UNITED STATES
NUCLEAR REGULATORY COMMISSION
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
WASHINGTON, DC 20555 - 0001

July 15, 2015

MEMORANDUM TO: ACRS Members

FROM: Michael R. Snodderly, Senior Staff Engineer **/RA/**
Technical Support Branch, ACRS

SUBJECT: CERTIFIED MINUTES OF THE MEETING OF THE RELIABIITY AND PRA SUBCOMMITTEE ON FEBRUARY 20, 2015

The minutes for the subject meeting were certified on June 25, 2015, as the official record of the proceedings of that meeting. Copies of the certification letter and minutes are attached.

Attachment: As stated

cc with Attachment: E. Hackett
M. Banks

cc w/ Attachment: ACRS Members

UNITED STATES
NUCLEAR REGULATORY COMMISSION
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
WASHINGTON, DC 20555 - 0001

MEMORANDUM TO: Michael Snodderly, Senior Staff Engineer
Technical Support Branch
Advisory Committee on Reactor Safeguards

FROM: John W. Stetkar, Chairman
Reliability and PRA Subcommittee
Advisory Committee on Reactor Safeguards

SUBJECT: CERTIFICATION OF THE MINUTES OF THE ACRS RELIABILITY AND PRA SUBCOMMITTEE ON FEBRUARY 20, 2015, IN ROCKVILLE, MARYLAND

I hereby certify, to the best of my knowledge and belief, that the minutes of the subject meeting on February 20, 2015, are an accurate record of the proceedings for that meeting.

/RA/ **June 25, 2015**

_____ Date_____

John W. Stetkar, Chairman
Reliability and PRA Subcommittee

Certified on: June 25, 2015
Certified by: John W. Stetkar

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
MINUTES OF THE ACRS RELIABILITY AND PRA SUBCOMMITTEE MEETING
FEBRUARY 20, 2015

The ACRS Reliability and PRA Subcommittee held a meeting on February 20, 2015 in TWFN 2B1, 11545 Rockville Pike, Rockville, Maryland. The meeting convened at 1:00 p.m. and adjourned at 4:19 p.m.

The entire meeting was open to the public.

David Lochbaum of the Union of Concerned Scientists provided written comments and requested time to make oral statements.

ATTENDEES

ACRS Members
- John Stetkar, Chairman
- Ronald Ballinger, Member
- Dennis Bley, Member
- Charles Brown, Member
- Joy Rempe, Member
- Michael Ryan, Member
- Stephen P. Schultz, Member
- Gordon R. Skillman, Member

NRC Staff
- Michael Snodderly, Designated Federal Official
- Ed Hackett, ACRS
- Joseph Giitter, NRR
- Lawrence Kokajko, NRR
- Aby Mohseni, NRR
- Steve Ruffin, NRR
- Antonios Zoulis, NRR
- Fred Schofer, NRR
- Tara Inverso, NRR
- Sunil Weerakkody, NRR
- Richard Dudley, NRR
- Jeff Mitman, NRR
- Donald Harrison, NRO
- Roger Pedersen, NRR
- Joseph Rivers, NSIR
- Cardelia Maupin, NMSS

Other Attendees
- John Butler, NEI
- David Lochbaum, Union of Concerned Scientists
- Jana Bergman, Curtiss-Wright/Scientech
- Stanley Levenson, AREVA
- Tom Hiltz, DOE

Other Attendees (Continued)
Jim O'Brien, DOE

SUMMARY

The purpose of the meeting was to review a draft notation vote paper, for Commission consideration, that provides approaches for allowing licensees to propose to the NRC a prioritization of the implementation of regulatory actions as an integrated set and in a way that reflects their risk significance on a plant-specific basis. The meeting transcripts are attached and contain an accurate description of each matter discussed during the meeting. The presentation slides and handouts used during the meeting are attached to these transcripts.

SIGNIFICANT ISSUES	
Issue	Reference Pages in Transcript
1. L. Kokajko, Director of Division of Policy and Rulemaking, provided an opening statement for the staff where he provided introductions and mentioned the key objective to inform the Subcommittee on the staff's efforts regarding the cumulative effects of regulation (CER) and the Risk Prioritization Initiative (RPI).	7-8
2. S. Ruffin and A. Zoulis discussed background, updated the Subcommittee on CER Efforts, NEI Draft Guidance, and four potential options for implementing RPI.	9-?
3. Chairman Stetkar asked about the hiring of independent cost estimators.	13
4. Member Schultz asked about the lack of responses received concerning the CER impact of two draft generic letters: one concerning the use of neutron absorbent materials in spent fuel pools and the other on the treatment of natural phenomena hazards at fuel cycle facilities.	16
5. Chairman Stetkar requested further explanation of the staff's concern that introducing the RPI process may result in regulatory instability because the RPI guidance may conflict with ROP guidance.	23
6. Chairman Stetkar used an obsolete heater drain pump as an example of a component that could lead to a loss of feedwater plant trip if not repaired or replaced. He questioned why replacement of the obsolete pump should not be considered in an integrated manner with an ROP finding of a missing screw in a safety-related component that is not as risk significant. Members Bley and Skillman provided further discussion and examples.	28
7. S. Ruffin described the creation of an NRC expert panel to provide the NRC with an integrated look at recent and ongoing regulatory actions to better assess the cumulative effects of regulation. The Subcommittee questioned the need for Commission approval of such a panel and whether that panel's efforts would duplicate those directed by the regulatory analysis guidelines.	36

8. Members Ryan and Brown expressed concerns and skepticism about the NRC expert panel. Member Brown challenged the staff that any additional panel or process would delay the rulemaking process.	48
9. A. Zoulis went over the cons associated with Option 2. He mentioned that it's voluntary, so it wouldn't incentivize licensees to further develop or enhance existing PRA models. In the short term, the number of exemption requests would increase. Member Schultz and Chairman Stetkar pointed out that greater use of PRAs usually leads to improvements.	51
10. Chairman Stetkar inquired about the apparent subtle difference between Options 2 and 3.	57
11. L. Kokajko discussed the need for the Commission to weigh in on the NRC staff setting plant-specific schedules for rules that have typically been codified as part of the draft final rulemaking.	63
12. Member Bley suggested that the staff provide a side by side comparison between Options 2 and 3 to better understand the similarities and differences. He argued that they are more similar than different. Member Bley used the example of the exemption "con" for Option 2. He asserted that Option 3 required just as much work in preparation and review time as the exemption route.	67
13. A. Zoulis described Option 4 which explores rulemaking to develop a new process that would allow licensees flexibility to reschedule regulatory compliance without the need for prior staff approval.	69
14. In response to questions from many Members, J. Giitter responded that initially Option 4 allowed deferral, proposed alternatives, and perhaps even elimination of some requirements to address the case of something that repeatedly shows up as very low priority. He clarified that is not off the table. It's just not explicitly expressed as a major facet of the currently proposed Option 4, but going forward, he believed it was a possibility.	76
15. Member Skillman asked about assurances of PRA configuration control and confirmation that the PRA is consistent with the actual plant configuration. He also asked about verification.	77
16. Members Ryan and Ballinger asked about the Office of Enforcement's documentation concerns.	81
17. S. Ruffin described the staff's recommendation that the Commission approve Option 2 and agree to pilot Option 3 and report back the staff's findings to the Commission.	87
18. Member Brown asked where the NRC expert panel would get their risk insights.	89
19. J. Butler of NEI provided his perspective on the staff's proposed options and lessons learned from the prioritization process.	98
20. Member Ryan asked why Interim Staff Guidance would not be an appropriate vehicle for issuing guidance to support risk prioritization.	102
21. Chairman Stetkar asked for clarification from the staff and NEI on whether or not the RPI process can be used to make changes to a schedule for a commitment to implement a corrective action for an inspection finding.	106
22. Member Rempe asked how a recommendation by the NRC expert panel to delay or eliminate an action would be implemented, including upper management oversight.	116

23. D. Lochbaum of the Union of Concerned Scientists provided his perspective on the risk prioritization initiative including concerns with timeliness of resolving nuclear safety issues and the difference in risk estimates between the NRC and licensees.	122
24. Chairman Stetkar asked for public comments. There were none.	134
25. Chairman Stetkar asked the subcommittee for final comments.	135
26. Chairman Stetkar adjourned the meeting.	137

Documents provided to the Subcommittee

1. Predecisional Draft SECY, "Cumulative Effects of Regulation Process Enhancements and Risk Prioritization Initiative: Response to Commission Direction and Recommendations," February 9, 2015 (ML15036181)
2. COMGEA-12-001/COMWDM-12-002, "Proposed Initiative to Improve Nuclear Safety and Regulatory Efficiency," November 5, 2012 (ML12314A262)
3. SRM-COMGEA-12-001/COMWDM-12-002, "Proposed Initiative to Improve Nuclear Safety and Regulatory Efficiency," February 6, 2013 (ML13037A541)
4. COMSECY-14-0014, "Cumulative Effects of Regulation and Risk Prioritization Initiative: Update on Recent Activities and Recommendations for Path Forward," April 9, 2014 (ML14069A061)
5. SRM-COMSECY-14-0014, "Cumulative Effects of Regulation and Risk Prioritization Initiative: Update on Recent Activities and Recommendations for Path Forward," July 18, 2014 (ML14199A187)
6. Memorandum from John Butler, Nuclear Energy Institute, "Draft Guidance for Prioritization and Scheduling Implementation," April 15, 2014 (ML14105A485)
7. Nuclear Energy Institute, NEI 14-10, "Guidelines for Prioritization and Scheduling Implementation," Revision 0, November 14, 2014 (ML14325A681)
8. Nuclear Energy Institute, "Report on Prioritization and Scheduling Pilot," December 2014
9. Memorandum from Michael Snodderly, "Certified Minutes of the Meeting of the Reliability and PRA Subcommittee on November 3, 2014," January 20, 2015
10. Memorandum from Martin J. Virgilio, NRR, "Integrated Safety Assessment Program," July 3, 1996 (ML13189A224)

Official Transcript of Proceedings

NUCLEAR REGULATORY COMMISSION

Title: Advisory Committee on Reactor Safeguards
Reliability and PRA Subcommittee

Docket Number: (n/a)

Location: Rockville, Maryland

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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

(ACRS)

+ + + + +

RELIABILITY AND PRA SUBCOMMITTEE

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FRIDAY, FEBRUARY 20, 2015

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ROCKVILLE, MARYLAND

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The Subcommittee met at the Nuclear Regulatory Commission, Two White Flint North, Room T2B1, 11545 Rockville Pike, at 1:00 p.m., John W. Stetkar, Chairman, presiding.

COMMITTEE MEMBERS:

JOHN W. STETKAR, Chairman

RONALD G. BALLINGER, Member

DENNIS C. BLEY, Member

CHARLES H. BROWN, JR. Member

JOY REMPE, Member

MICHAEL T. RYAN, Member

STEPHEN P. SCHULTZ, Member

GORDON R. SKILLMAN, Member

DESIGNATED FEDERAL OFFICIAL:

MICHAEL SNODDERLY

ALSO PRESENT:

EDWIN M. HACKETT, Executive Director, ACRS

JOHN BUTLER, NEI

JOSEPH G. GIITTER, NRR

LAWRENCE KOKAJKO, NRR

DAVID LOCHBAUM, UCS*

JOSEPH RIVERS, NSIR

STEVE RUFFIN, NRR

RICHARD F. SCHOFER, NRR

SUNIL D. WEERAKKODY, NRR

ANTONIOS ZOULIS, NRR

*Present via telephone

T-A-B-L-E O-F C-O-N-T-E-N-T-S

P R O C E E D I N G S

(1:00 p.m.)

CHAIRMAN STETKAR: The meeting will now come to order. This is a meeting of the Advisory Committee on Reactor Safeguards Subcommittee on Reliability and Probabilistic Risk Assessment. I'm John Stetkar, Chairman of the Subcommittee. Members in attendance today are Steve Schultz, Dick Skillman, Dennis Bley, Mike Ryan, Ron Ballinger, Charlie Brown, and Joy Rempe.

The purpose of today's meeting is to review a draft notation vote paper for Commission consideration that provides approaches for allowing licensees to propose to the NRC, a prioritization of the implementation of regulatory actions as an integrated set and in a way that reflects their risk significance on a plant-specific basis.

This meeting is open to the public. This meeting is being conducted in accordance with the provisions of the Federal Advisory Committee Act, rules for the conduct of and participation in the meeting have been published in the federal register as part of the notice for this meeting.

The Subcommittee intends to gather information, analyze relevant issues and facts, and

formulate proposed positions and actions, as appropriate, for deliberation by the full committee. Mr. Michael Snodderly is the designated federal official for this meeting. A transcript of the meeting is being kept and it will be made available as stated in the Federal Registry Notice.

Therefore, it's requested that all speakers first identify themselves and speak with sufficient clarity and volume so that they can be readily heard. And again, I'll remind everyone to please silence all of your little communication devices. And I believe that I skipped Dr. Dennis Bley, who is also a Member in attendance at this meeting.

We received written comments and requests to make oral statements from David Lochbaum of the Union of Concerned Scientists, and I believe we're also going to have comment from NEI. I understand that there may be individuals on the bridge line today who are listening in on today's proceedings. The bridge line will be closed on mute so that those individuals may listen in, and at an appropriate time later in the meeting, will have an opportunity for public comments from the bridge line and from members of the public in attendance.

We will now proceed with the meeting and I

call upon Lawrence Kokajko of the Office of Nuclear Reactor Regulation to open up presentations.

MR. KOKAJKO: Thank you. Good afternoon. My name is Lawrence Kokajko. I'm the Director of the Division of Policy and Rulemaking in the Office of Nuclear Reactor Regulation. On behalf of NRR's Division of Policy and Rulemaking and the Division of Risk Assessment, we are pleased to provide this briefing to the ACRS Subcommittee on PRA and Reliability.

Today, are staff will brief you on the cumulative effects of regulation, known as CER, and the Risk Prioritization Initiative, known as RPI, and the SECY paper that is due to the Commission in late March.

As background, our CER efforts examined ways in which the Agency may be able to enhance the efficiency with which it implements regulatory actions while mitigating inappropriate impact of regulatory activities. The goal of RPI is to enable the NRC staff and licensees to focus resources on those things that are most significant for public safety using risk insights and to incentivize the further use and development of probabilistic risk assessment techniques.

