let's say spent fuel pool level instrumentation to concur with a different outage, I believe that process is a -- the licensees may be able to come into the NRC staff and request a change to their implementation schedule. My sense; and I'll ask our staff this, is that's worked reasonably well. You may have a different viewpoint, but I'm trying to understand as far as this -- when do you do certain things, if that existing process is adequate to address licensees' priorities at Hatch or at Palisade as to when you would do something?

DR. MEIER: I will speak for Hatch. I would say the process, as you said, Commissioner, does work reasonably well. When requested, I think the staff is very cooperative. And as far as looking at our needs and what we need to do, especially considering outages -- and it approved as such.

MR. GUSTAFSON: I would concur with that. From the Palisades standpoint the process works well. What I always try to get my staff to do is to provide as much detail, as much relevant context with every submittal as we possibly can. And I see the risk insight from the Risk Prioritization Initiative providing a more robust submittal to the staff, which would only I think benefit both parties.

COMMISSIONER OSTENDORFF: Okay. I'm out of time.

Thank you all for your presentations. They've been very helpful.

Thank you, Chairman.

physical security modifications ranked 18th out of 18.

CHAIRMAN BURNS: Thank you. Commissioner Baran?

COMMISSIONER BARAN: Thank you. Well, this has been a very interesting discussion. I'm just going to jump right in. Dr. Meier mentioned the Hatch cyber security example from the pilot studies where they ranked this issue as priority 2 or medium safety and 3rd out of 20 in the overall prioritization of the plant. But cyber security and physical security didn't fare as well in the prioritizations of other pilot plants. At Palisades cyber security and intrusion monitoring ranked last among 20 issues. At Summer the cyber security project finished seventh out of seven projects. And at Davis-Besse

Mr. Butler, how do we ensure that requirements related to cyber security, emergency preparedness or physical security, which are clearly important but perhaps difficult to quantify, or more difficult to quantify -- how do we make sure that those are appropriately prioritized in a consistent manner?

MR. BUTLER: Well, first off, the point I made earlier, when something -- you're comparing the results from different pilots that may use the same title, but you have to look into the scope of what the change was that they were looking at. In a number of cases an issue that was ranked relatively low may have been a change of very limited scope and limited impact, whereas another plant looks at the same title of an issue, but it's a much broader scope and had a much larger safety importance of security importance. So you got to look beyond the title of an issue to really compare

two issues.

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that?

So with that point, in our experience with the pilots looking at issues that are difficult to quantify like security, cyber security, EP, rad protection, we utilize kind of a flow chart process where you identify what the key attributes are that determine or influence the significance of the issue or its importance. And that's a robust process that can be repeated for issues. It tends to treat things in a conservative fashion in answering the questions, but I think it is fairly robust in treating issues consistently.

COMMISSIONER BARAN: And so is it your sense that in these pilot projects where cyber security or physical security end up ranking very low that that is an artifact of those being slivers of some larger requirements?

MR. BUTLER: Yes.

COMMISSIONER BARAN: That's what's accounting to

Dave, what do you think about this? I mean, the security and emergency preparedness issues right now, are they properly prioritized in your view under the NEI guidance?

MR. LOCHBAUM: Yes, when we reviewed it we didn't -- although I wish I would have ferreted it out from the analysis, because that would have been a good point to make, but we didn't see any problems with the ranking when we reviewed the pilots.

Two things I think would help address those kind of issues and answer them, whatever the answer really is, is the inspection that we talked about, the performance indicator verification inspection the NRC does.

The second thing, after a period of years the NRC could

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issue something like NUREG-1022 that was issued about 10 CFR 50.72, the Reporting Requirements. The NRC, from observing a number of licensee event reports, found some inconsistencies and used the NUREG-1022 and the supplements or revisions to better communicate its expectations to the industry. So I think those kind of processes would help converge on whatever the right expectation is.

COMMISSIONER BARAN: Yes, well, following up on a point you made earlier, it seems to me that if we're going to prioritize regulatory compliance work at plants based on risk significance, we're going to have to grapple with the concern that some important items could be perpetually deferred.

So let me give you another example from the NEI pilot report. Four of the six plants assessed the post-Fukushima spent fuel pool instrumentation requirement. All four decided that it had very low safety significance, and three of the four gave it an overall priority rating of four, which is very low, which leads to kind of a similar question to the one I asked, which is how is the NEI guidance going to ensure that requirements that address beyond design basis situations are not perpetually deferred due to low rankings in plants' relative priority? Whoever wants to --

(Simultaneous speaking)

MR. LOCHBAUM: Well, I answer this way: Anytime a licensee uses a process to reschedule something that they use existing processes, either that's a commitment change process or an exemption request, that involves a staff review. So the staff has an opportunity to act as the backstop, if you will, to review the basis for and approve any schedule changes that are made. If that schedule change is delayed again, the staff

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looks at the basis for that subsequent schedule change and the fact that it's a multiple change. But again, they have an opportunity to agree or disagree with the basis for that change.

If that for any reason isn't sufficient, our guidance itself only allows three extensions in a schedule. Beyond that a licensee -- the guidance calls for a licensee to either implement the activity or to go through a process with the NRC to become exempted from the action altogether.

COMMISSIONER BARAN: And so let me ask that question about -- because I wanted to ask about backstops and whether they make sense in this situation. And so from your point of view if we're focusing on the first part of Option 2; it's hard to keep track of all these options in the paper, but the first part of Option 2 where the idea would be the guidance would be used for prioritization purposes, but ultimately it would be to inform both the licensee requester and the NRC when they review a request for an extension. In that context am I correct in understanding your view is you don't need a backstop because it's going to the NRC staff and the NRC staff is going to either sign off or not sign off on the change of priority, or the extension request?

MR. BUTLER: Well, the way I would characterize it is we have multiple backstops, or the way I've characterized it before, we have a catcher and backstop. Staff is reviewing each of these requests, acting as the -- in effect the catcher, but in the end there is a full backstop that prevents perpetual deferrals of the schedule per the guidance. And so, if a plant is committed to following the guidance, they would be help up by that backstop.

COMMISSIONER BARAN: Okay. Dave, you have thoughts about this, either on the beyond design basis element of it or whether backstops make sense here?

MR. LOCHBAUM: The latter. I would point out that we've been using that process and Browns Ferry still doesn't comply with fire protection regulations more than 35 years later. So that process isn't exactly working real well for getting safety issues resolved. So sustaining that isn't really a good idea.

The thing I like, what's different about the existing process is I think there will be an increased awareness on both the licensee's part and the NRC's part on when deferrals can be granted and when they shouldn't be. So it's kind of a supplementing or existing process, which I don't think has been working great, but I think it has a chance to work much better.

COMMISSIONER BARAN: Yes.

MR. LOCHBAUM: So that's the hope.

As far as the beyond design basis, that's a good -- I hadn't thought about that, but you do have to integrate that together, and I'm not sure how you do that integration when you evaluating those five factors, six factors.

COMMISSIONER BARAN: Well, it's kind of a natural thing. If you're trying to prioritize these by risk, you're looking at things like core damage frequency. And something like spent fuel pool instrumentation, level instrumentation may not score that well when you look at it that way, but the Commission prior to my being here thought it was an important thing to require post-Fukushima. And I think if we had metrics or methodology that basically routinely characterized -- I'm not saying that it does, that's why I'm asking the questions -- characterized those types of requirements as a very low priority and then allowed them potentially to be deferred for how many ever years, that strikes me as potentially problematic.

1 MR. LOCHBAUM: I agree. I just don't 2 have --(Laughter) 3 MR. LOCHBAUM: Other than the time factor, I don't have 4 5 a good answer. COMMISSIONER BARAN: Does anyone else? I mean, 6 7 do you all see that as an issue and are there elements of the guidance or the 8 process or changes you're thinking about making to the guidance that kind of 9 specifically hone in on this question of -- if it's not really a core damage 10 frequency issue how we make sure it doesn't end up at the bottom of the list? 11 Or do you think it should be at the bottom of the list? 12 MR. MEIER: Commissioner, I'd like to say something on 13 that point. Each plan is so different. We kind of say generally here's a 14 project, but each plant is not only different, but also where they are in that 15 project. So I cannot compare one plant versus another very easily to say 16 where the priority is. If someone uses the guidance, what I believe is very 17 robust and helps us to be consistent, says it's at a lower priority, then I would 18 believe it is at a lower priority versus other type of activities. 19 COMMISSIONER BARAN: Okay. 20 MR. LOCHBAUM: And I guess I would agree with Mike in 21 that when I looked at the pilots, it wasn't all core damage frequency. The also 22 evaluated emergency planning and some other issues. 23 COMMISSIONER BARAN: Yes. 24 MR. LOCHBAUM: And it seemed like despite the inequity in terms of not having a risk number to compare, they came out at a good end 25 26 point. So I think I would hope that that would also apply to beyond design basis event items that are on that list as well.

COMMISSIONER BARAN: Okay. Well, thank you. Stop there.

CHAIRMAN BURNS: Thank you. And thank you all for your presentations. I think as with some of my fellow Commissioners and still in process of getting up to -- working through this paper, but also some of the background through, I mean, we have an interesting topic from the standpoint on the one hand in terms of setting requirements. If you look at this issue from -- I'll take from my background an administrative law concept or construct -- to some extent particularly in the rulemaking area, you're trying to adopt or establish uniform requirements that affect an industry or a class within an industry. You're trying to do that transparently. You're trying to do that in a way that provides general consistency as a goal in terms of the nature requirement, which also I think also establishes some fairness in terms of application.

At the same token, I understand, and from discussion with folks at plants and all, in terms of how you integrate requirements is a difficult one. And that often -- and I know I think Commissioner Svinicki said this before, in terms of sometimes holistically how we look at the nature of regulation is sometimes lost in the focus on particular things.