CER and RPI were originally two distinct activities which had separate working groups, public

meetings, and recommendations. However, as discussed in COMSECY-14-0014, these activities are closely related and we believe the RPI initiative for operating reactors would help address aspects of CER. Thus, the CER and RPI working groups have merged to develop a paper that provides four consolidated options for nuclear power reactors.

The draft SECY paper also contains an update on the CER efforts in the areas of fuel cycle and the materials program areas, in addition to an update for the nuclear power reactors. We are scheduled to brief the ACRS Full Committee on March 5th. We would welcome any letter from the ACRS on this topic after that meeting.

At this time, I would like to introduce our presenters. First to address you today is Steve Ruffin. He's a project manager in the Division of Policy and Rulemaking and he will discuss CER. The second is Antonios Zoulis, a reliability and risk analyst in the Division of Risk Assessment, and he will discuss the Risk Prioritization Initiative.

I've also asked Joe Rivers from the Office of Nuclear Security and Incident Response to be with us because security is a big part of this and we would like to have his views, and I know you will have some

questions for him, as security and emergency planning may come up during the conversation today on CER and RPI.

And with that opening, Steve, I'd like to turn it over to you, sir.

MR. RUFFIN: Thanks, Lawrence. Good afternoon. I'm Steve Ruffin with the Division of Policy and Rulemaking. I work with Lawrence and I will lead off the discussion on CER. However, because the topics are integrated, Antonios and I will switch back and forth a couple of times as we proceed with the presentations on CER and RPI today.

Our purpose today is to provide you with an overview of the SECY paper which is currently within the management concurrence process here with the staff. Note also that we are scheduled to brief the full ACRS Committee on March 5th, and as Lawrence mentioned, we will be requesting to obtain a letter from the Full Committee.

The presentation will generally follow the outline of the paper. The paper can be viewed as having two objectives. The first objective is to report back to the Commission with an update on CER across the Agency, as well as updates on staff efforts regarding NEI draft guidance.

The second objective is to provide the

Commission with four options for CER and RPI for operating power reactors along with our recommendations. Note that the options and recommendations in the paper apply only to operating power reactors. Slide 4.

So the paper responds to the Commission direction in SRM-COMSECY-14-0014, which merged the deliverables for SRM-COMSECY-12-0137 and SRM-COMGEA-12-0001 and COMWDM-12-0002, which is to provide updates on lessons learned and recommendation on CER, on CER case studies on regulatory analysis, and on RPI demonstration pilots, and to provide options for implementing RPI and how those options may incentivize PRA enhancement. Slide 5, please.

The staff defined cumulative effects of regulations in SECY-12-0137 in October of 2012. For the benefit of the public, I would like to repeat that definition. CER is characterize as the challenges that licensees and other affected entities face while implementing multiple regulatory actions within a limited implementation period and with limited available resources. Slide 6.

The CER update discussion begins with providing the Commission with a status of the Office of Nuclear Material Safety and Safeguards CER activities

for fuel cycle facilities and Agreement States. This is Enclosure 1 of the paper. In summary, fuel cycle maintains an integrated schedule, which provides an overview of significant regulatory activities over a four-year span.

It coordinates multiple regulatory activities and the timing of such milestones, and NMSS also conducts quarterly meetings with stakeholders to discuss their integrated schedule.

For Agreement States, NMSS regularly engages them and provides reports and seeks feedback on rulemaking, they have monthly calls with the Organization of Agreement States, and an Agreement State representative is actually part of the CER/RPI Working Group.

Other than this particular discussion, which is in Enclosure 1 of the paper, all of the options and discussions in the remainder of the paper pertain only to operating power reactors. Slide 6 -- 7. I'm sorry.

The Commission directed the staff to seek volunteers to perform case studies to evaluate the accuracy of costs and schedule estimates with the NRC's regulatory analysis. Those case studies focused on three power reactor regulations; the Part 26, Managing

Fatigue; the 50.488, NFPA-805 for Fire Protection; and Part 73, Physical Protection.

The staff held a public meeting specifically on the case studies in January of 2014. During that meeting, NEI presented its summary. And for Part 26, NEI's summary determined that NRC's cost estimate was two to five times lower than its actual implementation cost, that 50.488, the estimates were roughly six times lower than the implementation cost, and for Part 73, specifically, 73.55, the cost estimate was 19 times lower than implementation cost.

As a result, industry provided three recommendations related to clearly defining the scope, the closure criteria, and the characteristics of NRC's regulatory action, early release of regulatory analysis and detailed implementation guides, and cost estimates -- additional information on cost estimates made in regulatory analysis.

Based on those recommendations, the staff evaluated this information and have made process enhancements related to planned regulators analysis updates, which is discussed in Enclosure 3 of the paper, improvements in cost estimating within the regulatory analysis, including piloting of an independent cost estimate by a contractor, and ways in which risk

insights from generic prioritization could improve our regulatory analysis. Slide 8.

CHAIRMAN STETKAR: Bob, before you drop that, I hadn't heard before that you were considering hiring independent cost estimators. Why?

MR. RUFFIN: Well, we have Fred Schofer here, which is our regulatory analysis team leader here. Fred, could you provide some insights?

MR. SCHOFER: Hello. This is Fred Schofer, NRR. With regard to independent cost estimates, it is an identified best practice that has been pointed out to us by the General Accountability Office and so we are looking to take advantage of that practice.

CHAIRMAN STETKAR: That was one of my questions, because I hadn't heard about it before, Fred. Do other federal agencies who do cost estimation, typically use independent estimators?

MR. SCHOFER: Really, it's much more common for acquisition, but we thought would take advantage of that practice and see if there would be any major differences between what the NRC would estimate and an independent body.

CHAIRMAN STETKAR: Okay. Thank you.

MEMBER SKILLMAN: Steve, let me ask you to

repeat something that you said. What I heard you say is that the estimates were, generally, six times higher than the actual implementation costs. I had thought it was the opposite. I thought the implementation costs were turning out to be many times greater than the estimates.

MR. RUFFIN: That's what I intended to say. Did I say the other way? Okay.

MEMBER SKILLMAN: Okay. So let me get clear in my mind. What you're saying is that the actual costs turned out to be six times greater than the estimates.

MR. RUFFIN: Yes.

MEMBER SKILLMAN: Okay. I think if you check the record, you'll find you might have gotten that --

MR. RUFFIN: So let's clarify. The actual costs for the Part 26 was projected to be two to five times higher, for 50.488, six times higher --

MEMBER SKILLMAN: The actual costs.

MR. RUFFIN: Yes.

MEMBER SKILLMAN: Than the estimate. Okay.

MR. RUFFIN: And for Part 73, specifically 73.55, 19 times.

MEMBER SKILLMAN: Higher than the estimated.

MR. RUFFIN: Yes.

MEMBER SKILLMAN: Copy that.

MR. RUFFIN: For 73.55, yes.

MEMBER SKILLMAN: Thank you.

MR. RUFFIN: Thank you. So next slide. One more. I'm sorry. In SRM-SECY-12-0137, the Commission directed the staff to explore expanding CER for a broader range of regulatory actions. Staff included a request for specific comment on CER in two draft Generic Letters as a pilot. The two draft Generic Letters were learn from the neutron absorbent materials of spent fuel pools, and treatment of natural phenomena hazards in fuel cycle facilities.

The staff did receive feedback on the fuel cycle Generic Letter and determined that the industry response did not identify any significant impact on a licensee's ability to implement other significant NRC requirements as responding to a Generic Letter. The staff proposed to continue this pilot, not only for other generic communications, such as bulletins, regulatory issue summaries, information notices, security advisories, or information assessment team advisories, the staff did not see a need to expand the

pilot to these generic communications.

MEMBER SCHULTZ: Steve, do you feel that the lack of response was -- do you have a reason, a rationale, for it for these particular test applications? You basically said, here's an opportunity to provide comments relates to the impact of the regulation, but you -- from what I read, you weren't getting any response, really, that was material to the questions that were being asked, and the questions are good ones, but did you investigate or determine why you didn't get a response that you thought you might?

MR. RUFFIN: We've only piloted on two.

MEMBER SCHULTZ: Right.

MR. RUFFIN: So it's a really small sample size.

MEMBER SCHULTZ: It is.

MR. RUFFIN: And so we're going to continue to pilot and I think as we get more -- see what kind of response we get from the industry, maybe we'll be able to answer that question better, but I think we're too -- it's hard to draw any kind of conclusion as to why -- because they responded to the one for fuel cycle. There just wasn't a response to the one for the spent fuel pools.

So we sent out two; they responded to one of them.

MEMBER SCHULTZ: Thank you.

MR. RUFFIN: So we're now going to move to Slide 8 and Antonios is going to pickup the conversation with regards to NEI Draft Guidance.

MR. ZOULIS: Good afternoon. My name is Antonios Zoulis and I thank you for the opportunity to present to you today. Just to let you know how coordinated and intertwined they are, our wardrobes are also coordinated. That's how closely related those two topics are.

So as you know, of course, in November of last year, the industry and staff presented to the Subcommittee, in detail, on the draft NEI Guidance for Prioritization and Scheduling. On a high level, the guidance consisted of three major aspects. One is the generic assessment portion, which is conducted by subject matter experts to evaluate an issue on the generic level, and then that information can inform various other topics, such as reg analysis and other things that the plant-specific evaluation could use when they do their prioritization process.

And that leads into the second aspect, which is the Integrated Decision-Making Panel, which is

conducted at the site, and then prioritizes the issues using plant-specific information. Once that's completed, the issues are then aggregated and evaluated in the aggregate to determine the overall priority for those issues. So on a high level, that is what the guidance encompasses.

Both the NRC summary report and the industry summary report are provided for you for your convenience. The ADAMS Accession Numbers are listed on the slide. I won't go into further detail, but I want to hit some highlights and takeaways that we took from our observation and participation in the demonstration pilots.

So the process the staff observed during numerous interactions and public meetings, tabletop exercises, and the demonstration pilots is a robust process and provides a common frame of reference to conduct risk-informed decision making to support prioritization of regulatory as well as planned initiated activities.

One of the strengths that we saw was the ability for the panel to address both the adverse effects of an issue as well as the positive aspects, so we thought that was a very strong aspect of the process.

And in addition, when the IDP utilized

plan-specific PRA information, it facilitated the prioritization process, so by using the PRA, we saw that the discussions were much more focused on the safety impact of the issue. On the other side, we know, as everyone in this meeting knows, that emergency preparedness, radiation protection, and security are not amenable to risk modification.

So that leads the process to develop qualitative flowcharts to characterize issues, and that could result in some subjective evaluations. However, there has been improvements made to the guidance and we're continuing to work on improving the guidance to make sure that those issues are being characterized appropriately.

Now I want to go into more in the areas of what the Commission specifically asked the staff to evaluate as part of this initiative. In February of 2013, the Commission approved the initiative to further explore the idea of enhancing nuclear safety and regulatory efficiency by applying probabilistic risk assessment. The goal of RPI was to enable the NRC staff and licensees to focus resources on issues that are most significant to public safety using risk insights and incentivize the further use and development of PRA.

In other words, nuclear safety's advance

with licensees and staff focused their time, attention, and resources on issues of greater safety significance at each plant, i.e., addressing the most safety significant issues first.

The next slides are discussions that we're going to go into, help to form how we developed the options that we're going to talk about later. And I want to make a very important distinction that, all the options promote the use of PRA and some, the development. So that's a very, kind of, subtle characteristic is that, when we observe the demonstration pilots, by having PRA discussed at the IDP level, the Integrated Decision-Making Panel, that exposed other disciplines at the site to PRA where, in other words, what they do, they may not have been exposed to.

So we did observe that this process did promote the use of PRA. So I think that's a very important distinction between the use and the development of PRA. Next slide.

One of the issues that the SRM-COMSECY-14-0014 asked us, the staff, to evaluate was how corrective actions for findings, violations, and degraded or non-conforming conditions, adverse to quality, could be treated as part of RPI. We engaged

a regional staff counterparts, we've engaged the Division of Inspection and Regional Support in NRR, and the Office of Enforcement to evaluate this direction.

What we concluded was, and as many of you know, that the ROP is a mature process and is already risk informed in many of the areas. In addition, we feel that the licensee's corrective action program under the ROP has flexibility to already prioritize in how to address the corrective actions associated with these findings, and most of these are related to very low safety significant issues, and I'll explain that in the next slide.

So as one of the fundamental subjects of the ROP is that corrective actions associated with green and higher significant findings would be promptly addressed, and from our experience, from GRA's experience, with the ROP, most of the corrective actions associated with higher significant findings are already completed even before the final determination letter is issued by the NRC.

So we're really focusing on the very low safety significant corrective actions, which, licensees already have a lot of flexibility to prioritize as part of their routine work. And we have inspection guidance that delineates what is meant by

prompt, and also, as I mentioned before, the flexibility of the corrective action program to already handle that is already in the ROP.

So we felt that if a process now was overlaid on top of the already at-risk informed process, it could result in a continuous deferral of issues and we didn't see -- especially for these very low safety significant corrective issues, that there was any benefit from having them in the scope of the RPI.

In addition, it could also impact or complicate the follow-on supplemental inspections that could result from moving the licensee from one column to the other if those corrective actions weren't closed out or were deferred. So the bottom-line is, the guidance right now is, as it states, next slide, only allows the prioritization of docketed commitments resulting from inspection findings.

So our counterparts in the region and the staff at headquarters are comfortable with that small subset of issues being prioritized.

CHAIRMAN STETKAR: I'm really confused about this, Antonios, so you're going to have to explain this to me so a simpleminded guy can understand it, and I'll read your quote from the document. "The NRC staff disagrees with the industry on this aspect because the

ROP itself is already risk-informed.", which is a point you've made. "The NRC staff is of the review that introducing another risk-informed process may result in regulatory instability since RPI guidance may conflict with ROP guidance." Explain to me how that can conflict.

If I'm using risk assessment to determine the significance of an inspection finding, using, let's say, a SPAR model, and the industry is using their PRA, and you come to agreement that the risk significance is X, why would the RPI process, which uses the same risk model, come up with a different conclusion about the relative risk of that particular finding?

MR. ZOULIS: The issue is not about the significance. The issue is, when will the prompt corrective action be completed.

CHAIRMAN STETKAR: And why should the prompt corrective action for something that is totally insignificant to safety have higher priority than the resolution of something that's more important to safety, simply because that thing has been identified by some auditor that happens to wear an NRC badge as opposed to someone who's at the plant?