But I guess one question I'd start out with is that -- and this leads -- is prompted as well from some of the comments from my fellow Commissioners -- is do you see this effort in addressing cumulative effects essentially a scheduling one, or does it deal

-- the question as well of necessity in terms of the nature of some of the requirements that have been imposed? And any of you can start. Mr. Butler

maybe, then --

MR. BUTLER: It's both. I mean, the prioritization process where you're looking at an issue through this framework to identify its importance, how you use that information. We've primarily focused on using that information to assist plants in their scheduling of their time and resources, and hopefully the NRC in using it to better utilize staff resources and time.

But it can also inform matters in a number of different ways. We've envisioned using our Generic Expert Team to assist in discussions with staff on emerging issues to help identify what the key attributes are of an issue, to then use that to identify which population of plants are most affected, had those attributes and use that to kind of direct how best to move forward on a particular issue that's being dealt with. Information of importance can just help define how best to move forward on an issue. Can it possibly define alternative ways to address an issue? The fact that we have 99 plants and they're all different is sometimes difficult to deal with. But they are in many ways different. So having a process that allows you to bring that into focus and decisions I think is important.

CHAIRMAN BURNS: Okay. Dave, you want

to --

MR. LOCHBAUM: Well, the example I think Mike used earlier about the person on the panel owned the issue; I thought it was very important, but at the end of the day he changed that person's mind and decided it wasn't as important as some of the others. I think to me that illustrates the value of this process. As the plants get older, there are some non-safety-related portions of the plant that need to be replaced or repaired.

Currently it's hard to make that decision to do that and bump

something that's required by the NRC. It's a regulatory requirement. We think this process would inform that decision to allow the right decisions to be made. Sometimes it's not to do the regulatory requirement this year. Postpone it a year and do the electrical maintenance repair, or whatever it is.

We think this process helps both the licensees and the NRC reach those better decisions, and I think that example illustrated it better than anything I could dream up.

CHAIRMAN BURNS: Yes. Okay. Thanks. Any others?

(No audible response)

CHAIRMAN BURNS: Okay. One of the difficulties I had in terms of looking at or at least my initial look at I think really Option 3 in talking about -- and again, this would go partly to a concern I would have on transparency. Also the effectiveness of the rulemaking process. Part of that proposal potentially is setting through rulemaking -- it almost looks like to me individual compliance times within the rule itself. And I'm trying to understand.

And again, from the perspective of what I will call traditional or the norm, as I would expect, in a rulemaking process where as part of that process you identify a time frame for implementation, it might not be the same -- comes out the same for each person, but -- I don't know if you any of you have comments. And how would trying to expend the resources and time in terms of trying to come up with individual time frames potentially -- you said the comment we have 99 different plants. I think actually you'd probably bin them a little bit differently. But how would that be an improvement over a process in which again now is we set an outer bound for compliance which

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allows for the use of the exemption process or a license amendment process?

MR. BUTLER: I'll start. I also struggle with some of the questions you're talking about. I mean, the staff paper gave two examples where we've had regulations or rules that have used similar processes. There was the station blackout rule and then currently the 50.46(c) rule. Both have opportunities for plants to have input into their implementation schedule. I'm not sure which is the better approach. There may be a difference in transparency with one of the other. What I see the prioritization process adding to this is not creating a new process, but providing a way for the basis for whatever schedule a plant decides on being supported. So those specifics you're talking about I think are beyond the prioritization process. They need to be answered, but which process do you use? I don't know.

CHAIRMAN BURNS: Okay.

MR. MEIER: Chairman, I mean I agree there are areas to work out. And that's why we agree with the recommendation. Let's pilot this and determine what needs to be worked out. And is this the option we ought to pursue for the future?

CHAIRMAN BURNS: Okay. Any other?

(No audible response)

CHAIRMAN BURNS: Okay. One of the things, looking at the Risk Prioritization Initiative, in terms of going forward with that, what can NEI do to ensure that that process is applied consistently across the plants that would participate in it? In terms of again we want to look at with some of the questions we've heard here today is assuring consistency. What role do you see NEI playing in that?

MR. BUTLER: I don't have a firm answer for that question.

I mean, ideally what I would see plants doing is taking the elements of this process and integrating it into their existing decision processes for projects. The decision basis for which projects are going to be funded in the coming year involves factors that our process doesn't address. So I don't want to separate those decision aspects of the process totally from this. So I would hope that eventually they would be integrated into a single process. And so, naturally if you do that, there are going to be differences from plant to plant. But there are key elements of this process that -- pretty elemental parts of the process, and it shouldn't be too difficult to just kind of assess whether that's being implemented consistently. But how you do that, I haven't come to a decision.

MR. GUSTAFSON: But, and certainly, I mean, the industry ownership for the process is of significant import. And consistency in all things, right, begins with what? Begins with good training. So not necessarily there's an oversight structure by the industry where we police our own, but with the appropriate level of training for licensees that implement the Risk Prioritization Initiative certainly we can do that. And as we continue to see licensees come in with submittals, those type of submittals will be discussed in owners' group meetings. And so there will be an information exchange where we can continue to inform the process and the implementation of it.

MR. LOCHBAUM: I just wanted to add that NEI has gone through this before with the Reactor Oversight Process Performance Indicators and other. When confusion comes up or clarification is needed, they revise the guidance document. We think that's been very helpful and I

would expect that that kind of thing could also work on this issue as well.

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CHAIRMAN BURNS: Okay. All right. Thanks. Yes, Commissioner Svinicki?

COMMISSIONER SVINICKI: I promise it's one specific question. In the SECY paper enclosure on regulatory analysis improvements the NRC staff synthesized some observations that they had in looking at the pilots. And just indulge me. I want to get this precisely said. So this is NRC staff's observations. "During demonstrated pilots NRC staff observed the generic characterization process described in the guidance and done by the Generic Assessment Expert Team. The team reviewed regulatory actions and prepared a report on its deliberations which would be supplied to NRC staff," meaning if we enshrined this. "As part of the deliberations this Generic Assessment Expert Team often discussed how a perspective regulatory action could affect different groups of entities; for example, boiling water reactors versus pressurized water reactors. From these observations NRC staff determined that the information garnered from the generic characterization activities described in NEI's draft guidance and documented in its report could be used to improve and refine the NRC's regulatory analysis work."

I was a little surprised in reading this that with the NEI structure, as I understand it, where you have BWR reactors owner's groups and PWR reactor owner's groups and you have a lot of steering committees and subcommittees that work on various things -- I guess my question would be why isn't this happening now in the rulemaking process, that early the industry would kind of get an expert panel to look at it generically and make sure that whatever industry comment on the rulemaking was well-informed?

1 It struck me as just why is this an new outgrowth of the RPI pilots? This 2 seems to be, given all the regulated component has at stake -- isn't this happening now? 3 MR. BUTLER: 4 Yes, it is. I think what the Generic Assessment Expert Team process provides is a more integrated approach. 5 We look at a number of factors. We follow the process, making sure that we 6 address the importance of each of those five attributes. While it's no doubt 7 8 that the owner's groups will provide input on the importance of an issue on 9 their particular class of plants -- and that's valuable. I don't want to say it's not 10 valuable. What this process does is provide a structure to make sure you do 11 address --12 (Simultaneous speaking) COMMISSIONER SVINICKI: But that structure, whether 13 or not you had RPI, you could still implement this as an improvement. 14 15 MR. BUTLER: Oh, no. Yes. 16 COMMISSIONER SVINICKI: So that has --17 MR. BUTLER: Exactly. COMMISSIONER SVINICKI: Okay. Thank you. That's 18 19 it for me. 20 CHAIRMAN BURNS: Okay. Thanks again to our panel 21 for the discussion and providing some insights in the issue. 22 And with that, we'll take a brief break. Why don't we 23 reassemble at 10:25? 24 (Whereupon, the above-entitled matter went off the record at 10:16 a.m. and resumed at 10:23 a.m.) 25 26 CHAIRMAN BURNS: We'll resume our meeting. We'll

now have a presentation from the staff on the NRC's efforts to address Cumulative Effects of Regulation and the staff's activities associated with the Risk Prioritization Initiative including lessons learned from the pilot program. And I'll let the EDO, Mark Satorius, introduce the rest of the panel, the staff panel.

MR. SATORIUS: Thank you, Chairman, and good morning. And good morning, Commissioners. I'm pleased to be here today to discuss the staff efforts on Cumulative Effects of Regulation, or CER, which encompasses aspects of the Risk Prioritization Initiative.

As you're aware, CER is an effort that the staff has been engaged formally and since 2009. The challenges posed by CER offer the Agency a unique opportunity to examine ways to improve how the NRC and licensees carry out regulatory actions to address the impacts implementing multiple regulations concurrently with limited resources.

The staff has implemented several process improvements to address CER and to enable the NRC staff and its licensees to better focus their resources on safety. Our Agency's CER efforts are consistent with Federal Government initiatives such as the Executive Order on Improving Regulation and Regulatory Review and the OMB Memorandum on Cumulative Effects of Regulation.

The staff continues to engage its stakeholders and through collective brainstorming from public, NRC, and industry experts identify additional process improvements that could be implemented.

Next slide, please.

Several key experts from the NRC are with me here today.

I'll run through the names real quickly and the slide that's currently up, Slide 2,

provides their staff positions. To my right, Jennifer Uhle; and to her right, Lawrence Kokajko; and his right, Steve Ruffin. To my left, Antonios Zoulis, and at the end, Joe Rivers.

So now I'll turn it over to Jennifer, if you can start the presentation.

MS. UHLE: Thanks, Mark. Good morning, Chairman, Commissioners. During the recent Commission meeting, the Lessons Learned From Fukushima, the internal panel and the Commission reflected on a number of key guiding principles. They are do not be distracted from safety. Be disciplined in screening of additional issues. Do not displace work of greater safety significance. Do it right the first time. And finally, establish a sound basis for decisions.

These principles guide us on all of our regulatory activities at the NRC and we believe that Cumulative Effects of Regulation and the Risk Prioritization Initiative processes can help the Agency apply these principles more consistently.

When the NRC staff, licensees, and external stakeholders first began to explore the concept of aggregate impact, that's what the Cumulative Effects of Regulation was called back in 2009, the staff held a series of public meetings to better define the concept and how best to address it. We realized that when multiple regulations are issued concurrently, the aggregate or now cumulative impact of those regulations can distract us from focusing on safety, given that both the Agency, as well as the industry, have finite resources. So in light of the first principle, we do need to address this issue.

In meeting with the external stakeholders, we also heard

that when initially considering the need for rulemaking, the NRC developed a problem statement, did not always clearly define the safety concern. And in light of the second principle, and of course, our problems -- our responsibility to establish a sound basis for our decisions, the NRC increased its interactions with the public and other stakeholders during the regulatory basis stage of rulemaking. And to this end, the staff generally provides the draft

regulatory analysis at that early stage.

So today, you will hear about options to expand the use of risk information under the Risk Prioritization Initiative to help us in our decisionmaking. It will further ensure that the NRC is disciplined in the screening of additional issues and does not displace work of greater safety significance.

So when viewed in the aggregate, we believe the enhancements we've already put in place under the cumulative effects of regulation, plus exploration of the Risk Prioritization Initiative, would help ensure that we do it right the first time when developing and implementing regulatory actions. And it's because of this nexus between the guiding principles that I first introduced in the beginning of my remarks and the cumulative effects of regulation and Risk Prioritization Initiative that we have placed a high priority on this initiative, as well as the industry as discussed in the first panel.

So Commissioner Ostendorff talked about some of the history of why we are considering these issues. So the staff's presentation today is in response to a number of Commission staff requirements memoranda or SRMs. The SRM to SECY-12-0137, Implementation of the Cumulative Effects of Regulation Process Changes, directed the staff to focus

on CER and implement some efficiencies. And as previously discussed, we have done so.

The Commission then directed the staff in the SRM to the COM written by previous Commissioners Apostolakis and Magwood in 2012 entitled Proposed Initiative to Improve Nuclear Safety and Regulatory Efficiency. That provided approaches for allowing licensees to prioritize their activities on site based on site specific risk insights. The staff responded to that SRM and developed the Risk Prioritization Initiative.

So recognizing that the Risk Prioritization Initiative, if implemented, would complement the goals of the Cumulative Effects of Regulation, the way we look at it is the Cumulative Effects of Regulation is the over-arching concern and the Risk Prioritization Initiative is one tool in the tool box to contribute to the cumulative effects or to reduce the cumulative effects.

The staff proposed that the deliverables for CER or the Cumulative Effects of Regulation and the Risk Prioritization Initiative be merged. So the Commission approved this recommendation in the SRM to the COMSECY-14-0014 and directed the staff to develop a SECY paper which is now in front of the Commission, SECY-15-0055, entitled Cumulative Effects of Regulation, Process Enhancements, and Risk Prioritization Initiative.

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So the staff believes that by continued focus on the Cumulative Effects of Regulation and the appropriate implementation of the Risk Prioritization Initiative, safety will be improved. The increased public input throughout all phases of the rulemaking process results in rules that

have fewer unintended consequences. The process will allow the NRC and its licensees to efficiently apply its resources to issues of highest significance first. The schedules will be developed consistent with the relative safety significance ranking. And the increased use of risk insights in developing regulatory actions will further ensure that the NRC and its licensees are focusing on issues of greatest safety significance first.

So in addition to what we believe would be an improvement in safety, we believe CER and RPI will enhance the Agency's efficiency and effectiveness. And before I turn over the talk to Lawrence, I would like to take a few seconds here to clear up some issues that may not have been very straightforward in the SECY paper.

Our goal is not to have a great deal of processes and steering committees and expert groups and all that. We want to make this as efficient as possible. So you'll hear more from the panel here about how we propose to do that. But we are interested in not relying on exemptions and that direction was provided by the Commission in the SRM to the COM developed by Commissioners Apostolakis and Magwood. And that is because there is limited public involvement in the exemption process. The public does not have a say in the exemptions, although they are informed after the Agency has made the decision.

So I just wanted to stress that as something to think about as you hear from the rest of the staff today. So with that, Lawrence.

MR. KOKAJKO: Thank you, Jennifer, and good morning, Chairman and Commissioners. Let me speak with you today about some of the specifics of CER and RPI. As Jennifer noted, the Commission directed the staff to propose approaches to allow licensees to prioritize implementation

of regulatory actions as an integrated set and in a way that reflects the risk significance on a plant-specific basis. At the time the staff received that direction, CER was already under way. Later, the staff identified that there was a strong linkage between RPI and CER. And as you know, CER is the organizational effectiveness challenge that arises when licensees are faced with implementing multiple regulatory actions concurrently. If those licensees could use a methodology that would use plant specific risk insights such as an RPI-like process, CER would be addressed at that facility. Thus, we believe RPI complements CER.

Next slide, please.

The options that Mr. Steve Ruffin and Mr. Antonios Zoulis will present today pertain to operating reactors only. But now I would like to address some concepts that have agency-wide application.

In 2013 and 2014, the staff engaged the industry to perform case studies to explore accuracy of cost scheduling estimates and regulatory analyses. The industry studied three previously implemented regulatory analyses, the 2008 Part 26 rulemaking, the National Fire Protection Association 805 rulemaking, and the Power Reactor Security rulemaking. In each case, the study concluded that the NRC cost estimates were low.

While I note that these analyses were developed prior to the staff specifically seeking comment on draft regulatory analysis and the industry subsequently providing such comments, we have explored additional improvements that could be made. One such improvement is that the staff is on the verge of awarding a contract to perform independent cost estimates. This independent cost estimate concept will be piloted within the operating reactors business line beginning with the proposed rule pertaining to

incorporation by reference of the American Society of Mechanical Engineers code cases. The independent cost estimate will provide unbiased input on whether the NRC prepared cost estimates for the proposed rule are reasonable.

In addition, the staff has many regulatory analysis guidance updates planned consistent with the SECY on updating the cost benefit guidance which was SECY-14-002. These updates will cover such topics as the use of qualitative factors which will be responsive to the SRM on qualitative factors, updating the dollar per person rem conversion factor and replacement energy costs. The staff will provide an update on the schedule for revising these guidance documents in September 2015.

During the industry's presentation, we heard that the industry's generic assessment evaluation team is part of the NEI process. We understand that following the generic assessment of regulatory actions, the NRC will receive a report describing the industry's conclusions. The staff believes that such conclusions can be used to inform the regulatory analysis. For example, this generic information could provide feedback into cost and benefit breakdowns, different implementations, time lines for groups of affected entities and perhaps even differing requirements for groups of affected entities.

Next slide, please.

I will now describe some of the CER activities that the Office of Nuclear Materials Safety and Safeguards is pursuing. I note that representatives of NMSS are here today should the Commissioners desire more details on any of these areas.

The Commission directed that the staff should engage with

the agreement states broadly on cumulative effects of NRC regulatory actions on the conduct of their agreement state programs. In response, the NRC staff added a representative to the Organization of Agreement States to the CER working group. The representative, Mr. Mike Stephens, provides great perspective to the working group. The NRC staff also provides updates on CER, as necessary, during monthly calls to the state agency representatives of the Organization of Agreement States and the Conference of Radiation Control Program Directors.

To offer another example, the NRC staff meets annually with the Organization of Agreement States Board to prioritize upcoming regulatory products affecting the agreement states.

Another successful CER initiative within NMSS is the integrated schedule that lists the major regulatory activities in development that could impact fuel cycle facilities. The tool is used for many purposes, including facilitating communications and interactions with stakeholders, focusing efforts on activities with the most strategic plan benefit, and evaluating the need to add, shed, or adjust assignments. NMSS conducts a public meeting quarterly to discuss the items within the integrated schedule.

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I should note that I am enthusiastic about what we have achieved to date and what we hope to accomplish in the future. I also realize that many may see this as ephemeral. This may be because of the additional staff effort needed to implement the additional improvements we propose. For example, infrastructure, such as -- and by that I mean guidance, charters, and training, may be required to support the expert panel in the proposed risk-informed prioritization methodology. We still have much work to

consider in terms of implementing the expert panel.

In addition, while the staff is placing a priority on improving the quality and accuracy of regulatory analyses, the resulting product requires additional staff resources in time to develop. We believe these additional resources are warranted, given the importance of this decision-making tool.

Now I'll turn the presentation over to Mr. Steve Ruffin.

MR. RUFFIN: Thank you, Lawrence. Good morning, Chairman, Commissioners. I am Steve Ruffin and I will provide the current status of the staff's efforts associated with the CER process enhancements. In addition, I will discuss the options and recommendation for expanding the CER enhancements.

The graphic on Slide 9 depicts each of the options related to CER and RPI and the associated components that the staff discussed in the April 1st SECY paper. Please note that the options are designed so that each option builds off the previous and contains all those components. Option 1 is CER today and I will speak to that, the enhancements on the next slide. The staff believes that those process enhancements have been successful.

Option 2 would build off of CER today, and in addition to having an expert panel, plus the risk-informed prioritization methodology that could be used to augment existing processes. And let me pause to say that we acknowledge that there was a lack of clarity in the paper with regards to -- and some vagueness with regards to the expert panel. I hope to provide some more clarity as we continue this discussion and my talk.

Option 2 proposed to expand the use of risk information in decision making. Option 3 would include all components of Options 1 and 2,

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plus provide an opportunity for considering plant-specific risk insights and determine the implementation schedule for future rules.

Option 4 would include all components of Options 1, 2, and 3, plus add a rulemaking that would allow licensees to use the risk-informed prioritization methodology for even greater scheduling flexibility for regulatory actions. As a reminder, these options pertain to operating power reactors only.

Next slide, please.

CER to date includes significant CER improvements that have been approved or implemented across the agencies. These rulemaking process enhancements were approved by the Commission SRM to SECY-11-0032 and have been incorporated into rulemaking procedures for the program offices. The enhancements begin with increase interactions with stakeholders throughout all phases of rulemaking, beginning with seeking public input on developing the regulatory basis. The extent of public interaction necessary is determined on a case-by-case basis.