MR. ZOULIS: One of the issues is that the process doesn't deal well with issues of

non-conformance. And the fundamental instruction of the ROP is that you will address those issues promptly. If you allow them to continually be deferred, there's a chance, which is not very well quantified, that the failure rate, or the risk increase is going to increase as time goes on.

So the fundamental instructions that you're going to take care of those degraded issues in a timely fashion, if you allow them now -- if you allow this process to allow the deferral of those issues, that fundamental assumption now is being challenged, and that's where we believe --

CHAIRMAN STETKAR: But the RPI process, as I understand it, has a periodic re-evaluation of issues. And also, at least the last guidance I saw, has something like three refueling outages, kind of a time backstop on things, so I'm still not -- I'm curious why these particular issues that are identified by a particular policeman, doing a particular focused audit, ought to have higher priority, just because they're identified that way, than other issues.

MR. ZOULIS: I think it has to do with the compliance concern and the issue that we've already, under the ROP, given flexibility for licensees to manage their corrective action program to be able to address

those issues on a timely fashion. Once you challenge that fundamental assumption, I think you introduce a lot of issues that this process was not intended to address.

CHAIRMAN STETKAR: But this process is intended to put highest priority on things that are most important to safety, regardless of how they're identified, and by whom.

MR. ZOULIS: I think the intent was not to go down to the weeds and --

CHAIRMAN STETKAR: If something is in the weeds, it's in the weeds.

MR. GIITTER: I think the point is that there is a well-established process in existence for -- the licensees have it in their corrective action program for dealing with inspection findings, that if you were to open that up and throw it in with everything else, it creates additional complications. And I think it's because there is an established program that licensees have for corrective actions, the feeling was, we didn't want to perturbate that process that's already in place.

CHAIRMAN STETKAR: Well, I'll be the devil's advocate, Joe. If it's an established process, but it's placing higher priority on things that are less important, simply because the policeman says that I must pay attention to that --

MR. GIITTER: I understand your point.

CHAIRMAN STETKAR: -- that is not --

MR. GIITTER: I understand your point.

CHAIRMAN STETKAR: -- the whole focus of this initiative.

MEMBER SCHULTZ: It seems like a missed opportunity, that is, it came -- in the words that you said, I think you intended it to say that you have a finding and a number of corrective actions may be proposed, there may be a dozen corrective actions, and they will have a priority of their own, and hopefully, they would be prioritized so that a licensee would have some that are of lower significance, and if you have another issue that comes up, you'd want to be prioritizing more important safety issues and corrective actions before those.

CHAIRMAN STETKAR: Except for what I'm reading and what I'm hearing, you're saying that those corrective actions in response to an inspection finding are put over here, and everything else is evaluated over here.

MEMBER SCHULTZ: That's why I say it's a missed opportunity.

CHAIRMAN STETKAR: That's right.

MEMBER SCHULTZ: Not to integrate that

into the process.

MEMBER BLEY: Yes, but I'm still confused. As I watched the ROP in action, watch what you guys do, if there's an inspection finding, it's evaluated by color and the wrote, and given its priority from that. If it's not the best one, then they have to do something. And I guess that is what you do, but for the things that are picked up in the plant and go into their program, they can order those on their own.

I guess I'm still confused why if something coming up that way is evaluated using the wrote, do they evaluate the things in their own program using the wrote approach?

MR. ZOULIS: The corrective programs have their own priorities built-in.

MEMBER BLEY: Okay.

MR. ZOULIS: They have their own --

MEMBER BLEY: So there isn't an alignment of the priorities.

MR. ZOULIS: Have the flexibility to address them, but we need to have the ability to be able to come in on follow-on inspections to determine how those corrective actions were closed. If an inspector now goes into the site to do his follow-on inspection on an issue, and he goes in and is told that, well, we

used the RPI process to defer this six years from now, come back later and conduct your inspection, I mean, I don't know how -- first of all, I don't see the benefit for the plant to apply all those resources, to apply this process on those very low significant issues, when they already have a way to prioritize them now.

The way I envisioned the RPI was more for big items, more on the long-range planning items, not for it to go into that level of detail where, like I said, we have a mature process in place that already provides the licensee flexibility to address those issues.

MEMBER BLEY: I guess I got a little bitter this morning.

CHAIRMAN STETKAR: Suppose I come across a heater drain pump and it's making a lot of noise, something that your ROP doesn't even look at. It's making a lot of noise and I find out that, oh, my God, you know, we have an obsolescence issue on this heater drain. Heater drain pump goes belly-up, I'm like to get a plant trip. Plant trips are not very good. It's not even anything that you would ever identify because it's non-safety related, and, man, I want to replace that heater drain pump because I've done a risk assessment to say that the likelihood of having loss of feedwater initiating event is pretty important.

And yet, you identify something because there's an obsolescence issue on some screw on a relay that has minimal risk significance, suddenly, I have to put higher priority on that because it's identified during an audit and an inspection of some safety-related piece of equipment?

MR. GIITTER: I think the point is, licensees already have the flexibility within their corrective action program to make those decisions about which modifications are most important.

CHAIRMAN STETKAR: Sure.

MR. GIITTER: They don't have to work right away on that screw. They can put that off.

CHAIRMAN STETKAR: But why not integrate it with everything else with that heater drain pump?

MR. GIITTER: Yes.

CHAIRMAN STETKAR: I mean, why not?

MR. GIITTER: It's something that, you know, that's one of the differences we currently have with industry. It's something we're going to have to continue to pursue in the long run. I can just tell you that there's different views on that, you know, within the staff, and it's an issue that we're going to have to continue to work through. But the staff's original, or initial, conclusion is that, as Antonios stated,

there is a corrective action program in place that allows flexibility. It gives licensees flexibility in determining what's important.

There's no reason they couldn't, in terms of making those decisions on their own, stack it up against whatever they come up with for RPI. That's certainly something they could do. There's nothing prohibiting them from doing that.

MEMBER BLEY: I guess, and it goes back to your Slide 13, this discussion was all hinged on the idea that, even with a green finding, you expect them to promptly deal with it. I don't know if we've had cases, and maybe the industry will tell us whether we have or not, where something that was shown, through your process, to be of no or minimal risk significance, dealing with that somehow interfered with something that, should you have known about it, might have had something other than a green finding, and made that be delayed to take care of this one because somewhere we've got words that say prompt on these and we don't have that on their corrective action program.

I don't know if it's a problem, but intellectually, it's not in a satisfying spot. Not intellectually, from a safety point of view, it's not an ideal spot.

MEMBER SKILLMAN: Seems to me we've got a mix of apples and oranges here. I'll give you an example, and I dealt with this for years in my roles at TMI. About degraded, two examples, an ECCS relay in 4160 that's necessary for emergency core cooling is buzzing or chattering. What we learned in the course of time is, that becomes inoperable when you lose your confidence that it's operable.

And you normally end up at an understanding of importance by discussion between the risk analyst at the site and the region risk analyst, who also has a PRA for the site, and it's kind of the front end of the significance determination for that particular device for that system.

My experience is that that was a very smooth interaction, very collegial, very respectful, and sometimes we would say, we think we're operable, and region would say, we think you're not, or region would say, we think you're okay, and we would say, we're going to take action anyways because we're not comfortable that we want to go the next week or two weeks.

Another very good example would be, Number 1 seal leak off on a reactor coolant pump, you're allowed up to 10 gallons a minute identified leak-off. You may not go above 1 unidentified. So Number 1 seal leak-off

is running at 6 gallons a minute, the question is, when do you take the pump out and fix that? And if you're within two months of an outage, you might say, I'm going to wait because the overall risk is less by waiting than taking the plant down, bringing it up, taking it down again.

So the point I want to make is, this issue is really in the center, not so much of Appendix B to 10 CFR 50 in corrective action, this is more in the work management program, either of the unit or the utility, how they identify risk, how the shift manager, and how the utility determines what is the best path forward.

So all of these elements are really getting into the work management program, not so much the corrective action program, although the corrective action program would identify the degraded condition. So in real life, this would be handled out of the risk prioritization in work management and it would be the work management leaders who would say, this needs attention now, not tomorrow, bring in people, we're working on this through the night, and that would get the pump that John's talking about, but this is a work management issue, not a corrective action issue.

MR. ZOULIS: That's exactly right. And I think that was never intended to replace --

MEMBER SKILLMAN: Work management.

MR. ZOULIS: -- your already well-established work management program, your corrective action program, and other programs. It was more to assist you in planning major initiatives and comparing them against regulatory missions and perhaps it's a regulatory or a prime issue is more important, let's do that first, and defer the other one.

MEMBER SKILLMAN: Yes. And I think the plant language would be, the RPI will be a very good tool for minor modifications and major capital modifications, but not day-to-day addressing of emergent issues, some of which are prompt, and some of which can legitimately and safely be delayed.

MR. ZOULIS: Right. And that's exactly right. Thank you.

MEMBER SKILLMAN: Thanks.

MR. ZOULIS: Here we go to the -- to get to the center of what the Commission requested the staff to explore, a process that would allow licensees to prioritize regulatory activities on a plant-specific basis and an integrated set. Furthermore, the process would allow licensees to propose alternatives or perhaps eliminate issues if they were supported with a full scope Level 1 and 2 PRA and were of very low safety

significance.

The staff, I can tell you, spent many hours thinking and deliberating on how this process could fit under our current regulatory framework. We concluded that the only way we would be able to adequately implement such a process would be through new rulemaking, and in that rulemaking, we would be able to establish the criteria for licensees to reschedule issues and what criteria would be required for them to, perhaps, defer or eliminate issues.

And this is where the incentivization of the actual PRA was to be able to do that, and by developing PRA, you would get that additional flexibility. So we concluded that, only through rulemaking, were we able to implement such a process, and we'll get to that later on in the Option 4 discussion.

Another issue the Commission asked us to evaluate was issue management. The Commission was concerned that allowing the continuous deferral of regulatory activities would eliminate or diminish their safety benefit if they were continuously deferred. In other words, they asked us to explore a backstop.

As we go through the discussions of the options, I will highlight where we felt that a backstop

may or may not be applicable and how we thought about that for each option.

MR. RUFFIN: So on Slide 17 we have provided an illustration to show you what the components of each of the four options are as discussed in the paper, and also to illustrate how the options build on each other, such that Option 2 includes the CER process enhancements already approved, and are implemented, which is currently Option 1, Option 3 includes an expert panel, plus the risk-informed prioritization methodology in Option 2, in addition to the CER process enhancements in Option 1, and Option 4 includes all the CER and RPI enhancements in Options 1 through 3.

The staff proposes a phased approach for implementation with regard to these options, and as stated earlier, all four options pertain to operating power reactors only. Slide 18.

So Option 1 is the status quo today, and that is, all the CER process enhancements that have been approved previously and are implemented, such as those rulemaking enhancements in SECY-11-0032, which includes interaction with stakeholders throughout all phases of the rulemaking process, explicit requests for stakeholder feedback on CER during the proposed rule stage, concurrent publication of the draft guidance

with the draft rule, and final guides with the final rule, and a public meeting after the implementation phase of the final rule.

And as mentioned earlier, and as Fred discussed, also exploring the use of contractors to develop independent cost estimates, and continuing to pilot expanding CER to Generic Letters.

The pros of Option 1, the status quo, is, it doesn't require additional staff resources. It maintains the existing regulatory processes. It continues the current approach to regulation that is current and well understood. It implements all of those process enhancements that we've already had to provide to the Commission, recommended to the Commission, that's approved already.

The cons, however, on Option 1 is on Page 20. It does not incentivize licensees to use or develop PRA models and it may not resolve some of industry's concerns with existing or future requirements. Page 21. Option 2 has two parts.

One part of Option 2 is in the paper, the staff proposes to create an expert panel. This panel will be similar to the industry's generic assessment expert team or the staff proposes to either create a panel similar to that or expand the role of an existing

panel to incorporate the function of that gate.

The role of the expert panel would be to make recommendations using risk insights and other relevant technical information to prioritize, and eliminate as appropriate, proposed regulatory actions. This will be applied across the NRR business line and this information could be used by the NRR office director to ensure that NRC resources and skillsets are focused on the items of highest risk significance, and a panel could be comprised of senior agency managers and subject matter experts.

CHAIRMAN STETKAR: Steve, as I read through this, I came across this, and it confused the heck out of me for a couple of reasons. First of all, why do we need Commission guidance or approval to establish this expert panel? Second of all, doesn't our regulatory analysis process already account for the use of risk information? I mean, we've had several -- looked at several regulatory analyses, spent fuel transfer, venting, filtered venting.

You know, we may take -- have differences of opinion about quality of the risk assessments, but risk insights come out in there. I don't understand, why do we need this panel, and furthermore, why do we need Commission approval to establish this panel?

MR. RUFFIN: There has been a lot of discussion at the Working Group level regarding the panel; the need for the expert panel, where it gets inserted within the process, the function of it, how does it compliment or not conflict with other existing processes?

And I can tell you, there isn't a 100 percent consensus on that, but the thinking was that if it is truly an independent panel outside of those processes, it might require us to have the Commission endorse that. If it's a panel that's embedded within current processes, then we could do that on our own.

CHAIRMAN STETKAR: But I mean, the staff is already updating the guidance for regulatory analyses. There's some schedule and project plan out there for updating whatever it is, NUREG/BR-0058, or something like that, the associated guidance, why isn't this notion of this panel, whether it's an independent panel, or not independent panel, or whatever the panel is, embodied in that?

I mean, my question is, why are we cluttering up these options as saying, well, you take Option 2, which includes what I've always thought of as the risk prioritization initiative, and oh, by the way, the NRC staff has to have this expert panel to provide

risk insights for regulatory activities?

MR. ZOULIS: Again, as Steve alluded to, there's differences of opinion within the working level on what the expert panel would do. One idea is that it would not only look at rules, it would look at orders, generic communications, other issues that are on the table, and then apply risk insights to prioritize, or perhaps figure out whether or not we should be doing certain things on a higher level across the operating business line.

So we're piloting it at a very small level, but if successful, could have broader exposure, so the issue that we're piloting now because, again, we're struggling with, what is the scope of the panel, where should it fall under, what should we be looking at? So there's more there than just --

CHAIRMAN STETKAR: And again, this is a Subcommittee meeting, so I'll give you my personal -- I don't disagree with that notion. I just don't understand why it is being brought to light as part of this risk prioritization initiative and why it isn't being addressed, you know, as part of the normal use of risk information throughout the agency.