In addition, CER requires that draft guides be published with proposed rules and final guides with the final rule. It is critical that the public be able to comment on implementing guidance in the proposed and final rule phase as the guidance contains an acceptable method to achieve compliance with the rule.

Further, CER requires that the staff seek stakeholder comments on the CER during the proposed rule stage. For example, proposed rules published in the Federal Register will ask the public to comment on the draft regulatory analysis and whether the implementation of the subject rule would impact any on-going regulatory actions.

And finally, CER requires that the staff conduct a public meeting on implementation from the development of the final rule. This public meeting is held once the rule language is technically sound and after it has received an appropriate level of management review. It focuses on obtaining a better and more updated understanding of the implementation challenges. The information obtained supports the staff's recommendation to the Commission regarding the need for implementation adjustments.

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To build on the progress that the Agency has made with CER improvements, the staff proposes expanding the CER process enhancements to include generic letters. In the SRM to SECY-12-0137, the Commission directed the staff to explore expanding CER for a broader range of regulatory actions. The staff conducted several public meetings and received feedback that CER could be applied to generic letters. The staff reviewed the process for developing generic letters, and determined that the goals of CER were already included. However, as a pilot, the staff requested CER comments in the Federal Register for two draft generic letters and receive feedback on one of them. No significant impact was identified. However, we plan to continue to include the request for CER comments and future Federal Register notices for draft generic letters.

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As part of Option 2, staff proposes to pilot the concept of an NRC expert panel. The purpose of the expert panel would be to expand the use of risk insights in decision making. Staff received feedback during public meetings and observed from demonstration pilots that Antonios will discuss later, that the NRC should consider expanding the use of risk information for

prioritizing regulatory action. Our CER and RPI working group evaluated that external input, along with the existing NRC regulatory processes, and determined that if applied at the very early stages, the expanded use of risk insights could increase efficiency and effectiveness of the Agency.

The staff believes that it would benefit the Agency by allowing the NRC to focus resources on the issues of higher safety significance across the NRR business line. The role of the expert panel could be to make recommendations to prioritize regulatory actions very early in the decisionmaking process based on risk insights and other relevant technical information. The panel could make recommendations to eliminate, as appropriate, some proposed regulatory actions very early in the regulatory process before significant resources are spent.

Again, the efficiency would be achieved by conducting this review very early in the process before we incur the resource burden. The effectiveness would be achieved, as Jennifer stated, by allowing NRC and its licensees to officially apply its resources to issues of highest safety significance.

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Slide 13 is intended to demonstrate for the rulemaking process where each of the proposed process enhancements in Option 2 would occur. It is for illustrative purposes only and doesn't represent a rulemaking time line. As you can see, CER today is the orange bar across the top and it spans all phases of the rulemaking process. The arrows below represent the proposed process enhancements which incorporate the expanded use of risk insights to better inform the process. For the proposed NRC expert panel, the staff envisions that the greatest impact of that panel is

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at the early stages of development during the pre-regulatory basis and regulatory basis stage as illustrated by the black arrows.

As discussed previously, the efficiency would be achieved by conducting this expert panel review very early in the process before we incur the resource burden. This will result in regulatory actions being expedited or delayed relative to its safety significance.

The tan arrows illustrate the expanded opportunity for external input early in the process. One example could be the industry's generic assessment expert team report of its findings based on the demonstration pilot discussed in the April 1st SECY paper. The staff could use this publicly-available report to better inform the regulatory basis and the draft regulatory analysis.

Next slide, please.

There are implementation considerations to address should the Commission approve the expert panel. The staff proposes to pilot an expert panel to address all these unknowns. For example, to recommend whether to establish a new panel or if it's more appropriate, to augment an existing panel. For a new panel, additional resources would be required to establish it, its associated charter and any training or guidance that would be necessary to support it. For an existing panel, what are the needed skill sets in the composition of the members? How would inclusion of the panel in the regulatory process impact the overall development schedule for rules and generic letters?

NRC staff is aware that there are several panels and/or programs that already exist within the NRC including generic issues program, the Committee for Review of Generic Requirements, and the common

prioritization of rulemaking. The pilot would need to ensure that such a panel would complement and not conflict the functions of these existing panels and programs.

I will now introduce Antonios Zoulis who will discuss the Risk Prioritization Initiative and the remaining options.

MR. ZOULIS: Thank you, Steve. Good morning. My name is Antonios Zoulis. As a reliability and risk analyst in the Division of Risk Assessment, I've been leading the Agency's effort in exploring ways to use risk insights to prioritize regulatory actions, also known as the Risk Prioritization Initiative or RPI.

The risk prioritization effort is based on the premise that safety is advanced when licensees and the NRC focus their time, attention, and resources on issues of the greatest safety significance.

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Over the past year and a half, the staff has been interacting with industry on an approach that would support prioritization based on risk insights. As you can see in this diagram, there are three aspects to this prioritization process. One aspect is the generic assessment portion. To support this aspect, industry implements a process in which subject matter experts evaluate an issue on a generic level. The information generated under this methodology can inform various other processes such as a regulatory analysis, as Lawrence discussed, or provide information to the plant-specific evaluation to support that assessment.

The risk significance of some issues will require a plant-specific assessment which is typically conducted at the site. For this plant-specific assessment, the site subject matter experts, who have

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benefitted from the insights generated by the generic assessment, evaluate issues using plant- and site-specific information. Once that's completed, the issues are then evaluated in the aggregate to determine their overall relative significance.

actively involved in reviewing and evaluating the methodology that industry has developed to implement this prioritization process. In fact, much of the guidance borrowed from processes that have been already developed by NRC. For example, NEI relied on guidance from the risk informed reactor oversight process and the 50.59 screening process. However, while the process borrows from the ROP, it does not require extensive quantification and can leverage existing plant risk information.

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When the staff was tasked to explore risk prioritization methodology, we reached out to stakeholders through multiple public meetings. Getting feedback from our external stakeholders was key, but polling our internal stakeholders was just as important.

In October of 2013, industry provided draft guidance that illustrated how a risk prioritization process could work. Staff held a public meeting to conduct a generic assessment using the draft process to exercise the process on a generic level. Staff then observed the table-top exercises that were conducted in February and March of 2014 at three licensee facilities to observe the plant specific assessment process.

In April of 2014, staff transmitted COMSECY-2014-0014 which proposed merging the deliverables for CER and RPI in recognition of their close relationship. We also informed the Commission of our plans to

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2 Commission endorsed our proposal.

Consequently, staff participated in the demonstration pilots which were conducted between May through September of 2014 at six licensee facilities. The purpose of the pilots was to demonstrate how such a process could be implemented, exercising all aspects of that process, the generic assessment, the plant-specific assessment, and the issue aggregation.

participate in the demonstration pilots of the draft NEI guidance.

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The demonstration pilots addressed over 100 issues that were under the purview of various entities within NRC in the areas of inspection and oversight, rulemaking, and licensing, etcetera. This graphic illustrates some of the various specific issues that were prioritized. As part of that effort, the working group conducted outreach initiatives to all the divisions and offices to inform them of our intent to participate in the demonstration pilots which would prioritize issues within their respective disciplines. As practical, we included subject matter experts from these organizations to observe the demonstration pilots and gave them an opportunity to provide feedback on the proposed process. NRC experts were informed and included in the exploration of this process, looking at issues on an in-depth level and in a broader sense of how the process could work.

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The staff developed four options after observing the demonstration pilots, having numerous public meetings, and reviewing the NEI guidance. Steve has presented Option 1 and a portion of Option 2 in his presentation.

This slide illustrates the second feature of Option 2. This feature relies on existing processes to facilitate the review of schedule changes using a risk informed prioritization process conducted by the licensees. It does not require creating new rules or changing the rulemaking process. It will allow the licensees to use risk insights to prioritize those issues that are already on their plates and if they deem necessary, submit a risk informed schedule change request.

In the event the Commission approves Recommendation 2, the staff will prepare a regulatory guide to endorse to NEI guidance with appropriate clarification and exceptions. Such a regulatory guide would streamline NRC reviews and thereby improve efficiencies and the predictability of staff reviews. The NRC staff would be reviewing the information using established guidance to determine its approval or non-acceptance.

For example, the license could submit, if it chooses, to a risk-informed schedule change per the established templates developed in the regulatory guide. Depending on whether the issue is a rule, order, or licensing action or license commitment, the licensee would submit the appropriate application using our existing processes such as an exemption or relaxation of an order.

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Option 3 builds upon processes and regulatory tools built in support of Option 2. For Option 3, the staff would allow licensees the opportunity to submit a plant-specific date of implementation for each rule. Under this option, a licensee could either conform to a generic date in the rule or they could use an approved prioritization method the same method

 developed to support Option 2 to provide to NRC a plant-specific date of implementation during the proposed rule stage. This flexibility would enable the NRC staff to consider the unique plant specific risk insights and the relative significance of other licensee activities to inform the compliance and implementation schedule of the new rule. So again, the important feature here is that it allows the NRC staff to consider plant specific risk insights to inform the implementation and compliance date of these new rules.

exemptions in the future. Flexible implemented schedules could offer benefits with respect to reducing cumulative burden associated with other regulations. A key difference between Option 2 and Option 3 is Option 2 looking at requirements that have already been issued, while Option 3 is being proactive and looking at future requirements. We engage the licensee as part of reducing CER, to provide to us an implementation date using plant specific risk insights.

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This slide reflects key features of Option 4. The Commission had directed the staff to explore ways on how a process could obviate the need for exemptions and allow licensees to prioritize regulatory issues without the need for prior NRC approval. This option also supports the Commission goal to improve safety by leveraging plant specific risk insights and to incentivize the further use and development of Level 1 and 2, probabilistic risk assessment information or PRA.

The staff concluded that rulemaking would be necessary to develop a process that would allow licensees flexibility to reschedule regulatory activities without the need for prior NRC approval. In this option,

the level of PRA development would dictate the degree of flexibility and licensees would prioritize current and future requirements.

One of the fundamental attributes of the process would be a backstop that would prevent issues from being continuously deferred, thus negating the safety benefits.