MR. RUFFIN: Well, okay, but let me say that, when we merged the two SRMs, so it's not strictly

a risk prioritization initiative paper anymore. We're still responding to some CER aspects and this is a CER aspect where this panel within NRC would have the ability to prioritize, and where applicable, eliminate a regulatory action before it ever, you know, continues on.

So that becomes CER, and then where we gain efficiency also is, that then allows the decision makers, the deciders, to focus NRC's resources on the areas where they think our highest priorities that offer the --

CHAIRMAN STETKAR: That's certainly the most compelling argument I've heard. I'll tell you, reading the text, it certainly didn't come across.

MEMBER SCHULTZ: It didn't come across the way at all.

MR. RUFFIN: It didn't come across that way?

MEMBER SCHULTZ: It seemed as if in Option 2 there was some sort of combination of what has already been piloted in the industry and what NRC's oversight and then this, suddenly, an expert panel that's also going to weigh-in in these activities, and so the concept and the purpose of the expert panel is not well laid out.

MR. RUFFIN: It's not very clear?

CHAIRMAN STETKAR: It's not very clear and it's presented, at least as I read it, in the context of those regulatory analysis decision making, which is, again, I was under the naive impression that there already was some high level risk insights brought into that process.

MR. RUFFIN: Yes, we don't, at least the Working Group thought, think that there is a current any other existing team or panel that functions -- provide this benefit.

CHAIRMAN STETKAR: Okay.

MR. ZOULIS: And the link, of course, is that, when we observe the gate, that kind of inspired us to say that, that may be something that we could use internally, and then -- you know, and that could support the CER interactions early on if an issue, you know, maybe, perhaps, the generic gate could evaluate it, they could provide input to the NRC during rulemaking, and then that could be evaluated, so there is a relationship there. It's not totally, you know, disconnected.

But again, we're still piloting this, so how and what the panel would do is still --

CHAIRMAN STETKAR: You may want to consider in the text, making some of that distinctions

a little more clearer.

MR. RUFFIN: Clarify it some.

CHAIRMAN STETKAR: You did indicate there were two parts, but in the text and development, it all seemed to merge into one part between the initiative as well as the actions associated with the CER impact focus.

MEMBER SKILLMAN: I'd like to ask, just based on this several minute exchange, how you are -- how the staff is immune from the assertion that some expert panel review for CER should have been part of your process all along. Seems like the industry, or the public, could say, why haven't you always been behaving in a way that was assuring that the regulatory changes that you might be considering or the regulations you would be enforcing should have already been considered from a relative risk perspective so that the only ones you're really going after are the ones that are really value added?

Seems like you're wide open to that assertion.

MR. KOKAJKO: Yes, sir. The questions that you have are very valid, all of them are, and as they pointed out, the Working Group is of -- there are several minds about how this should be implemented and

the implementation details are, clearly, to be formed. The comment earlier about couldn't some other committee or group be doing this? The answer is, yes. In fact, the Committee to Review Generic Requirements, CRGR, could be, in fact, part of that process, but we'd have to amend their charter.

This would also get resource commitments that perhaps would need to come into play, and resource commitments, of course, are done by the business line and approved by the Commission, so anytime that we would be directing resources, we would need some type of Commission engagement, potentially, some time in the future.

Also, this Committee, in my view, is the regulatory analysis under Fred Schofer, who spoke earlier, I think does a very admirable job, but one of the things that this expert panel can do is look at things on a generic basis, which sometimes, the regulatory analysis is focused on just one specific item and this panel could, conceivably, look at things more broadly, and in so, might find a gap that might have been missed.

I don't pretend to say that we know how this panel's going to work and whether or not it would be as successful as what appears to be doing on a

plant-specific basis in the generic assessment team that NEI proposed in their document. I don't know that yet, but I think we were encouraged that it could work here.

And one of the things that was identified early on was, we needed some generic approach to some of this work, and we thought this might be a method by which we could do that, and so you see it in the paper as such. Whether it needs to be more clearly laid out, as one commenter noted, perhaps that's true. The paper is still working through concurrence now and, you know, we're making changes, still, to the document.

MEMBER SKILLMAN: I'd like to add to my prior comment. Clairvoyance isn't part of anybody's skillset and a lot of this is learning as we go, and so there's need to be some mercy in this discussion because we just don't know what we don't know, and so suggesting that people should have known and should have been doing it is presumptuous. I acknowledge that. But it does seem to me it'd be a logical question, shouldn't there have been some form of consideration before we move ahead with some of this stuff?

MR. KOKAJKO: Yes, sir.

MEMBER SKILLMAN: That's all. Thanks.

CHAIRMAN STETKAR: But I think, you know,

as I read through the document, I, basically, got distracted by this and tried to understand how it related to Options 2, 3, and 4, for example, and I, honestly, you know, until today's discussion, I think I have a little better sense, but I would hope that when it's presented to the Commission, there isn't similar distraction or possible confusion, you know, regardless of what my own personal opinion might be about whether it's a good idea to have that type of body or not.

MR. ZOULIS: The feedback is appreciated.

MEMBER SCHULTZ: One way it came is across is that, the industry approach has Panel A, and Panel B, and therefore, in reviewing what industry might propose, NRC needs an expert panel in order to provide that review. And so it wasn't clear, as it is in this slide, that the intent is to do, not only a pre-look, but a global look at the regulatory process in order to provide a panel that would work to optimize that, and yes, there might be some gaps that are found.

There may be -- one would also hope, since we're talking about cumulative effects of regulation, many opportunities to say, in the grand scheme of things, in a safety and risk perspective, we don't need to do what is being proposed. We ought to set these things aside. And I would certainly recommend that

there needs to be a tie with regard to generic issue evaluation as well and any panel that might be developed here.

There has to be a clear indication that what is being reviewed by one part of the organization is being seen by the other.

MR. ZOULIS: I dare to go out on a limb, but I hope I'm not muddying the waters more, but I was listening to the presentation on Project Aim, I don't know if you were aware of it, and when I was listening to that conversation, to me, it spoke to this kind of panel that would be able to look at what we're doing across -- of course, we're not proposing it that way, but across multiple business lines and focusing the resources to the most significant issues.

And this would be a process that would be robust, it would be standardized, you know, it would be transparent. I mean, when I was at the presentation, all I could think about was this expert panel. That's just my thought on that.

MR. RUFFIN: And I think by merging those two SRMs and presenting one paper, you know, because we started out with a draft paper where we talk about responding to one SRM and then we talk about the other one, they were, kind of, two separate things, and so as

we merged them, I can understand how there may be a little bit of confusion introduced in terms of when we talk about CER and RPI together.

But in the big picture, this panel is CER for NRC.

CHAIRMAN STETKAR: I think also, part of, at least my confusion, was there are a lot of -- in the introduction to our discussion this afternoon, both in the paper and the enclosures to the paper, and in your introduction, you seem to make a point that the agency is already doing, or has done a lot, in the area of CER. And that, again, was why I was kind of surprised about what this expert panel is doing.

Here you're saying, well, we have done a lot of things, but in addition to that, we think that the Agency could benefit from this type of activity. You follow me?

MR. RUFFIN: Thank you.

MR. GIITTER: This is Joe Giitter. I just wanted to kind of amplify on my understanding of how this would work. When we do a reg analysis, we're looking at a specific issue. And it kind of goes back to what our discussion was this morning, where you sit is where you stand. If you have a particular perspective on an issue, you're going to go into looking at that issue with

some bias.

What this panel might do would be to look at across the board issues and apply a risk perspective in a way that we currently don't do. So it's looking more holistically at our priorities as an Agency, not just what's in front of you and the reg analysis supporting that. Does that help at all?

CHAIRMAN STETKAR: The oral discussion this afternoon helps a lot.

MEMBER RYAN: Just a follow-up comment. It's something that's been in my brain for the last half hour or so, and that is, how do you integrate, you know, two or three different views on a particular topic in this scheme? And I think you have to figure out how you're going to do that before you start to do it, you'll end up -- I'm sorry. You'll end up kind of running into a wall.

So I'm a little nervous that, you know, some of the issues that Dick was talking about might get swept away because the process is what people are focused on and not the content of the process and the outcome. I just worry about jumping into a revised process of some kind because people will focus on, well, how do I get this done? I used to do it this way, now I got to do it this way, and that kind of thing, and I'm a little

nervous that there's going to be some training or some kind of rollout that lets people be successful as they start and then as they get better at it. Does that make sense or am I off-base? Thank you.

MR. RUFFIN: So we'll move to Slide 22, and so as you've already pointed out, Option 2 has two parts. And Slide 2 is the other part that -- Slide 22 is the other part that Antonios is going to speak to.

MR. ZOULIS: So as we thought about how to implement RPI, we thought of enhancing our existing regulatory processes to use a risk-informed prioritization process for scheduling regulatory issues. The licensee could use the prioritization process on site, determine which issues they felt they needed to reschedule, they would then submit those, as they would do today, using whatever -- if it's a rule, they would use an exemption, if it's an order, an order modification, an amendment change, and submit it to us for approval.

On our side, we would have developed templates, review plans to be able to facilitate the review of these submittals and to ensure consistency in the information that was provided.

MEMBER RYAN: That's a helpful summary and I think that kind of discussion, or that kind of

guidance, I guess, will really have to be, I think, formalized to help licensees really get a hold of it and, you know, get started on the right foot.

MR. ZOULIS: And we would, of course, endorse a method of risk-informed prioritization. In this case, we're looking at the NEI guidance that was provided to us. This kind of illustrates what I'm talking about, so you would endorse the guidance, the NEI guidance in this case, with exceptions and clarifications as necessary, the licensee then would conduct their periodic reviews onsite, determine which issues they would want to come in for a scheduled change, and depending on what the regulatory vehicle, whether it's a rule, an order, or a licensing amendment, it would be submitted to us accordingly, and we would then approve or not accept that issue.

So we build on, kind of, what we have in place today, but we augment it with this risk prioritization process.

CHAIRMAN STETKAR: So I can use this process to file an exemption to extend the time for compliance with a rule, but I can't do it to replace some screws on a relay that have been found during an inspection audit.

MR. ZOULIS: I'll defer to Joe on that. No

comment.

MR. RUFFIN: Is this Slide 24?

MR. ZOULIS: So some of the pros --

MR. GIITTER: I understand your concerns.

CHAIRMAN STETKAR: The answer is yes, the way it's --

MR. ZOULIS: Some of the pros are that it does go to the use of PRA risk insights both at the licensee and at the NRC. It supports the industry and the Agency's efforts in CER by focusing resources on issues of greater safety significance. By establishing this common frame of reference, we could, perhaps, reduce the review time for these changes in the long term, and by using an expert panel, that could also ensure that resources at the NRC are being focused on issues of highest safety significance, so for Option 2, those are the pros.

MEMBER BROWN: You introduce another panel and how in the world does that speed stuff up? I never see you putting another group in-between going from Point A to Point B, that that actually accelerates the process. I'm a little bit of a skeptic on that.

MR. ZOULIS: Those pros are two different -- one is focusing on the second part of Option 2 and the last one was focusing on the expert panel. So the

expert panel, hopefully, could have focused the staff's time and attention to issues of the most safety significance, this augmented prioritization process, if we have the established templates and the guidance, could streamline the change requests that come to us.

MR. RUFFIN: So in the paper, the panel part and the pros and cons are discussed separately from RPI, but in the slides, we kind of lumped the pros together and the cons together. So that expert panel doesn't speed up. That expert panel, in the paper, we may say, may add some time because that's another process that they need to go that may end up eliminating that regulatory action all together, so it's not presented that way in the paper.

The paper actually has Part 1, the option and implementation, and Part 2, the option and implementation. It's just that, on the slide here, we put the pros together for both Part 1 and Part 2 of Option 2.

MR. ZOULIS: To be concise.

MEMBER SCHULTZ: Antonios, that third bullet there, to me, is -- may reduce the review time. Why do we have to say it, may reduce it? I mean, isn't the whole intent here to move in that direction? I mean, I understand. I just --

MR. ZOULIS: I mean, I would hope that we would introduce something that --

MEMBER SCHULTZ: The more I get concerned that we're going to spend a lot of time and effort and not achieve what we ought to.

MR. ZOULIS: Yes, I would hope that it would not increase the time, but I mean, we're just trying to be, you know, kind of -- and remember, when we develop these, we're considering everyone's opinion, the Working Group Members, and other members of the staff, so we're trying to be balanced in the presentation.

MR. RIBERS: You know, one thing to think about is, if I introduce something into a process that's structured and provides a lot of detail, background information, and constructive support for something, it should take less time to review it, so it's probably not may, but probably more likely.

MEMBER SCHULTZ: That's what I would be hoping.

MR. RIBERS: It should. I think the key is that you're introducing something into the process that's meant to give substantial information for the reviewer to make a decision.

MEMBER SCHULTZ: Yes, and on the other

hand, playing devil's advocate, if you file something that raises, you know, 37 RAIs over a particular nuance, it's going to extend the time.

MR. RIBERS: Well, but hopefully, you know, as this process would progress, that both sides would get smarter on the process.

MEMBER SCHULTZ: That's right. You'd understand the -- the licensees would understand the expectation.

MR. RIBERS: Right. You know, the first couple of times, it may not play out, but after that, it should.

MR. ZOULIS: All right. Thank you, John. Now, the cons, it's voluntary, so it wouldn't incentivize licensees to further develop or enhance PRA models and it may actually increase the number of associated -- for certain exemptions in the short term, as Joe mentioned. And of course, it would require additional staff resources to develop the supporting templates and standard review plans.

MEMBER SCHULTZ: So just on that first bullet, is what you're saying there, you're talking about licensees in terms of all licensees?

MR. ZOULIS: Yes.

MEMBER SCHULTZ: Because if it's

voluntary, you would hope it, in fact, would incentivize some licensees, at least, and if it's really good, in terms of its benefit, the more the merrier.

MR. ZOULIS: But again, this is where the nuances about developing as opposed to using. So it may or may not incentivize the development, it'll promote the use, as we mentioned earlier, but in the development --

CHAIRMAN STETKAR: Because there, the devil, you know, I hate the term, the devil's in the details, but however the regulatory guidance, what emphasis the regulatory guidance places on quantitative versus qualitative decision making, could actually provide incentives to develop and enhance PRA.

MR. ZOULIS: But at the same time, if we make it too complicated, it becomes a burdensome process that nobody will use. So that's a balance that we need to --

CHAIRMAN STETKAR: It's voluntary.

MR. ZOULIS: But we'd like somebody to use it. Next slide, please. So in the inspection and enforcement, the staff would review and approve any changes to the schedule of implementations according with the existing processes. Through our interactions with the region, we felt that the impact to the

inspection and enforcement of these issues would be minimal since the reviews are conducted on a case-by-case basis.

And I mentioned that about the backstop earlier, for this option, because each of the issues are reviewed on a case-by-case basis, we don't think that the backstop is applicable here, because, for example, if an issue's come in for a second deferral, then the staff could review it on its own merits at that time to determine whether or not it's justified.

So the need, I think, for a backstop here is kind of moot or unapplicable.

CHAIRMAN STETKAR: It's okay to not have backstop on a rule that you have to have one on anymore in inspection findings.

MR. ZOULIS: For Option 3, again, Option 2 focused more on issues that are already out there. For Option 3, we're looking at for future rules or orders where we would allow licensees to provide to us a specific date of implementation. So a licensee could either conform to a generic date or they could use an approved prioritization method, the same one as in Option 2, to provide to us a date, based on what they have on their plate today, on when they would be able to comply to that new rule or order.

So again, the important feature here is that it allows licensees to use plant-specific risk insights to inform the implementation of these new rules or orders, or other regulatory actions.

CHAIRMAN STETKAR: Antonios?

MR. ZOULIS: Yes, sir.

CHAIRMAN STETKAR: Well, I'll let you get -- I'm going to need some help in understanding why Option 3 is different from Option 2.

MR. ZOULIS: That's a very good question.

CHAIRMAN STETKAR: Okay.

MR. ZOULIS: Very good.

CHAIRMAN STETKAR: So I'll let you get as far as -- but I'm not going to forget it.

MR. ZOULIS: So here's my lovely graph that shows, you have the order, you have this approved guidance that we've already with the reg guide in Option 2, the licensee would then use that to either propose a specific date or just use the generic date that's embedded in the requirement. The only difference between Option 2 and Option 3 is, one, looking at issues that have already on their plate today. This is for issues in the future.

So if you want to think of Option 3 being proactive in that, as we're issuing you rules and

requirements, we're engaging the licensee through -- as part of CER to provide to us when they believe, based on what they have on their plate today, they could implement this new requirement, you know, relatively speaking and compared to the other issues they have.

So that's, basically, the only difference. It's not --

CHAIRMAN STETKAR: To me, that's awfully subtle, because all you're saying is that it's 10 seconds before this, and now I can engage in Option 3 and negotiate a schedule, and as soon as it clicks off to the rule is issued, it's now 1 second after the rule has been issued, now I can use a risk -- now I can use Option 2 --

MR. ZOULIS: But they're both the same.

CHAIRMAN STETKAR: That's right.

MR. ZOULIS: I mean, you're still using the prioritization process.

CHAIRMAN STETKAR: But I don't understand why a separate Option 3 is presented for Commission approval, because to me, all you're doing is talking about timing, but it's essentially the same process.

MEMBER BLEY: But if you do, you could just say, this is Option 2 with the following thing. It could be three sentences long.

MR. RUFFIN: But it's the how, because --

CHAIRMAN STETKAR: What's different on the how?

MR. RUFFIN: -- Option 3 would say that, for every new rule going forward, we would allow the operating power reactor licensees to come in and propose an alternative implementation schedule.

CHAIRMAN STETKAR: ON a plant-by-plant --

MR. RUFFIN: On a plant-specific basis, and that would be early on in the early interaction stage before it ever even goes out for a proposed rule, so we would have a way to eliminate or mitigate the need to use Option 2, because they've already gotten their information to us early on to say -- and so that they have -- for those that want to just accept the implementation schedule, fine, but there may be others that will already use this process to determine that they want to implement it later, and so they would need to use Option 2, which is using the risk prioritization methodology for an exemption because they've already gotten it in Option 3.

CHAIRMAN STETKAR: And I make the decision today, and a year from now, stuff has arisen, and the rule is in place, and I do my re-evaluation under Option 2, because I'm --

MR. RIBERS: But by then you use Option 2.

CHAIRMAN STETKAR: And then I say, I'm going to use Option 2 to reschedule the thing that I talked to you about 10 seconds before the hour for the rule that's now in place. I don't understand why it's conceptually different.

MR. RIBERS: Well, I think the concept is, is that, in Option 2, you're going for exemptions, and waivers, and things like that. Option 3 seems to be more designed in such a way that you don't have to use that exemption and waiver process. It's built into the rule.

MR. ZOULIS: Right. Exactly.

MR. RIBERS: So it's trying to be more proactive on the part of NRC where we're not going to make you come in for exemptions.

MR. RUFFIN: Right. Option 3 is marrying CER, all the early interaction stuff, with the risk-informed prioritization methodology with that process. So they're using it -- they're determining what implementation plan unique to their plant works for them, and so CER then becomes the -- that's how we at NRC now are integrating that with an RPI.

MEMBER BLEY: Let me repeat back what I think I've head, and that is, there's a coming rule, you

could do the things you would have done with Option 2 to justify your case so that it would be written into the rule and then you wouldn't have to apply for an exception.

And for a lot of people, that might mean it's a lot -- well, for everybody, it would be a lot more certain, going forward, than if you're responding to something that's already a rule and trying to get an exception. Is that --

MR. ZOULIS: That's right.

MEMBER BLEY: But if you could say it that simply, I think it'd be a lot easier to understand.

MR. RUFFIN: One of the considerations raised by the industry was the implementation schedules; the implementation plans. So you're using CER now, at that stage in the game, so that you've alleviated that cumulative effect of regulations, to obviate the need, at least in part, for an exemption for that particular corrective action.

MEMBER BLEY: But you pretty much have to make the same arguments. It's just making them ahead of time.

MR. RUFFIN: Make them ahead of time and you're using the process that has been endorsed in Option 2.

MR. ZOULIS: Yes. Now, there's certain staff members at the working level who believe that Option 2 and Option 3 should be issued in parallel, that there shouldn't be any -- there is no need to --

CHAIRMAN STETKAR: I understand that. I wouldn't say parallel. I would say it's a single option.

MR. ZOULIS: Well, whatever it is, but I mean, again, as we stated earlier, we're trying to phase this in, we're trying to get a little bit more working time with these options, get more people familiar with the processes, get more runtime with the guidance, and then as we see benefits of the process, hopefully then it'll lead us into expanding the use of the process.

MEMBER SCHULTZ: Well, you are also doing a trial run of this on Generic Letters, if you will. You've already described if you're going to the CER program, what you put forward on Generic Letters. You haven't got much response, but these are the same questions and issues which licensees are being provided the opportunity to comment on before the Generic Letter response is required.

So here you are with the rule looking for an early opportunity to get this type of input and feedback, and then formalizing it in the process to even

a greater extent. I guess I'm with the -- I like that chart where you showed the sequential implementation, but I'm afraid it's going to take a very long time to get there when this concept is already similar to what is being proposed in the other areas in Option 2.

MR. KOKAJKO: My point, I acknowledge the similarities between Option 2 and 3, and you're correct, the similarities are there. And the way Steven and Antonios described that they could put in this flexible implementation schedule as a proposal, essentially, changes the dynamic with the Commission, when you think about it, and there are members of our, senior staff members, who believe that Commission would not be willing to give that particular authority to the staff or to allow that type of thing to happen.

I mean, in theory, we could ask that in any paper today, right? And the Commission would have to do it. However, given that this is combined with this trying to, sort of, tie the RPI piece with CER, like the expert panel, we thought it'd best to be upfront with the Commission, seek their guidance, their approval, as to whether or not this should go forward in this manner, and that is why it is in there in this way.

I also acknowledge that, again, that certain senior members are, let's say they're at least,

cool, or lukewarm, to the idea. We've got to overcome some internal resistance too to try to see if something like this could go forward, hence, the more phase, slower approach with Option 2 first before we try to do something along the lines of Option, and that's why --

CHAIRMAN STETKAR: But again, Option 2, if the clock ticked over at 12 o'clock, you know, 1 minute after 12:00, the rule was issued at 12:00, Option 2 would allow me, voluntarily, to file an exemption saying I would like to extend the schedule for compliance with this rule out until, you know, 2019 or something like that. It would allow me to do that.

MR. KOKAJKO: It would allow you to do that.

CHAIRMAN STETKAR: But I would have to file an exemption.

MR. KOKAJKO: You would have to file an exemption and you would have to have your basis for why you needed it and we would have to review and approve it.

CHAIRMAN STETKAR: Okay.

MR. RUFFIN: So the next slide, Slide 29.

MR. ZOULIS: So the pros for this option are, it allows the licensee to propose a flexible plant-specific date of implementation for a new rule or

order. We believe that it could reduce the number of future exemptions because you've now incorporated flexibility into the rule. It again furthers the use of PRA and it supports the industry and the Agency's efforts on CER by focusing resources for current and future requirements of greater safety significance.

Some of the cons against, it's voluntary, similar to Option 2, and it would require additional staff time and resources to develop the final rule, and to develop the final implementation language, and so forth.

MEMBER SKILLMAN: Let me just challenge you there on that first sub-bullet. It seems to me that if this option were to be chosen, then if I'm an assertive licensee and I come in and say, you've issued this order, or whatever it is, and I want to delay it four outages, eight years, I'm on a two-year fuel cycle, I would have to have a pretty good PRA to show why that delay is not at a CDF or LERF greater than a 10 to the minus 7 or 10 to the minus 6 delta.

And my region PRA specialist would have to have a PRA for my plant that's fairly consistent, or known to be identical, for that PRA specialist to tell that region leadership, we concur with the licensee's request for that delay. So I'm not so sure it wouldn't

incentivize the use of a PRA model. It might, in fact, enhance it.

At least my experience was, particularly in areas of operability and operability determinations, the real decision was made when the PRA specialist in the region and our site or corporate PRA specialist were aligned. We got more traction at that interface than at any other interface in dealing with the region.

MR. ZOULIS: Well, for these options, the way we are proposing them is that you can use existing PRA information because it's for scheduling purposes only. So --

MEMBER SKILLMAN: Well, maybe that's the front story, but the back story is, your PRA specialist in the region, and the one down here at headquarters, and the person at site or corporate, are actually in league with each other asking whether or not this is truly an accurate representation of the plant configuration. Is that accurate based on what you know?

MR. ZOULIS: That's a possibility. That could happen.

MEMBER SKILLMAN: So I think that there is an under-story here that might suggest Option 3 could be quite viable, recognizing how the system really

works.

MR. ZOULIS: We'll take that into consideration.

MEMBER BLEY: Antonios, two things from me. One, a suggestion, and you've probably done this, but I would still suggest it, you take, between Option 2 and Option 3, you layout your slides on the pros, and the text too, and lay them side-by-side, and really think hard about justifying the differences that are in them. I think you could find things that ought to be more the same than they are.

And on the cons, same thing, but on the cons on Option 2, I think the focus was all on exemptions, so you had a second bullet, another bullet, from these that talked about exemptions, but I think you would have -- you haven't acknowledged over here that somewhere you're going to have to do the same kind of review. I don't know if that delays the rule or it's built into the schedule of the rule, but you can't -- it looks, reading your cons side-by-side, like you can dodge this extra effort about the review, and I don't think that's true.

MR. ZOULIS: That's a good point.

MEMBER BLEY: I was able to lay them side-by-side.

CHAIRMAN STETKAR: Oh, sure, you can do that.

MEMBER BLEY: You have two hands. You can do it too.

MR. ZOULIS: Okay. Next slide. For the inspection and enforcement of this option, there is additional findings that would need to be done because, when you issue a new rule using, there's a follow-on temporary instruction, and the region would plan to go out and evaluate whether the rule was implemented appropriately. In this case, because you have -- you may have varying dates of implementation, you would have to coordinate the regional inspection accordingly. So it would have the potential to impact inspection schedules.

CHAIRMAN STETKAR: That just simply is, if I have five plants in my region, I might have five different schedules, because already, they have to have inspection activities for each of those five plants, it just happens to be the same schedule for each of the five. Okay.

MR. ZOULIS: But our conclusion was, if the issue is manageable, there's sufficient coordination provided. So it may actually benefit the regions because now they could spread their resources out, so

there's a plus and a minus there.

CHAIRMAN STETKAR: What I propose, because you have several slides on Option 4, we take a break because I need one. So let's recess until 2:45, please.

(Whereupon, the foregoing matter went off the record at 2:28 p.m. and went back on the record at 2:45 p.m.)

CHAIRMAN STETKAR: Okay. We're back in Session. Option 4.

MR. ZOULIS: For Option 4, the staff concluded that we had to explore rulemaking to develop a new process that would allow licensees flexibility to reschedule regulatory compliance without the need for prior industry approval.

In this case, for Option 4, the licensee would be able to, as Steve just mentioned in another discussion, shuffle the deck, the issues without having to come to the NRC to let us know when the changes would be made. They would, perhaps, provide a schedule periodically to the NRC, and in order to do that, rulemaking would be necessary.

And in this option, the level of PRA development would dictate the degree of flexibility. If we had a full-scope Level 1 and 2 PRA, you could defer and compare alternatives, and maybe even eliminate issues if there was a very low safety convention.

For scheduling purposes, we feel the current and available risk insight would be adequate, so the degree of flexibility would range from just scheduling with the current risk information or if you wanted to be more aggressive, to propose alternatives or eliminate, and that would require development of a full-scope Level 1 and 2 PRA.

MEMBER BROWN: Just curious, since you're on this one, if a plant has a Level 2 PRA, and there's some dictum that comes out from the NRC, some plant-specific thing they tell you you have to do, why couldn't they independently just request the ability to defer that because they've analyzed it with a Level 2 PRA and shown it to be of very little risk significance, and ask not to do it at all?

MR. ZOULIS: You can still come in for an exemption and they're trying to eliminate that. The difference with Option 4 is that, you made a -- again, because we haven't -- Option 4 is still -- the details haven't been fully fleshed-out, we didn't determine whether or not we would -- how to -- they would actually come to us and submit the information, request the exemption, would they just need to inform us? Those details weren't fleshed-out in Option 4.

But today, you could do that. You would

have to come in if you wanted to, but there wouldn't be that rule that would dictate the actual level or the requirement that you would need to do that. We have Reg 1.174 and other issues, but for exemptions, you could come in, but it wouldn't be an established process, the way we're trying to in Option 4.