The staff and our stakeholders recognize that additional time would be needed to gain experiences to enhance PRA models before those models could reach the maturity needed to support Option 4. The previous options allow the staff and licensees to become familiar with the methodology and allows a managed case-by-case implementation of the review and approval process.

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Additional considerations prompted us not to recommend Option 4 at this time. Relative to Options 1 through 3, there may be increased implications to the enforcement, inspection, and oversight programs. Additional work would be needed to develop the inspection guidance, training, and other infrastructure required for implementation of such a process under Option 4 which would take away from efforts that could improve safety today.

That concludes my presentation. I would like to introduce Joe Rivers for the next slide.

MR. RIVERS: Good morning, Chairman and Commissioners. My name is Joe Rivers. I'm a Senior Level Advisor on Security in the Office of Nuclear Security and Incident Response. One of my primary responsibilities is the better risk-informed security.

One of the things that I think everybody understands is that

neither security nor EP typically use the traditional risk approach found in the safety community. In the security world, the initiating event for security tends to problematic. It's not random and the adversary tends to take advantage of situations that present themselves.

In security, we often use the conditional risk for security. A lot of times, people look at that and say, well, it's the probability of law and in reality what it is is a conditional risk. If the site is attacked, how well can the security system perform?

Another thing that we try to use in security at times if it's using risk information is the consequence. In the cyber world, cyber security area right now, we're trying to look at establishing the level of security requirements based on the potential consequence that could be impacted by the cyber attack.

When we look at EP, EP also does not look at the traditional risk approach that is used in the safety community. It tends to focus more on the mitigation or reducing the consequence of a potential event.

In NSIR, we have several on-going efforts for trying to better risk-inform security. One of them is actually working with industry on looking at vulnerability assessment and bottling it to simulation modeling to better risk-inform security to try -- very similar to what's used in probabilistic risk assessment modeling. A lot of the approaches were actually -- initial approaches were actually developed by the same statisticians at the National Labs. This approach in the end, if it actually plays out in the community, will allow us to have much better systematic assessments of security risk at facilities.

In addition, we've established some on-going initiatives to try to engage both the safety and security risk communities within NRC and

amongst our stakeholders to try to get a better understanding of how risk is evaluated in the two communities and try to leverage off of each of the two communities.

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Based on interactions with stakeholders,

at the Risk Prioritization Initiative pilots and also risk-informing security workshops, we found that there are some challenges that need to be addressed. In particular, we need to correctly use the model or approach for risk for safety and security. They tend to focus on different elements of facility risk. In security, we're focused primarily on the attack of the facility and the success of the security system actually defeating that attack. Whereas in safety, it's focused on sort of the path, the accident path that actually takes place and not as much on the actual initiation of the event.

In security, we also tend to look at timely detection and adequate delay that are critical for security. So in security, we're trying to establish security systems and security efforts that actually are far away from the vital area and vital equipment. Whereas, in safety, most of our analysis focuses on things in every close proximity to that vital equipment and vital areas.

If we're truly going to use risk-informing approaches to prioritize activities and initiatives for both safety, security, and emergency preparedness and other disciplines that we regulate, we need to better understand how safety and security risks relate to each other. And also, we have to have processes that are developed that produce results that are reproducible and they also must be predictable.

So in the end, I think this approach is definitely a positive

1 direction to go, but we have a lot of challenges that we need to address over 2 time. Lawrence? MR. KOKAJKO: Thank you, Joe. Let me conclude by 3 offering the Staff's recommendations. The Staff recommends that the 4 Commission approve both parts of Option 2 and direct the Staff to augment 5 existing processes with a risk-informed prioritization process and to explore 6 the use of an NRC expert panel. 7 8 In addition, the Staff recommends that the Commission 9 approve a pilot of Option 3, which pertains to plant-specific implementation 10 schedules for prospective rules. 11 On behalf of the Staff that have been working on CER and 12 RPI I'd like to thank you for your attention and turn it back over to Mark Satorius. 13 14 MR. SATORIUS: Thanks, Lawrence. And as you've 15 heard today the Staff has implemented several process improvements to 16 address CER across the Agency. 17 In addition, the Staff presented some options and 18 recommendations for the Commission to consider to enable the NRC Staff 19 and its power reactor licensees to better focus their resources on safety. 20 This completes our presentation and we look forward to any 21 of your questions that you all have. 22 CHAIRMAN BURNS: Okay. Thank you. And, again, 23 we'll begin with Commissioner Svinicki. 24 COMMISSIONER SVINICKI: Thank you all for your presentations. I have a number of questions, I'll try to get through as much as 25 26 I can.

I would just begin with this broad point. In the ACRS letter report on this topic in conclusions and recommendations they stated the following, "The Staff should explicitly include risk information as an input to decisions and priorities for proposed regulatory actions regardless of the Commission's decisions about specific options or approaches in the SECY Paper."

Do you all commit to do that? I mean that seems very basic, but is the Staff's general reaction to that -- Nodding their head in agreement?

MR. SATORIUS: Yes.

COMMISSIONER SVINICKI: Okay, thank you. Another item that was in the ACRS letter report that I -- If it was in the SECY Paper I missed it, so I just need confirmation if the ACRS stated this accurately.

They state "The proposed process would not be applied to activities that are required for compliance with an NRC finding of adequate protection."

Is that accurate that that would be your process? Because the pilots, as Commissioner Baran referenced, they included things like spent fuel pool instrumentation, which a majority of the Commission voted to deem a matter of adequate protection.

So if this were to move forward an activity like that wouldn't be eligible for -- Okay, I just wanted to make sure I understood that.

And then on Option 3, and I want to talk about the options although I agree that in the Paper they are presented as each one builds off the others. In the strictest sense the Commission would not need to confine itself to that.

Lochbaum outline a parallel concern which is that NRC would just kind of

shoehorn those in the final at the very end and what would be the

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1 transparency associated with that, so that was another, a related process 2 concern. 3 Jennifer, did you want to comment? MS. UHLE: Yes, I would. This approach actually was 4 being looked at for a 50.46(c) rulemaking, and what we're trying to do here, 5 6 although we recognize that would be odd to be reading a rule and then having 7 a long list of implementations dates, we realize that, but we are trying to avoid 8 exemptions as much as possible. COMMISSIONER SVINICKI: I appreciate your saying that 9 10 because I say that as the principle, attractive feature of this, however, and then I thought well, but we all know how long it takes to change a rule so if you 11 12 want to make some very much etched in stone, however, then I thought gosh, 13 you could get into the curious circumstance where they come in and ask for 14 exemption to their own plant-specific implementation which was put in there to 15 avoid the need for exemptions. 16 MS. UHLE: Yes, right. There is that concern. 17 COMMISSIONER SVINICKI: Okay. 18 MS. UHLE: I think I answered your question. 19 COMMISSIONER SVINICKI: Okay, thank you. Well I 20 just, it tells me I'm not getting it wrong. I do want to state that Enclosure 1, we 21 haven't talked about this a lot, there is an update on Staff's efforts to address 22 CER for fuel cycle facilities agreement states in radioactive material licensees. 23 I commend this to any readers who haven't read this 24 enclosure. I think this is a good, concise description of a set of very prudent measures to solicit for a better informed record on cumulative impact. 25 26 One thing that's in here that your colleagues in the fuel, in

the NMSS on the fuel cycle side are doing is that they have this integrated schedule and then they conduct quarterly meetings with industry and stakeholders to go and have a visual on all interrelated activities.

Do we have that for operating reactors, and if not, why not given that we're so focused on operating reactors and really addressing cumulative impact for that community?

MR. KOKAJKO: No, Commissioner, we do not have such an integrated schedule. Primarily it's due to the complexity of the actions that are occurring within NRR as well as the use of PRA information and the sheer volume of material that NRR deals with with the number of licenses that we have.

The fuel cycle in contrast is a relatively small subset. It relies upon different risk type of activities, such as integrated safety assessment and the number of things that they deal with on a per unit basis.

So it's relatively small comparted to the matters that the power plants have to deal with, each individual power plant has to deal with.

COMMISSIONER SVINICKI: But I think the Commission has been confronted with such a visual. In all our Congressional Oversight Hearings we've been able to see a spaghetti chart of all the ongoing activities on the power reactor side, so whether or not NRR has developed when others external to the Agency have developed that.

So, again, I just think it begins a dialogue about activities going on in parallel and so I appreciate the more detailed discussion about what an expert panel, what the establishment of that is intended to create and I appreciate assurances and commitments that it would be looked at in terms of other standing expert groups and panels like the CRGR to make sure that it

was complimentary.

But I guess the question it raises in my mind, is anyone right now either, well I'm not picking on anyone, but if we were to say the Director of NRR, that's a large office, there are many regulatory actions under contemplation in NRR at any given moment.

Is that office director sitting with direct reports and management within that saying let's look across to activities to look at whether something should be recommended to the Commission as a low, medium, or high, generally things are recommended to be low, they fall into low, but they start out medium or high, and then when the Staff is preparing a budget proposal to present to the Chairman so that he can present it to the Commission is there any discussion across business lines, maybe Mark should respond to this in terms of Project Aim, and trying to take a better look at integrated agencies priorities in kind of having a one NRC set of established activities.

Is there something not being done now that will come out of Aim?

MR. SATORIUS: Well I think it is being done now. In fact, the budget recommendation that the Staff is going to be providing next week to the Chairman, I believe it's on the 26th, will include facets of just what you've described, that we've looked at it from a one NRC perspective and balanced out those efforts between the business lines with the business line leads responsible for interacting with their colleagues to make those proposals for the CFO and for OEDO to put together a proposed budget for 2017, so that's taking place right now.

COMMISSIONER SVINICKI: I think in light of that the Staff

would want to look even more closely at the notion of the expert panel and how it might -- Again, if we're making process improvements out of what we're doing now or continuing to work on the Project Aim recommendations we'll want to make sure that we don't set up two groups of experts in conflict or experts in conflict with senior managers who are having to look at that prioritization process.