MEMBER SKILLMAN: Antonios, it appeared to me as though what's different between Option 3 and 4 is that, in Option 4, if you have an up-to-date PRA, then you could choose to defer almost without even communicating with the NRC. So the difference is, communication with the NRC. If you have a certified Level 1 and 2, I can jolly-well do what I want without telling you.

MR. ZOULIS: Correct.

MR. RIBERS: Hold on.

MEMBER SKILLMAN: Okay. So I can send you a letter, six months ago, I did this.

MR. RIBERS: For example, essentially what it says is, you can go ahead and change your security plan and implement it, you have to tell us that you're doing it, and then we have a certain amount of time to consider whether or not we'll accept that. So I wouldn't be surprised if it had something like that.

You almost have to have a regulatory vote

just in case.

MEMBER SKILLMAN: Why would you start implementing it if you knew there was a hook still coming to hook you?

MR. RIBERS: If you have the documentation to support it, then that should be reasonable.

CHAIRMAN STETKAR: It'd the way that if you -- the part that says that you have to tell the staff that you're doing something, but it does not require prior staff approval, and it's always subject to audit, as is everything, but this would apply much more broadly.

MEMBER BALLINGER: This would, essentially, eliminate a lot of this issue.

MR. RUFFIN: I need to point out something on Slide 33. The first sub-bullet there that says, development of full-scope Level 1 or 2 would allow deferral and proposal of alternatives and perhaps elimination, that is part of the discussion in the interim, but it's no longer part of the Option 4.

MEMBER BALLINGER: I don't quite understand.

MR. RUFFIN: So Option 4 in the paper does not include elimination of alternatives. It only includes schedule flexibility.

CHAIRMAN STETKAR: Because the whole thing is presented in terms of scheduling.

MEMBER BALLINGER: Okay.

MR. RUFFIN: So that really belonged in the slide before and that has to -- that doesn't belong there. It's just, Option 4 in the paper is strictly flexibilities. It allows you to shuffle everything on the deck versus Option 3, determining where that one card in the deck goes, based on you having used this risk-informed prioritization methodology that was proposed in Option 2.

MEMBER RYAN: To look at this a different way, basically, you're taking out the words, and probably the meaning of, plant-specific safety significance for actual PRA, am I right?

MR. RUFFIN: No, I'm taking out the words, proposal of alternatives and perhaps elimination.

MEMBER RYAN: It's not completely out of the question.

MR. RUFFIN: Right. In the text, we discussed it, and in that discussion, there were two aspects of the discussion that, as we went through the Working Group, because as you would imagine, in the discussion, there's one part of the text that says, based on the stakeholder feedback in our meetings with

industry, industry is not ready to commit to doing this level.

And when we receive that information, then we will look at it to see what the impacts would be as far as our enforcement, inspection, and legal aspects, and things like that, so the paper is neutral in that aspect of it, saying, we considered it because the SRM told us to consider it, in our interactions with industry, there wasn't an appetite for it at this time for the little PR that we would want to go to that level of detail in terms of providing that, so we pulled back and say that it's neutral, whether or not that's something that we can consider in the future, but the current Option 4 does not have it.

It's only scheduled flexibility where you can shuffle all the cards in the deck without prior approval.

MEMBER BLEY: Oh, okay. I have a discussion related to it, and then it does say, however, based on stakeholder feedback, so forth. I'm interested to know why you determined that you would not include the option based on stakeholder feedback if the option to not to B

MR. ZOULIS: We're not recommending that to the Board. I think that --

MEMBER SCHULTZ: I understand, but this was describing Option 4.

MR. ZOULIS: My read is that it's neutral. So in the future, we see this could be something that we could do, but there's some tracking involved, that could be the opening. I mean, personally, I don't think that that can totally taken off scale.

MEMBER SCHULTZ: But if you're wanting to encourage licensees to do full-scope PRA, why not just leave it in there?

MR. ZOULIS: Because there's a balance.

MEMBER SCHULTZ: It doesn't change it.

MEMBER BALLINGER: Well, that was what was confusing to me in that, in the first place, I thought, first, Option 4 would be responsive to the original direction when you say it, and also, potentially, elimination or re-characterization of an expectation or a requirement, but then it turned into the benefit would be scheduled and therefore, licensees would not move to approve their PRA. It's almost self-fulfilling.

MEMBER SCHULTZ: You're still going to get all the exemptions.

MR. RUFFIN: Well, once you get the exemption, you wouldn't get it for schedule though. You wouldn't get it for schedule.

MR. GIITTER: This is Joe Giitter. I'll try to put a little bit of perspective on it. This paper has been evolving. Initially, Option 4 did specifically state, as it states in the slide, that you could allow deferral and proposal alternatives, and maybe even elimination, because if something repeatedly shows up as very low priority, why do you keep bringing it up?

That's not off the table. It's something that's still in Option 4, it's just not explicitly expressed. It's not stated clearly as a major facet of Option 4, but going forward, we certainly think that's a possibility. We just don't state it as an aspect of Option 4. And a lot of that's based on feedback that we received as the paper worked its way through concurrence, but it is in Option 4. It's a possibility.

It's something that we would look at for the future, but what we're proposing is a phased approach, more cautious approach, which we think is, quite frankly, something that is more likely to -- we're going to be able to sell.

MEMBER REMPE: So in the paper where it says, based on stakeholder feedback, it's really internal NRC concurrence process that caused you to draw this out?

MR. RUFFIN: No. It means with industry, they've said that they don't have an interest in going to the level of PRA that we would want to give that kind of flexibility.

MR. GIITTER: I think it's a combination of both.

MEMBER SKILLMAN: Steve, let me ask this, and this is a question that I asked Dick Dudley this morning. In this option, there is an expectation that the PRA is accurate, that it's a model, it's been verified accurate, and that the findings from its use can be taken to the bank. In other words, it is mighty good. It's really a good piece of analytical tool.

What we found years ago in the 50.54(f) activity, some of you might remember, is that the license basis for the plants stated one thing, but the configuration of the plant had slipped away. What ensures that the PRA that you're talking about here is conformed to the physical configuration of the plant so that when this assessment is performed, the licensee and the NRC know that the result is an accurate result?

MR. RUFFIN: I have to defer to the experts.

MR. ZOULIS: We would assume that for, again, it depends on if you're talking about full-scope

Level 1 PRA, it would have to be at Reg Guide 1.200 compliant. I would assume it would have to be a living PRA, that they would be updating it as they modify their plant, so all those aspects would ensure that the quality of the PRA is maintained.

MEMBER SKILLMAN: Yes, but you just said that you assume that they're updating, and this is where the industry goes to trust to verify. So what do you to put that thick magnifying glass over that activity to make sure that before you, if you will, agree to Option 4, that the PRA for that plant is, in fact, representative of the physical facility?

MR. ZOULIS: I think there's also been a lot of activity with the risk-informed safety committee on trying to determine technical adequacy of the PRA, so there's initiatives out there to ensure that that level of detail and the quality of the PRA is being maintained. Is that correct?

MR. WEERAKKODY: This is Sunil Weerakkody. I'm chief of PRA operations. When you look at Option 4 and think of things like rulemaking, the particular question on that plant, the PRA actually fits the plant, we build that into the rule. Like, if you look at 50.488, the fire protection rule and look at the rule language, it's in the rule itself that when you use, you

know, risk informing for this licensing action, the rule requires that the plant, as-built plant, as-operated plant, is reflected in the PRA.

So Option 4 relies on rulemaking and the rulemaking language will ensure that the plant is reflected in the PRA and vice versa.

MEMBER SKILLMAN: Thank you.

MR. ZOULIS: So for the pros of this option, it allows the licensees flexibility in scheduling and then implementation of regulatory requirements. It enables the staff to enforce deviation of the process. The requirements for the level of PRA development and regulatory flexibility would be, in part, in the rule so that we're promoting regulatory stability and predictability. And it would further the use of the PRA insights and the development in this case.

MR. RUFFIN: And I think we'll take the same comment that we took from --

MR. ZOULIS: Dennis.

MR. RUFFIN: -- and apply it, the pros and cons for all the slides together and make sure there's consistency, and that we address the concern that was raised.

MR. ZOULIS: The rulemaking portion of

this option would not address the current industry concerns, CR concern, with existing requirements. Obviously, the rule could take one to three years to develop, so it would not address current CR issues. Of course, it would require additional staff time to develop the rule, and again, we still have the issue of areas of emergency preparedness, radiation protection, and security, which, regardless of the level and quality of your PRA, it doesn't help you in determining the significance of those issues.

For the inspection and enforcement of Option 4, what the staff envisioned that it would be modeled after other performance-based risk-informed regulations, we would conduct a formal pilot, we would then rollout this process to all the licensees, we would, of course, then audit the licensees to make sure that their processes are being implemented appropriately, and then, eventually, include that into our baseline inspection.

The deferring of regulatory actions would add more challenges to how we would address the date of the violation or when the compliance was required. So there is a little bit more nuances in how to enforce this option. Next slide.

MEMBER BALLINGER: But if you did Option 4,

would there not be less cause for this? In other words, you're saying, it's going to increase the amount of staff time and everything, but if you go to Option 4, doesn't that unload you, to some extent, because you won't have to deal with so many violations and B

MR. ZOULIS: Well, I mean, if there was a violation, you would still have to now determine when the licensee had committed to doing that based on their scheduling. There's a little bit more resources involved in determining that, so it makes it a little bit more complicated.

MEMBER RYAN: I think just the opposite. If you know that there's a specific activity that was required that wasn't performed, it's a violation.

MR. ZOULIS: But when we determine the date of the violation, that may be, you know --

MEMBER RYAN: Well, it should be on the memo that said, go do this work, and if it gets done, it's done, if it doesn't, it doesn't. I'm struggling with why that's so hard or complicated.

MR. ZOULIS: Well, if they're rescheduling that --

MEMBER RYAN: Right. You can track the rescheduling. I mean, there's paper trails for all of this.

MR. ZOULIS: Well, not for -- remember, for scheduling, we said they could use the current and available risk information.

MEMBER BALLINGER: Well, I'm talking about Option 4.

MR. ZOULIS: That is this Option 4.

MEMBER BALLINGER: Okay.

MR. ZOULIS: It was a concerned raised to us by the Office of Enforcement.

MEMBER SCHULTZ: But the rule would have record-keeping requirements associated with any schedule or change.

MR. ZOULIS: Those details have not been fleshed-out yet.

MEMBER BALLINGER: How many of the plants are, indeed, doing the full-scope Level 1 and 2 PRA?

CHAIRMAN STETKAR: None.

MEMBER BALLINGER: Oh, none.

CHAIRMAN STETKAR: Regardless of what the industry tells you, none. Level 1, Level 2, internal events, external hazards, and low power, full power, and shutdown, none. You will hear other things when the industry gets up, they're not telling you the truth. That is my opinion.

MEMBER SKILLMAN: I'd like to hear more

about the I&E comment because I guess I'm kind of, at least partially, in Dr. Ryan's camp. It would seem to me that any licensee that would endorse or undertake Option 4, and then blow-off a schedule, is messing with dynamite. I mean, they've already moved into a trust area, which is what Option 4 is all about, so if they go and bugger-up the schedule, and try to do a fancy dance to say it isn't a violation, it seems to me that that's a slam dunk. I&E has everything they need to say, we're done talking about it. It's a Level umpty-ump, it's not green, it's white or yellow, and this is what we're going to do to you.

It just seems to me that that's a very short discussion.

MEMBER BALLINGER: It seems to me it's also very short because John's right, that nobody's done a Level 1 or Level 2 PRA, that the case is closed. Option 4 is off the table.

MEMBER SKILLMAN: But if they have already done that thorough a PRA, then to have asked for a delay or whatever, and then to blow it off, it seems that they don't have much of a leg to stand on in terms of defending against the violation.

MR. ZOULIS: But Option 4, they don't necessarily need to develop additional PRA capability

to do scheduling. So they have their existing PRA, but I think the issue here was more about, when the violation occurred and how you assess that violation based on the committed date that the licensee has on record. Now, remember, in this option, they're shuffling the deck periodically on their own, so they would have to take some time to determine when they were -- the violation occurred, so it's a little bit more nuances there, and I think that's what the Office of Enforcement was trying to tune-in on for this.

In the next slide, there's additional issue that they raised where they felt that the enforcement action would be more varied, require additional time and resources, you would need a new baseline inspection procedure for this new rule. They felt it could be more difficult to disposition of finding the violation, due to these varied dates.

CHAIRMAN STETKAR: I still don't -- I mean, I don't get it.

MEMBER SCHULTZ: It doesn't seem like a difficult problem to resolve.

CHAIRMAN STETKAR: It doesn't seem like a difficult problem. All you're doing is transitioning from some generic guidance to applying the generic guidance on a plant-specific basis. I mean, I don't --

the inspectors deal, you know, with each of the plants currently, don't they?

MR. ZOULIS: I guess now you're looking at 100 IDCs, now, all of them doing flexible -- if they adopt this process, doing flexible scheduling. It adds -- I think it was brought to our attention as an issue that we need to keep in mind if we go down this path when we're developing the rule, and I think that's how we're presenting it here.

You know, something that we need to keep in the back of our heads as we go forward if this option ever goes into development.

CHAIRMAN STETKAR: I mean, that last sub-bullet, potential to -- if I was an inspector, and I needed to say that I need to do 15 inspections within the next six months because I have the same time coming up for all of my plants, that, to me, is a lot more difficult than saying, I can coordinate those inspections out over 15 months because, luckily, I have different compliance schedules.

MR. ZOULIS: I guess what they were thinking about is, let's say that you had an issue and you were going to be scheduled to inspect a June X, the licensee did a re-evaluation, there's something more high priority came up, now they pushed it back to January

of the next year. So now you'd have to adjust your inspection schedule based on those perturbations. I mean --

MEMBER SCHULTZ: Communication would be important, but it's doable.

MR. ZOULIS: Coordination, communication, but I mean, you know, it has the potential to impact.

MR. GIITTER: Antonios, I just might add, I think a lot of what you're seeing under the discussion of Option 4 are reservations and concerns more than cons. And I think you're seeing this because as we try to communicate the RPI initiative and the different options to different facets of NRC, I think it's taking people outside of their comfort zone, to a certain degree, and I think that's what you're seeing. Are all these things, necessarily, going to be major issues? Probably not.

Are they things we can work through? Probably, we can. But nonetheless, they're seen as impediments or challenges by people who don't ordinarily think in risk space, and it's outside of their comfort zone, and it's outside of what they're normally accustomed to, so we felt, for completeness, we wanted to present this today.

MR. ZOULIS: I think, in the paper, do we

include them as implementation considerations? That may be a more appropriate title. We'll take back that comment.

MEMBER SCHULTZ: I'm wondering if these issues weren't more aimed at the opportunity to, you said, was originally in there, move away from a commitment on it rather than just change the date of a commitment.

MR. ZOULIS: That's true.

MR. RIBERS: You know, some of it could also be from how not being aware of how it's going to be communicated with the NRC as well. You know, if there's a clear communication path that they have make certain things within certain timeframes, some of these go away, but since we don't have that spelled out, the people doing these inspections and enforcement activities don't have a lot of confidence in what they're really going to know, and so they're going to have concerns, because it's not clear at this stage.

MR. ZOULIS: Good point. Thank you.

MR. RUFFIN: So then we go to Slide 38, basically, and this is a recommendation, and part if spills over to 39, so essentially what the staff is recommending in the paper is that, the Commission approve Option 2, which has two parts. It has the CER

part that we talked about, which is the expert panel, either a new entity or an augmenting a function with an existing panel. And then it has the risk-informed prioritization methodology that, once you introduce it in Option 2, it's also the same thing that would be used with any of the others.

And so the staff is recommending that, also, the Commission approve a pilot of Option 3, which would be to use this same risk-informed prioritization methodology and allow for the voluntary -- allow licensees to submit a voluntary implementation plan based on how they apply it to their plant-specific needs on a plant-specific basis.

And let me see what I have on the next page, and then so what we basically say on Slide 39 is, after obtaining feedback from what we learned from Option 2 and the pilot of Option 3, we would turn it to the Commission.

MEMBER BROWN: Your discussions have helped me understand a little bit on your Option 2, and I guess my question is, the panel, that's an NRC panel, and this means you're going to pre-screen prospective staff in your own minds as to what its impact would be before they go out to licensees? Is that -- that's what you're going to be evaluating?

MR. RUFFIN: Well, that's one aspect of the panel. So the panel's role would be, and I can go back to the slide --

MEMBER BROWN: We're characterizing prioritized regulatory actions, that would be your all's prioritizations, which ones are important, and then the screen across the operating reactor business line, which is everybody, power reactors, and then prioritize prospective regulatory actions from that standpoint, and then -- well, the last part is, who does it.

MR. RUFFIN: So the CER part is that, that panel use these risk insights, right?

MEMBER BROWN: But where do they get those? They don't have -- do they --

MR. RUFFIN: The panel would have to -- it has to be comprised of people that have -- part of the team has to be comprised of people that have that PRA knowledge.

MEMBER BROWN: For the plants? All the plants themselves or are you talking about just insights that you have in-house?

MR. RUFFIN: So internally, when we talk about the composition of the panel, it would have to be made up of senior managers and technical experts with

the PRA knowledge, like Antonios and Joe --

MEMBER BROWN: No, I understand that, but how do they know what -- how do they get the plant-specific information in order to make the --

MR. RUFFIN: It's generic.

MEMBER BROWN: Right. It's generic.

MR. RUFFIN: Yes. So --

MEMBER BROWN: You've got type of reactors, and basic --

MR. RUFFIN: -- the staff is contemplating regulatory actions and they come here, and similar to how they're doing it at the plant, the expert panel looks at them, prioritizes them, and say, hey, we don't need to do these, for some of them, or for the resources we have, we need to do these in this order. So they're going to prioritize our resources, and they're making a recommendation, by the way. They're going to make a recommendation towards prioritizing those activities, which may include eliminating, and then they're going to make that recommendation to the decider.

MEMBER BROWN: Okay. So you're self-policing a little bit before you got out and start --

MR. RUFFIN: It's aimed at furthering CER. It's CER for us.

MEMBER BROWN: All right.

MR. ZOULIS: But with the use of risk. That's the key. Using risk --

MEMBER BROWN: No, I understand. But it's an internal -- it's an in-house --

MR. RUFFIN: It's internal.

MEMBER BROWN: -- generic evaluation of PRA based on basic plant configurations, although there may be specific plant differences, you're going to do it on a generic basis.

MR. RUFFIN: Correct.

MEMBER BALLINGER: So there's no thought of industry participation?

MR. RUFFIN: Well --

MEMBER BALLINGER: That's what I'm trying to read here.

MEMBER BROWN: It's internal. They have their own templates and they augment their own processes, et cetera, et cetera. I'm not objecting. I'm just trying to make sure I understood that one based on the ongoing discussions. Thank you.

MR. ZOULIS: It's possible that if you're deliberating an issue, the gate on the industry side could deliberate the same issue and submit that information to the NRC for review in some public venue.

Again, that's the things that we need to think about on how to utilize this information. So, you know, we're not saying we're going to be in a silo, in a box, all by ourselves.

MR. RUFFIN: And we do, in the paper, and this is a different panel, so in the paper we do say that the gate that Antonios is talking about would have an opportunity to provide their input to us early on before we ever go off for a proposed rule, but that's a separate phase. The NRC panel would eliminate -- have the potential to eliminate something before it ever gets there, so that's the CER. And then it has the potential, or it should, prioritize the things that we do, and that's where it then assists the decision makers in terms of how NRC's resources and skills are focused on the things that are most risk significant here.

So those are kind of the two aspects of that panel. But that panel, if it's already gone from that panel and we're getting input from the industry's gate, it's already past that step, that stage in the -- that means it survived the panel, the NRC's panel, and now it's getting -- whatever action we do have is getting input from the industry's gate, which may impact the implementation schedule, it may impact something else, but it's another cut at CER.

MEMBER SCHULTZ: Now I'm confused about the responsibilities of this panel. I thought it was to review what was happening within the Agency, not review what was being proposed by the industry with regard to --

MR. RUFFIN: You're correct.

MEMBER SCHULTZ: Okay.

MR. RUFFIN: It's what the staff is proposing to do that would ultimately be imposed on industry.

MEMBER SCHULTZ: What you seem to have done in the letter is propose some options associated with this panel. The options particularly being that it can be comprised of a panel that already exists or it could be a new panel, but we ought to pilot this. And so is that piloting process going to be to create a new panel and see if that works, and if that does work well, then determine whether it should, in fact, be an existing panel or vice versa, or neither of those?

MR. RUFFIN: I think that would have to be kind of figured out as part of the -- I mean, if the Commission says, go do it, I think those kinds of things we'd have to kind of determine. I don't think we --

MEMBER SCHULTZ: You don't have any pre-thoughts about how one --

MR. RUFFIN: Yes. Correct.

MEMBER SCHULTZ: Because you do list four panels that already exist.

MR. RUFFIN: And none of which use risk insights. And so we wanted to make that distinction.

MEMBER SCHULTZ: That's interesting.

CHAIRMAN STETKAR: Interesting is a good word.

MEMBER BROWN: In your broad diagram, I'm trying to connect the dots between the words you've just gone through in the block diagram.

MR. ZOULIS: That diagram is for the second part of Option 2, which is for the risk prioritization initiative, not the expert panel.

MEMBER SCHULTZ: Which we just clarified, doesn't -- it's not the responsibility of the panel.

MEMBER BROWN: Yes, I got the flavor, like you, I'm just dead meat on this right now, so the panel, you all have some thoughts, they submitted a panel, the panel gives a CER evaluation of whether these are worth even going out to, from a safety aspect, on a generic basis, of imposing out into the industry. If it passes the panel, industry gets a crack at it, that's right?

MR. RUFFIN: Yes.

MEMBER BROWN: And is that your industry

gate that you're talking about?

MR. RUFFIN: Yes.

MEMBER BROWN: So then they get a chance to go look at the potential proposed regulation, or whatever action --

MR. RUFFIN: Yes.

MEMBER BROWN: -- then that gets fed back and all you've done is screen, instead 20 of them going out, you might have only 12, or 8, or whatever, and then you go interface with industry to determine which ones you do, and at some point, the prioritization comes in after the fact? Is that after the industry -- after you decide they're going to do it?

MR. ZOULIS: If an issue is --

MEMBER BROWN: If it's worthwhile, why do you need Page 2?

MR. ZOULIS: Those are for existing issues that are out there now.

MEMBER BROWN: Oh, not new ones. Okay. I'm sorry. I missed that.

MR. RUFFIN: Page 2 of that diagram just gives them a tool to --

MEMBER BROWN: I understand, vaguely, what you're talking about now.

MR. RUFFIN: So that completes our

presentation of what's currently in the paper and we certainly made notes of the comments, the concerns, that we've gotten from you. We certainly welcome any additional comments or concerns that you think we should go back and work with the Working Group on, or the paper, at this point so tact we can -- you know, we have the full Committee briefing on March 5th, which is not that far away. Anything more for our staff?

CHAIRMAN STETKAR: First of all, because of our schedule, we do have a Full Committee briefing on March 5th, which is two weeks away.

MR. RUFFIN: A week.

CHAIRMAN STETKAR: Or a little bit less. Our constraints are, we're going to have to have the Full Committee briefing based on the written material you've provided. I don't want to see something two days before the Full Committee meeting that's different than what's been distributed for Committee deliberation. We don't work on day-to-day time schedules, so any feedback you get from the Full Committee will be based on what you've given us in writing.

You can take any of the comments you've received here. That's the way we have to work.

MR. RUFFIN: Right. Understood.

CHAIRMAN STETKAR: That's a warning, but a

fact.

MR. RUFFIN: Understood.

CHAIRMAN STETKAR: You can discuss things, perhaps, you know, orally with the Full Committee, but we're going to have to base our -- the Members, you know, have other things to do in their lives.

MR. RUFFIN: Thank you.

CHAIRMAN STETKAR: So that's just something. If you honestly are planning to make some changes to the written material, you can present that orally during the meeting, but not -- we can't deal with last-minute things coming in in writing. Anything else for the staff? If not, thanks a lot. You actually covered everything quite well and in fact, as I mentioned earlier, a lot of the oral presentation helped me to understand some of the nuances a lot better, at least, than I got out of reading the written document.

So even if you don't change the written document going forward in some of your discussions, it might help to emphasize some of those points.

MR. RUFFIN: Thank you.

CHAIRMAN STETKAR: And with that, we have some time. The next presentation we have is from NEI, so I'll ask John Butler to come up, and I think we do have printed copies now. Do you have something to put

up on a screen or not?

MR. BUTLER: It should be. All right. Thank you for giving me the time to provide some comments on the draft SECY paper. I do want to thank the staff for all the effort they put in, not only the SECY paper, but the efforts last year in supporting and monitoring our development of the prioritization process. I think that was very important that they took a very strong active role in monitoring that process, giving us feedback during the process, and the piloting process, and in the end, I think we are closer to where we want to be with the prioritization process.

We learned a lot during the pilot and, you know, the staff involvement really helped us to sharpen the process, so I do want to thank the staff again for their involvement.

You know, there's been a lot of discussion on the different options and what it means. I do want to express that the basic process we're talking about with all these options is trying to identify a relative importance of a range of tasks, and having done that, to do the things that are more important first. It's no more complicated than that.

How you apply that process is what determines whether you call it Option 2(a), Option 2(b),

Option 3, or Option 4, or even an Option 5 before we end up here. You know, it's just a different manifestation of the same ranking process, but that's all we're trying to do.

And I'm disappointed that Commissioner Apostolakis is no longer here. He could, you know, possibly add to what they intended with the COMSECY that he and Commissioner Magwood put forward, but, you know, they're trying to get the staff and the licensees to focus attention on those things that are most important, and that's what we're trying to do here.

The process we piloted last year, we provided that in a guidance document, NEI 14-10, and we think that that process will provide an opportunity for plants to prioritize and schedule activities on the basis of their importance to safety. And, you know, I can't emphasize it enough. That's really all we're trying to do. The things that are most important, we want to do first.

This is not a process where you're trying to take things off the table, or, you know, say it's not important, you know, we assumed that the existing processes are -- there are processes in place that would prevent things that aren't important from making it to the plant site and being on their plate. All we're

trying to do with this process is to say, what order do we do these activities?

As I've already mentioned, you know, the prioritization framework can be incorporated in different matters. We do think there's a lot of value in this prioritization process if it's applied by NRC and their management, resource management, or even to better understand new emerging issues. That's one thing I do want to emphasize it, and I'll take the time now to do that.

How you apply this process, it can inform emerging issues in different manners. If you're looking at issues, a range of issues, it can certainly give you a relative priority and it can help in resource management, better utilization of staff resources, or even industry resources. That's a relative ranking process, but we did see a lot of value in the pilots from the IDP team, or the GAETs, and what the NRC would call an expert panel.

It provides a common framework for looking at an issue using the expertise of your panel to better inform how that issue -- you know, what's important with that issue. If you're applying it with an inert fashion, it can help you identify, what are the attributes of a particular issue that make it important?

Alternatively, what are the attributes that make it unimportant? That helps you to better inform how to manage the issue, if you will, and we think there's a lot of value in the expert panel evaluation of issues from that aspect; just from a singular looking at that issue alone.

So the types of prioritization, you know, we think is very important. You know, it's not the only aspect of CER that we're concerned with. We think there's value in both the expert panel that the staff is looking at for Option 2 to address the issues as they are emerging, but also, when the issues have made it to the plant site, it's important to bring in, or to allow consideration of the site-specific aspects in how they impact an issue's importance.

So that was one of the things that was very insightful in our pilot is that, each site, of course, is a little bit different in their design, but also in the make of the issues that they're dealing with and the relative priority of an issue can change, depending upon the issues that are on their plate that they're considering.

So now, relative to the options in the paper, some of the comments that -- you know, areas that we wanted to comment on from the paper. In Option 2,

Part 1, this is the, effectively, endorsement of the industry's plant-specific prioritization process. We think that's very positive that the staff is looking at diversity in the process. We've tried to be responsive to the staff's comments when we develop it, and I think, in some cases, we've met that mark, but, you know, we look forward to further discussion with the staff to see if there are further comments, and if, you know, there are ways that we can improve it and address their comments, but we do like that they are pursuing an endorsement.

Our one comment, our concern, is the amount of time it would take to, if we're relying upon that endorsement, come through solely as part of a Reg Guide endorsement. We think, in the end, that would provide a very durable regulatory product, but in the meantime, we would like the staff to consider endorsement, if you want to call it a temporary endorsement, through a letter, or an ISG, or something that would allow us -- to give us the confidence to move forward with this process and not hold us up awaiting a regulatory guide endorsement.