So I appreciate that we might widen the aperture a little bit on that. On the question of what the Staff calls for potential perpetual deferral situations or, you know, having some sort of ultimate backstop, do you think philosophically that's fundamentally in conflict with the notion of do not displace work of greater safety significance?

Under the RPI, if that was in place, if licensees can come in and make perpetual justifications for deferral that you accept, isn't having an ultimate backstop would be a little bit like saying, you know, what for deferral out to X number of years I'm going to be guided by risk and safety, but I'm just going to arbitrarily pick a date then I'm going to say I don't care what your justification is after that, you just have to do it.

Isn't there a fundamental incongruity there?

MS. UHLE: Yes, I would agree that there is. I think that if you remember from the Option 2, the Option 2 would be staff approved, so a licensee would submit an exemption request to change a date for a regulation or other activity that we required and NRC Staff would review whether or not that was appropriate.

And because of that we did not propose that there would be a need for a backstop date. However, when you look at something like Option 4, I would say throughout the staff and into the management chain

there is some level of discomfort with the idea of having a process in a rule that would allow licensees to do this by themselves.

And because of the fact that we maybe want to start to crawl before we walk and then, you know, run at full speed there was the discussion of a backstop, although the backstops, of course, would be to the degree possible, risk informed, but on a more generic basis.

COMMISSIONER SVINICKI: Well, and I'll just close with my, you know -- I don't know if they still publish these, but they used to have the "For Dummies" list of like, you know, "Cooking for Dummies" and "Car Maintenance for Dummies," this is my "For Dummies."

This is my "For Dummies" version of my experience with implementation timed with effective dates and final rules I've voted on and implementation timeframes. Reflexively they seem to be set at 12 months.

We get public comment almost universally that states that that's not enough time to do it. So in voting on it I would look at that public comment and think we kind of were dismissive about it because it comes from those who operate these facilities.

So I would vote that it should be extended to 24 months. A majority of the Commission would generally plead that out to 18 months and so we'd change it.

So please understand that I am all for having a process that isn't that kind of an auto pilot thing, that the potential here is to get a lot more sophisticated, much more granularity in risk insights on how long we give people to do something.

But right now when I vote on a final rule I look carefully at what am I voting to require and how long am I giving the impacted community

1 to implement that.

This would take into its logical conclusion take the Commission maybe much more fully out of the second step because you are taking what is a limited exemption process right now and I think perhaps having a lot more participation in it, and without a backstop then you are also making me question whether or not am I really voting to require something because the Staff, after my public vote, can then go and perpetually allow it to be deferred.

So you're fundamentally tipping the balance on the authorities. I think there's an implicit delegation, there's a shift of power in decision making between the Commission, which I know takes its rulemaking authority very, very seriously, and the Staff, so that potential exists.

I think we want to approach that. I'm not saying it's a wrong thing, but we want to do it very explicitly.

MS. UHLE: And if I can add, when we originally first started talking about the backstop we, of course, had certain views that we heard from the Commission that we were taking into account and the idea of that delegation being somewhat uncomfortable to you. As a whole --

COMMISSIONER SVINICKI: Well, yes, because after I vote yes for it you can vote no by just never making them implement it.

MS. UHLE: Yes, so the backstop was a perpetual -- (Simultaneous speaking)

COMMISSIONER SVINICKI: So, yes, I think the power definitely shifts there. Okay, well, thank you. Thank you, Chairman.

CHAIRMAN BURNS: Commissioner Ostendorff?

COMMISSIONER OSTENDORFF: Thank you, Chairman.

Thank you all for your presentations. Jennifer, I thank you for reminding the Commission, I don't think we need the reminding, but you did, and it's helpful,

prior direction from this Commission, our predecessors.

So that's an important point and I'm going to repeat a statement I made in the first panel, I view the CER efforts as one body of work, which I fully support, very much on board, appreciate the update, Lawrence, on what you've been doing in that area.

that, you know, the risk prioritization initiative work you've done is pursuant to

I think that's a real positive set of actions. I look at the RPI piece through a little bit different lens. So if I just, I'm going to ask a high level question. I'm going to ask Jennifer, if others want to chime in, please do so.

So if I accept that we are moving forward and implementing all of the cumulative impacts of regulation issues that Lawrence has discussed, and that's going forward, then I'll look at the risk prioritization initiative, and that is a separate, distinct set, what problem, how do you answer the problem statement as to what problem we're trying to solve with RPI?

MS. UHLE: Well I would focus on what we're doing under the cumulative effects of regulation where we are trying to have our regulatory analyses be more and more accurate.

Well the issue about our regulatory analysis approach is that it only considers the regulation in isolation. It looks at the benefit to the public of that regulation and it's evaluated.

And then when we go to the activities associated with, you know, carrying this out through the common prioritization of rulemaking then we start to consider relative benefit of the rules at hand.

But what we are trying to do with the risk prioritization initiative is not to just look at the benefit of that one rule in isolation, but to take into consideration everything that's on the plate of the licensees, including licensee initiatives that have been implemented by the licensees voluntarily to improve the risk of their plant.

And so that's the piece that we are trying to incorporate, is considering the whole landscape of activities.

COMMISSIONER OSTENDORFF: I think before you, you can speak in just a second here, but, Lawrence, in your presentation I thought on your Slide 10 when you were going through the CER work that's already underway I took away a couple of key points that I thought were being done during the CER effort.

One was to seek stakeholder comments on CER during proposal stage, look at what implementation of this proposed rule, what impact that would have on other rules.

So are you already doing that via the CER piece?

MR. KOKAJKO: Yes, we are. We do have the questions, as you know, for each rule that we go out with. We have CER-type questions, we try to understand the impact, and we are also doing that with the generic letters now as well.

So we are capturing elements of that today, and which is why we also in Steve's graph that showed CER today and when his explanation of this is the things we are doing today, and those will remain intact regardless of what the Commission decides we should pursue in terms of RPI and Options 2, 3, and 4.

(Simultaneous speaking)

1 COMMISSIONER OSTENDORFF: Let me add that if --MR. KOKAJKO: Well I'd like to, could I answer part of --2 3 (Simultaneous speaking) COMMISSIONER OSTENDORFF: Yes. No, please, yes, 4 5 yes. MR. KOKAJKO: Because I think this might get to the heart 6 of what you were asking about a little while ago. You said what is the 7 8 problem we're trying to solve with RPI --9 COMMISSIONER OSTENDORFF: And the corollary is 10 and it's not being addressed via CER, that's what I'm struggling with. 11 MR. KOKAJKO: Could I channel Former Commissioner 12 Apostolakis for a moment? He said that he would like, you know, his view 13 was risk information is the thing that is the one thing that can help you make the best decisions on understanding the true risk of your facility. 14 15 And if there were things, and this goes back to 16 Commissioner Svinicki's point awhile ago, you could find things that were 17 more risk significant that needed to be done and it might be different than what 18 the conventional wisdom might say. 19 Part of the COM and the SRM that derive from it was how 20 can we incentivize the use of risk information? And by that, and my 21 understanding is, how can we get the power plants to recognize the benefit of 22 using more risk information such that they develop more of it and meet the 23 quality standards of Reg Guide 1.200 and, also, do I dare say, try to advance 24 to the Level 1 and 2 PRA so that you can understand the true risk significance of elements of your corrective actions that you need to take or implementing 25

new equipment mods in a timely way.

1 So to me that's the benefit of --COMMISSIONER OSTENDORFF: 2 Correct me if I'm wrong, but I think as reflected in the SECY Paper the goal of incentivizing PRA 3 enhancement has not been reached, or achieved, or agreed to by industry 4 here. Is that a correct statement? 5 MR. KOKAJKO: That is --6 COMMISSIONER OSTENDORFF: So if that -- That was a 7 fundamental piece, Commissioner Apostolakis's comment. 8 9 MR. KOKAJKO: That by the way is, currently that is true, I 10 would agree with you. There is a sense though, and certainly NEI 11 representatives have stated this in the past when we've had public meetings, 12 that if they can see the benefit of using the risk insights they can take advantage of the risk insights they've already acquired they will be more 13 inclined to acquire more and to utilize this information to obtain it, utilize it, and 14 15 then begin to apply it. 16 And I think that's the NEI guidance which we haven't 17 endorsed yet. I think they're waiting to see, you know, how are we, NRC, 18 going to utilize this risk information in our decision-making process. 19 COMMISSIONER OSTENDORFF: Okay. Antonios, did 20 you want to make a comment there? 21 MR. ZOULIS: One of the subtle differences though that we've discovered through the pilots is that there are two aspects to the 22 23 development and use of PRA. 24 So what we saw was the use of PRA being disseminated throughout the demonstration pilots and we saw people of different disciplines 25 26 being exposed that that would not have been exposed to it before.

And through that as they see more benefit we believe there will be further development, so to say that the goal is not directly being met, I, you know, I would say that's our ultimate goal and we're going there in a more measured way instead of saying you need to have a full-blown Level 1, Level 2 PRA.

COMMISSIONER OSTENDORFF: That's fair. I appreciate the response. Steve, let me ask you a question.

On your Slide 12 concerning the expert panel I wanted to maybe get to two points and say that the role of the expert panel would be to prioritize regulatory actions based on risk insights, and I think very early in the decision-making process, and then perhaps eliminate as appropriate some proposed regulatory actions very early in the decision-making process.

Isn't that the task of Staff working at rulemaking now, that shouldn't that -- I worry that the expert panel would be perhaps as articulate, and maybe I don't fully understand it, it seems to me like it's telling the expert panel to do something on top of what the Staff should already be doing.

Is the Staff not doing this already?

MR. RUFFIN: It's not that the Staff isn't, the advantage that we've seen with this approach is that, one, we would use and apply these risk insights very early in the process to allow us to then inform the decision makers.

So this would augment what the decision makers are currently doing using risk information and risk insights as the primary driver. So, for example, if we currently use the prioritization of rulemaking, which is basically a budget formulation tool and the ranking, the pins, for example, how things address our strategic goals.

Shortly after there will be a great opportunity to then look at those prioritized items using risk insights from this similar process to then prioritize what actions the Staff works on first, and those are strictly recommendations that then are made to the decision makers, to the NRR office directors.

COMMISSIONER OSTENDORFF: Well let's -- Time out.

So let's take a group of people, I don't care, that's doing rulemaking right now in NRR.

So why isn't the Staff today already doing this? Why does it -- Because maybe I'm misinterpreting, but what I'm reading in the proposals in the Paper is to have a separate group overlain on top of the existing Staff effort, why isn't the Staff effort, is there an inherent hurdle of obstacle that precludes the Staff today from doing these things, to take a good look at it using risk insights?

MR. KOKAJKO: We do take advantage of whatever available information that we have. There are elements though that I think can be more enhanced, which is why we're not saying hey, approve this now, we're recommending that we explore it, the use of it.

COMMISSIONER OSTENDORFF: Yes.

MR. KOKAJKO: We also would like to not overlay this on other groups, if possible, which is why we would think about could we use the leadership team, for example, which is composed of the division directors within NRR as this vehicle.

We mentioned in the Paper CRGR as a potential vehicle.

Also, in the generic issues program and research they have something that's very similar that looks at assessment of a given issue and tries to determine

1 elements of this, and that's from a technical side and it may ultimately roll into 2 a rulemaking over time. 3 So, yes, there are, but I think what Steve was trying to 4 convey was there are pieces and elements elsewhere and at the regulatory basis stage sometimes it is not all rolled in as effectively as it should be. 5 6 COMMISSIONER OSTENDORFF: Well I'm going to run 7 out of time, with respect for my colleagues here I will just say that my personal 8 reaction to that is why the heck isn't it being done by the group that's doing the 9 rulemaking to begin with and it should be part of the overall effort, and my 10 personal view, developing a regulatory analysis to begin with it should be an ancillary or a sequential step, it ought to be there from the get-go. 11 12 So I'm not asking a question there, but I don't think your 13 SECY Paper really spells it out very well as to why the existing Staff 14 rulemaking process can't incorporate what I agree are good things here and 15 why you need a separate panel to do that. 16 So I'll stop there. Thank you, Chairman. 17 MR. KOKAJKO: Understood. 18 CHAIRMAN BURNS: Commissioner Baran? 19 COMMISSIONER BARAN: Okay, you're halfway there. 20 Jennifer, I want to start with a comment you made, which made a lot of sense 21 to me about the limited public involvement and engagement on exemptions 22 and the desire to move away from that, if there was a better process for that. 23 And so we have, if we focus on Option 2 and Option 3 for a second, Option 2 I take it, there's nothing about Option 2 that gets us around 24 that public involvement concern because we're still relying on the exemption 25

process and the panel, there's nothing about the panel that gets that gets us

1 around that. Okay.

So let's just explore Option 3 a little bit then. So what's your vision about how Option 3 addresses the concern about public involvement? And maybe I can even guide you a little bit on where I'm trying to understand.

If we just kind of looked at the timeline when would you envision a licensee submitting a site-specific implementation plan, or when would you imagine that NEI guidance would be put forth for inclusion in a rule?

MS. UHLE: Well I would say probably, and it was illustrated on Steve's chart, which would be at the proposed rule stage.

COMMISSIONER BARAN: Okay.

MS. UHLE: So there is technical basis that gets developed where there is a great deal of public input, we come up with a proposed rule, and, of course, during the technical basis development we have, you know, based on our interactions with industry and the public a certain understanding of the risk benefits of the work.

And then hopefully as we look more and more to understand the whole landscape we'll look at the varying other activities that are on the licensee's plate and get sort of a generic risk ranking.

So at the proposed rule stage that's when licensees, if they so choose, can come in with very plant-specific risk information and we know that this information, this is the information that we currently don't have.

Risk as we know is largely dominated by external events and those external events are very site specific. So we are going to learn quite a bit by having an individual site, provided their risk analysis that they do in whatever way, shape, or form that's done, is accurate and we, of course, will

need to have guidance documents to ensure that.

So when that information is presented and they prioritize what they are currently already planning to do voluntarily, which we may not know, as well as what else is on their plate and they rank it according, or they prioritize it according to risk and propose an alternative implementation date then it would be in the proposed rule stage there and that is all very publicly that it, at public meetings, and would therefore be discussed and I would expect each licensee who is proposing a different date would be in front of the public justifying that and then responding to both NRC questions as well as hearing from the public before it then would get hopefully codified in a rule.

COMMISSIONER BARAN: And what I'm trying to understand here is, so at the proposed rule stage, you know, where the agencies point out, probably has a preferred option as a proposed rule, but maybe seeking comment on other options, and so you may have licensee or other stakeholders, you almost inevitably will have licensee or other stakeholders making much more generic comments, too, right, like we think you're going the wrong direction, you should do this entirely differently, or you have asked for comments on three different ideas, we think you should pick Idea Number 3.

And so part of what I am trying to understand how at that stage when you don't know what the requirement is really going to be, or maybe even what the overall direction of a requirement might be, how would you at that stage be able to suggest a plant-specific implementation schedule?

And if you've got -- Now I'm just throwing more questions at you. If you've got a lot of interesting risk information as you hope to from

these submissions presumably it also could have more generic applicability, right?

So it might be applicable to more than just here's the date you should have for implementation at my plant, but rather oh, well that actually may guide the Staff in terms of picking among different options they were considering in the proposal or making modifications to their proposal to better address the risk information.

So it seems like it's a little bit of kind of a pile up, you know, in terms of what would be happening at this stage in response to a proposed rule

MR. KOKAJKO: Yes, sir, I understand the question. The proposed rule can, well it's typically the Staff's best thinking to date with regard to what they want to have done and the Commission, of course, approves the proposal that goes out.

The ANPR and earlier Advanced Notice of Proposed Rulemaking can capture more of the sort of the amorphous views that we might want to try to capture.

We think this may be what we want to do but we are seeking some additional comments about that, but even at the proposed rule stage, and when we do ask the CER questions I believe we do ask for what other things could be done.

If you recall, perhaps I'm undercutting my recommendation in the Paper, but even Dave Lochbaum of the UCS mentioned that no, he does not like Option 3. He thinks that the transparency is not there.

We are concerned about that and we would like to make sure that there is the transparency when people make changes on a

1 plant-specific basis, which is by the way one reason why we could not support 2 Option 4, because we thought that we had too many things to work out before we would proceed with a more comprehensive overarching rule related to the 3 4 implementation of the RPIs, an element of CER. COMMISSIONER BARAN: Is that something that as a 5 Staff you all have, is there kind of an answer to that concern? 6 7 I mean maybe there isn't, that basically if it's at the proposed 8 stage the implementation are being submitted for the first time, in some ways 9 it's both too early and too late, then doesn't the final implementation, you 10 know, plant-specific implementation deadline or any specifics associated with that would kind of fall out of the sky at that final stage and that's really -- There 11 12 isn't that kind of public feedback you want to have on that. 13 MR. KOKAJKO: Now if you were to come up with say 14 plant-specific implementation schedules that could be placed into the 15 proposed rule or the final rule, again, obviating the need for some exemptions, 16 or at least that's the hope. 17 One would hope that the licensees would live to those 18 dates, recognizing that might not always happen. 19 I think that's part of the, was one of our original concerns 20 about the need for a backstop, that if there was a date that you could not 21 perpetually defer and part of that was we know that the level of the quality of 22 the risk information. 23 You know some places are not going to have it and when we need to put our foot down we need to put the foot down and say this is what 24 you're going to do. This is the date you will meet. 25

COMMISSIONER BARAN: Well, you know, I guess that

kind of followed the decision tree, I don't know if it's a decision tree, but whatever, it's a tree of some kind.

If we follow that, you know, there is this issue about well, if you're at the proposed rule stage and you don't know what the final requirements are going to be.

It's probably pretty predictable that a plant-specific implementation schedule may not be as precise as it could be, right, because you don't know what your final requirements are so you don't know how precisely how long it's going to take you to implement them.

So then I do think you do have the potential to end up where Commissioner Svinicki kind of paused at which is okay, well that was my best guess at the time about when I was going to implement but now that I know what's actually required I got to seek an exemption and then we went through a lot of work and I don't know what we accomplished.

But my other concern on that would be also one that Commissioner Svinicki alluded to, which is that right now in many cases it takes us years to do a rulemaking, particularly a complicated rulemaking here, and if I just think at the proposed rule stage now if we're talking about a proposed rule let's say that would affect all operating reactors, you could have 99, you know, plant-specific implementation schedules submitted as comments on that.

And then presumably you are going to get comments on those deadlines, right? I mean so there are going to be stakeholders who can say no, you can do it in 12 months not 24.

And so it is going to, I would imagine you're going to have kind of a cascading effect on comments. It's hard for me to believe that that is

1 not going to slow down the rulemaking process and if you have an important 2 rule then are we potentially, dramatically slowing it down by the Option 3 3 approach? 4 MR. KOKAJKO: And it's going to be key as to develop the guidance that goes along with the proposed rule. Once we are able to do that 5 6 we think that we can control some of that. 7 We are also assessing whether or not, as I mentioned 8 earlier, improving our regulatory analysis to try and understand a little bit more 9 about the uncertainties of the thing we're trying to implement and we're trying 10 to get a better handle to understand exactly what it means to implement that rule. 11 12 We think if we spend that time up front we think we will, it will 13 pay off dividends at the back end of the process. MS. UHLE: And if I could just add quickly, that is when we 14 15 looked at 50.46(c) it actually wasn't necessarily, it was a plant-specific 16 implementation date but the way that those dates were determined were by 17 binning the plants into a certain number of bins and then the licensees 18 justifying, you know, that, you know, their specific condition looked like one of 19 the bins, and that's how we got away from doing the, you know, 99 different 20 reviews. 21 So that is also another method, but we do recognize in the 22 Paper that this approach could be problematic. 23 COMMISSIONER BARAN: Well thank you. I appreciate 24 all the thought that's gone into this. Thanks. CHAIRMAN BURNS: Thanks. Let me follow up on that 25 26 because I am not familiar, this is one on the way to us or it's here?

1 MS. UHLE: It went up to the Commission when you were in Paris at the NEA. 2 CHAIRMAN BURNS: Okay. 3 MS. UHLE: So you haven't not read something. 4 CHAIRMAN BURNS: 5 Okay. But what I want to understand is, and the idea is because I think the idea that for certain types of 6 facilities and we know in certain things that BWRs may be different than 7 8 PWRs and certain vintage BWRs may be different from other vintage BWRs, 9 but did that rule then have an outer, what I'll call the outer limit, is that how it 10 got with it? MS. UHLE: Yes, it did. 11 12 CHAIRMAN BURNS: Okay. 13 MS. UHLE: That rule that was proposed originally to the Commission, although now we are rethinking that approach of putting the 14 15 dates in. 16 CHAIRMAN BURNS: Yes. 17 MS. UHLE: It only had the four or five different bins and 18 each bin had a certain date that the rule had to be implemented by. 19 CHAIRMAN BURNS: Okay, thanks. Let me go 20 back and maybe, maybe I missed something. I'm going to ask a question, 21 who is on this expert panel? Who is this expert panel? Who are the --22 MS. UHLE: Can I -- Yes? 23 COMMISSIONER SVINICKI: I had a funny vision when I 24 read Paper of people get up from their desks where they do this in their day job and they move into a conference room and then they are the panel, 25 26 whereas five minutes before they were at their desk doing the exact same

1 function. 2 CHAIRMAN BURNS: Okay. MS. UHLE: Yes. 3 CHAIRMAN BURNS: So how would you -- Is it a, like I 4 think of CRGR or some others that is sort of a standing committee or a 5 6 standing group. Is this that or does it shift depending on what the area is? 7 MS. UHLE: Well first I would say, to be honest, I am not a 8 big fan of the expert panel, so however I lost the vote. 9 Okay. At any rate, but I do see its value and I think maybe 10 the term "panel" makes it sound a lot more formal than it really needs to be. 11 You are exactly right that when the Staff comes to us, 12 meaning the office level management, Bill Dean being the Director, and 13 proposes that some initiative needs to be taken. 14 We, of course, look at what else is on the landscape and 15 look at what we think the real safety significance of this proposed issue is and, 16 of course, we do our best with the information available to try to figure out 17 where this is in terms of priority. 18 However, at that stage we only have so much information 19 and we only have generic information. We have results from SORCA, we 20 have results from NUREG-1150, we have insights from the risk experts like 21 Antonios who do significance determination, process, we have the SPAR 22 models that we can look at. 23 But we only have so much information so we would like 24 there to be perhaps this group of people and they are most likely the risk experts who are in NRR as well as people from our contributing partners to the 25

business line and help refine, if possible, that understanding of the relative

significance of this issue compared to what else is on the plate.

So is it a panel? To me it is a resource that we would use more systematically and the difference between what we're doing now compared to maybe what we are talking about is we would spend more time at that stage to try to develop as much more of a refined understanding of the risks and recognizing that the industry would also be doing something similar, we can use whatever plant-specific information or bin the BWRs and PWRs into bins of finer granularity.

So really that's what we are trying to accomplish and I think what happened in the Paper is that it, you know, we said that well this is still in the thought process and I think we didn't provide enough detail that, to me, this is not a real steering committee or formal expert group. I don't know if that helps.

CHAIRMAN BURNS: Okay. No, it does. One of the things, and I want to maybe get off rulemaking for a minute, but, you know, I think an interesting, sort of interesting to observe sort of over the years, I mean we could go back to, I think it was the one time I actually looked at the original Statement and Consideration for Part 20 and it was sort of like we need radiation protection rules, here they are, and that's it.

And you would never in this day in age from an administrative law perspective, and, also, I think the idea of transparency for developing the sound regulatory bases, thinking about, you know, holistically about regulation, and I think that's a lot of what we've been discussing here today, you wouldn't do that.

And, you know, I think some of the benefits and certainly some of the benefits perhaps to date from the efforts that the Commission's

endorsed and the Staff has undertaken certainly address, I think, some sound criticisms.

And, again, in the rulemaking area about developing rule, or proposing rules that don't really tell you the details, where the devil is in the details in terms of the implementation guidance.

So we've moved toward including that up front, which gives a better picture of what the rule is and what the impacts are. I think it helps with the cost, and, in fact, the cost, and, also, another commitment here to improve the cost benefit analysis that we're doing.

So a number of those things I think contribute and we have this other issue. I want to switch to -- There's a brief attachment in the Paper on generic communications and I'll use a term, given you referenced my sabbatical in France, but I'll use this term and I only use it in this way because we used to talk a lot about hard law and soft law.

And hard laws are those regulations, those orders, those statutes, those types of things. The soft law is this kind of like we'd kind of like you to do it, and it's often I think like the generic communications.

If you look at generic communications, and there had been some criticism over the years that in effect, and particularly when we got into some of the development of more robust backfitting guidance that generic communications were a way of signaling this is a requirement even though we're only asking you for information.

Now the Paper talks about efforts to, and I'm not trying to be cynical on it, but I think, but that is sometimes how perceived, both through 50.54(f) letters or the generic communications.

One of the questions I would have is, and because, again,

the attachment discusses when a generic communication is issued identifying this, or asking questions about cumulative effects, how do you see that going forward?

Because if I saw anything, and then I'll stop, is that if I see in a rulemaking, which is one of these "hard law" things and that where perhaps having an external or a final, or not an external, a final completion date for something that is a hard requirement may make some sense.

The generic communications, that's the type of thing, we haven't quite gotten to the point where we think it's something we need to do. We'd like a little more information but the impact on a facility, or a licensee of sort of turning everything around to go get that information has an impact on schedules of things they want to do on their own, implementation, things like that.

So that's a long preface to maybe a simple question. How do you see the continuing to deal with these questions of cumulative impacts, or cumulative effects, in the area, what I will call the softer area, of asking for information, issuing generic communications and the like?

MR. KOKAJKO: Yes, sir, that's a good question. We, too, have a similar concern about that. We've had that concern for some time.

I will say that in the generic communications, say a generic letter to request information under 50.54(f), we do publish that for comment ahead of time.

Everyone is aware that this is what we are going to be asking or what we think we need and I think, I found that the process today is much more open, much more transparent in terms of this is why we need it, this is when we're going to need, and if there's a burden and there's a

cumulative impact please tell us today so we can factor this in.

And our goal would be to, of course, minimize requests for information such as this, but at the same time if we believe there is something of some safety significance that we need we certainly clearly need to ask that information.

This is also true, we also publish RISs, Regulatory Information Summaries, to let them know we don't, again, this is not new requirements, it's many times, most times, all times a reminder of the regulatory requirements and if there is non-compliances they need to comply with the regulatory information there.

The goal would be, again, to minimize this and I think we've made some efforts to do that. I guess it's in the eye of the beholder if the, the licensees may not think so, but I think we've made some great strides there and I think the industry will tell you that it's done a better job of addressing those earlier concerns.

We don't issue 50.54(f) letters like we did back in the 1980s or early '90s.

COMMISSIONER SVINICKI: There has been a really interesting discussion here so I want to, for my three lawyer colleagues maybe have my little summary or summation.

I've asked some very direct questions, I've made some pointed commentary, but let me go back to what I said at the beginning. There is some good stuff here.

There are some really important insights that the pilots -- No matter, you know, what direction the NRC takes from here I think this was an extremely productive, I hope the industry feels the same, but I think from what

you all have presented this was a good learning and I think that maybe the source of some of my questions is there may be other actions we could take that get to it, get to it more directly.

I'll mention again and encourage you that we have Project Aim ongoing. There is a lot of recommendations for looking at if we're doing things smartly, are the right steps there.

I think that these learnings on RPI could fit very seamlessly or be a compliment to a lot of what various programs are going to have ongoing, or have ongoing now, in terms of our very sincere commitment to take a hard look at ourselves.

So I don't share the pejorative view of exemptions. To me they are a legal necessity and frankly a real world necessity. If you are a regulator the notion that you could write one generic rule that gets it right for every regulated entity I think is an impossibility.

Exemption to me is not a dirty word. It absolutely has to exist. If you are compelling you have to have a process to exempt where a justification is made.

So I don't want that to drive us to silly things where we have, you know, site specific requirements in a rule and then they exempt themselves from their own site-specific requirement.

I don't, as Commissioner Baran would say, I am unsure of what we have gained in that process. There have always been voluntary investments made by the regulated community that result in greater core damage frequency reduction.

So that has always existed, that is not something we learned and then did this risk prioritization initiative. So a very interesting

question for me is to what extent is it appropriate or even permissible for me to found my regulatory responses in actions that I don't regulate, that I cannot compel, how much of a factor if any is it permissible for that to be?

I know that my example of opening a free immunization clinic in the community was kind of extreme, but I do that to challenge your thinking about that concept.

I think there are things that while obviously beneficial cannot be a factor, either in displacing regulatory compulsory actions or perhaps displacing them forever if there's no backstop.

So the final comment I'll make is to the Chairman on soft law. Some of us think that's an awful lot like nudge theory and we think that there's a whole constituency of the American citizenry that has a view that government doesn't really exist to make them do things that we can't make them do but we would just like them to do as virtuous items.

So any time that NRC is in the business of encouraging or incentivizing people to do things I pick up my Atomic Energy Act and clutch it close to me and say I only have the power to do what's in this, what the Congress, the elected officials, they gave me certain authorities, I exercise them.

I don't think that the word "incentivize" or "encourage" appears anywhere in the Atomic Energy Act. Thank you.

CHAIRMAN BURNS: Okay. Commissioner Ostendorff?

COMMISSIONER OSTENDORFF: Thank you, Chairman.

I know we've asked some potent questions toady and I told the first panel group after, when I thanked them for their presence here, I said, you know, I think where Ostendorff is I think we all have the same end-state objective.