MEMBER RYAN: Doesn't an ISG kind of do the right job for you? It's not going to be a full regulation, but it's something you're authorization for

implementation. Testing, I guess.

MR. BUTLER: The point we want to make is, we want to get something moving forward with the industry as quickly as possible, and we don't want to wait the two years that it might take to endorse it to develop a Reg Guide. The draft SECY made a point that seemed to indicate that the process is limited to schedule changes.

One of the things that we saw during our pilot is that, you know, this was the value of the IDP, bringing the experts together, you can't limit them in what they're thinking. And there were instances where they identified that for, you know, a couple of changes, that it made sense to consider changing the scope of what would be considered by the plant.

And so that may, if it's a regulatory issue, require the plant to identify, through the regulatory process, that they're not only changing the schedule, but changing the scope of what they had previously committed to. So we want to acknowledge that the process might identify scope changes in addition to schedule changes.

Again, you would have to go through, establish regulatory processes to, you know, obtain staff agreement or concurrent on those scope changes,

just as you would have to do on schedule changes, but, you know, it's possible that the process can identify scope changes.

MEMBER SCHULTZ: John, is that fully incorporated in the NEI guidance as it currently exists?

MR. BUTLER: Probably it could be a little bit clearer in the guidance document that, you know, scope changes are possible. The focus is on providing a relative priority and aggregation, and, you know, schedule changes can be a consequence of that.

MEMBER SCHULTZ: You said scope and schedule?

MR. BUTLER: Just schedule.

MEMBER SCHULTZ: Just schedule is what the document focuses on now.

MR. BUTLER: Yes.

MEMBER SCHULTZ: But you're saying, let's not forget about scope.

MR. BUTLER: Right. Scope changes are not what you would go into an IDP meeting focused on, but we're trying to acknowledge, or I'm trying to acknowledge, that we did see that as part of the IDP discussions, that they identified, in some cases, that it would make sense to consider a scope change.

If that's the case, we would see this

process being used as part of the basis for a request to change the scope. You know, certainly, other processes could be used.

MEMBER SCHULTZ: Right.

MR. BUTLER: The draft SECY talks about the concerns that were raised with our inclusion of inspection findings, or the corrective actions for inspection findings, within the scope of those issues that this process would consider. This was a comment that the staff had made early on in the process and in our latest guidance that we provided through NEI 14-10, we tried to address the staff's concerns, in that we limited the scope of the items that you would consider to those corrective actions where you've already established with the NRC a schedule.

That way, if you use this process to change the schedule for one of those corrective actions, you would have to go through established processes to change that -- to inform the NRC of the change in the schedule, that way, it gives the NRC an opportunity to consider the change that we're considering, and, you know, other factors, you know, again, would be considered as part of the overall evaluation.

This certainly addresses a concern that the industry had if you tried to apply this process to

corrective actions that were just within the licensee's purview to establish in the first place, then that opens up the possibility that, as part of an inspection finding, they could be questioned whether or not they were prompt enough in their resolution of that inspection finding, so it keeps that separation between the ROP finding inspection and the -- in this process.

But I think I heard in Antonios' discussion that the change that we made in our guidance, that they're okay with the change we made, so this, hopefully, will not be an issue going forward.

CHAIRMAN STETKAR: I'm not sure I heard that. I wanted some clarification here on that second bullet, because I see what you're saying here, and I think I saw what I read, and I thought I heard what I heard, but I'm not sure that I'm understanding the level of agreement here. So I'd like the staff to clarify if, indeed, the RPI process can be used to make changes to a schedule for a commitment to implement a corrective action for an inspection finding, according to the second bullet here. Is that yes or is that no?

MR. ZOULIS: This is Antonios Zoulis. Our interactions with the region, they felt comfortable that these would be a very small subset of issues under the ROP, and we were comfortable that if a docketed

commitment resulted from an inspection finding, that it was acceptable to allow the licensee the flexibility to prioritize that commitment.

CHAIRMAN STETKAR: Is that a yes, no?

MR. ZOULIS: Yes.

CHAIRMAN STETKAR: So what other commitments are we talking about that wouldn't fall under the RPI?

MR. ZOULIS: As John mentioned, other corrective actions as part of -- that result from an inspection finding. Remember, this a docketed commitment. That's very specific regulatory vehicle, so you could have 15 corrective actions, as we discussed earlier, that the working part is, but this would be a small subset of corrective actions that could be prioritized.

Maybe, with an example --

CHAIRMAN STETKAR: Two examples would help. An example of something that you could use the RPI for and an example of something that you could not use the RPI for.

MR. WEERAKKODY: Yes. This is Sunil, I can give you a very specific example based on an item that we discussed at the public meeting when we were talking about this, industry asked, why would you want

the findings, or the commitments out of the findings, under RPI?

I recall one of the licensees said, they had a finding, I believe it was a core compliance kind of issue, and in that particular case, they made a commitment through the licensing process to fix that issue within a timeframe, so it was a commitment made to the licensee as kind of a finding, but it was made as a licensee commitment.

For something like that, we said, yes, that sounds reasonable, so we were not, as I am borrowing the words of one of the members, mixing apples and oranges. We said, yes, for something like that, it's okay to use RPI. We wanted to make a distinction between something like that versus a number of relative other findings, you know, inspectors will find. They may find, you know, torn insulations, you know, a lot of other things where the licensee would still read and say, okay, we'll fix that by such and such.

We didn't want to bring all those things into the RPI.

MEMBER REMPE: So how do you decide up front what falls in and what doesn't fall in?

MR. WEERAKKODY: The way I understand it, again, I'm not an expert in this issue, if a licensee,

based on inspection findings, makes a commitment on the docket to say -- you know, to the staff saying, we will fix this by such and such a date. Okay? And that comes under the purview of our licensing process, that is one subset. Those are the ones that we can, relatively easily, handle under RPI.

What we have a hard time putting, and I'm mixing apples and oranges, there's numerous other inspection findings that you really can't fit to that level, where our inspectors would go, they would find something, and the licensees would say, well, it's green, we'll fix it under corrective action program, so when the inspectors come again, their next inspection, they have made a promise to the regions to get those things fixed.

Those things, we did not put in the RPI. John, if you wanted to --

MR. BUTLER: First off, I want to make clear that this process, while it is a relatively straightforward process, it does take time and effort to implement. So because of that, you're not taking run-of-the-mill O&M maintenance issues, a lot of the things that would come out of inspection findings, you're not taking those through this process. It's just not worth it.

Those are the type of issues you just go ahead and fix them. There is a potential corrective actions for inspection findings to be large enough to be considered as part of this project-based process, and, you know, we agreed in our guidance that we would limit consideration of those items to those for which you've docketed a schedule with the NRC. That way, if we take it through the process and determine that the schedule needs to change, we would go through established processes to change that commitment, giving NRC an opportunity to consider the basis for that decision.

MEMBER REMPE: So at the risk of sounding dumb, can I paraphrase and say, if it's a major commitment that's not part of maintenance or something that would be under the ROP process, then it can be put under the RPI process. So you're going to take the bigger ones, where they made a commitment, and you're going to put it in this RPI process.

MR. BUTLER: That's the practical restriction.

MEMBER REMPE: Okay.

MR. BUTLER: How it's expressed in the guidance is, it's docketed. Now, generally, you're not going to docket the smaller items, so, in practice, it's

the same thing.

MEMBER REMPE: Okay. Thank you very much.

CHAIRMAN STETKAR: I'll tell you, that certainly didn't come out of my reading of the description of the Option 2 in the draft SECY paper, because it seemed to be comprehensive and exclusive. It said, anything that comes out of an inspection finding shall be excluded from this process.

MR. ZOULIS: In the SECY, we kind of didn't address the modification to the guidance. We didn't think it was --

CHAIRMAN STETKAR: But see, in the SECY paper, we're talking about a lot of subtleties. Well, gee, these people, internally, raised this concern, so we had to make sure there's a slight nuance between Option 2 and Option 3. Why can't there be clarification on what's included and not in terms of inspection findings?

MR. WEERAKKODY: We will take that back for consideration.

MEMBER BROWN: It seems to me if you say docketed, that's a very formal thing that you can go put your hands on.

CHAIRMAN STETKAR: I would have understood that.

MEMBER BROWN: Yes. The words never came up.

CHAIRMAN STETKAR: And it didn't come under -- when we quizzed, you know, in my subtle ways of quizzing the staff, nobody ever raised that from the staff. And in fact --

MEMBER BROWN: But it's not some trivial inspection finding in the maintenance area.

MR. ZOULIS: I had a slide that said that, but it's not in the paper. That's the key. The key is --

CHAIRMAN STETKAR: It's not in the paper. Whatever is said here orally and put up on the screen is what it is.

MR. WEERAKKODY: We'll take that back for consideration.

CHAIRMAN STETKAR: The paper is what gets submitted and scrutinized word-by-word by everyone at the Committee.

MR. BUTLER: Moving on, the second part of Option 2 where the NRC is exploring the use of an expert panel, you know, we think this is a positive thing. We think it's needed. I wish the SECY paper had been a little bit more explicit on the, you know, expert panel; what the scope of it would be; how it would be applied.

We could be a little bit more explicit in our comments on that particular part, that option, so at this point, absent those specifics, we have more questions than comments on how it might be applied.

MEMBER RYAN: Just one question, who would be selected to be on this panel and who would be excluded from being on the panel?

CHAIRMAN STETKAR: You can't ask NEI that. It's not an NEI problem.

MEMBER RYAN: I'm just curious. Expert panel representation. What does expert panel mean to --

CHAIRMAN STETKAR: This is a staff problem. This is not John Butler at NEI.

MR. WEERAKKODY: Yes. It was in one of our slides. Again, we are getting into the amount of slides. All right. Go ahead.

MR. RUFFIN: During the Working Group's deliberations on the panel, again, this is one of those areas where there wasn't 100 percent agreement.

MEMBER RYAN: I'll take that to mean there was not an agreement at the end of the discussion.

MR. RUFFIN: Well, there was an agreement that the panel would be made up of senior managers and subject matter experts that have the right experience,

PRA experience --

MEMBER RYAN: All right. So now we've kind of kicked the ball to the, we'll have to develop the criteria that describes a competent person to stand, you know, in on this field, or that field, or whatever, so I get that part. But that's a heck of a lot of weight to carry to handle a problem. When I would think that, you know, there could be some ad hoc activities with, you know, key people from the staff that could group up pretty quickly and address something.

You know, the experience I have in my head is, anybody familiar with DSSI in Kingston, Tennessee that caught fire. Well, guess who the RSO was. Me. I wasn't at the facility, I was at Chem-Nuclear, but they bought it, so, Brian, you're the radiological guy. Get in the plane. Go. You know, and that really became kind of a learning field for all these things you've talked about.

And trust me, you know, if you have to deal with it at the end of some event like a fire in air pollution control system, you're going to work a whole lot faster than this process is going to let you do. Trust me. I just think, you know, we need to structure this so it's fluid and flexible for any user to make use of it, to understand it quickly, and to really define

the objectives they need to reach to be done.

I asked every regulator involved in that one process that I mentioned, when am I done? When am I done? Just tell me when I'm finished. And I'll plan it, and I'll execute it, and I'll get it done, and if you don't like it, I'll do whatever you want the second round. I'm sure there'll be a second or a third, you know, so just tell me what you want. Sitting around thinking about what we want, not so good.

MR. RUFFIN: Well, I think --

MEMBER RYAN: So I just offer you that insight to say, what you really need to think about, if I was in that, you know, licensee's shoes, how would I want to structure this so I could, you know, communicate information about what I'm doing and why I'm doing it, and get a read. Yes, okay, that's good, or no, this part's good and that part isn't, as efficiently as possible.

MR. RUFFIN: And I appreciate that. And again, the Working Group -- you know, the dynamics is, sometimes, you know, to get consensus, to get concurrence, you have to take it a little higher.

MEMBER RYAN: What do you mean by taking it a little higher? Take it to management?

MR. RUFFIN: No, it means we have to define

it at a level where --

MEMBER RYAN: And I don't know what higher level means, to be honest with you.

MR. RUFFIN: -- all of the details aren't resolved and --

MEMBER RYAN: When you say it's going to go to a higher level, I don't know what that means.

CHAIRMAN STETKAR: We're not going to constitute the expert panel at this Subcommittee meeting.

MEMBER RYAN: I'm not asking to, John. I'm just trying to understand what they're meaning by their words.

MEMBER REMPE: But I have a different question if you're done.

MEMBER RYAN: Thank you.

MEMBER REMPE: It's related to what you have here in your questions about the expert panel, and again, I'm afraid the staff's going to have to answer, but earlier a couple of slides, you said something about it's important not to preclude the possibility of project scope changes or particular issues from being considered because of that happening during the IDP process.

Would this expert panel that provides a

high level guidance about which issues that should be focused upon, and how would that interface work if they decide that some issue just shouldn't be considered, and then you guys say, oh, that issue is important and we'd like to consider it? How does that exchange work?

MR. RUFFIN: Well, I think they're two different things. When they talked about what their guidance does, in addition to schedule, they said what they also learned is that they found that they need to make some changes as well. They would have to come in through the regular processes to request that type --

MR. BUTLER: I can give you my opinions.

MR. RUFFIN: But the expert panel that we're talking about would be a panel that is internal looking at what regulatory actions NRC staff is proposing, and that panel would prioritize those actions and when appropriate, eliminate some of those, so that's a CER function that's not interfacing with that process there. Where the interface is that is identified in the paper is when the GAET does its deliberations out in the industry, and before we ever go out with a proposed rule that's already gotten past the expert panel, and the expert panel says still go do it, the report that they would make available to us would be what would then shape our opinions from how that

information they provided to us affects that proposed rule or proposed regulatory action that was going to forward that had already gotten past the expert panel.

MEMBER REMPE: Okay. Thank you.

MR. ZOULIS: This is Antonios Zoulis, because this is exploratory, the expert panel is exploratory, I can envision that if we get feedback from the industry that the proposed solution for X isn't really hitting the mark, that could be provided back to us in some funnel thing, that could then be deliberated again in the expert panel level to determine an even more appropriate solution for it, and that could then cover the scope change issue.

I mean, nobody says you can't do that. I mean, that would be, to me, a very productive way of using the expert panel as well.

MR. BUTLER: The value of the expert panel has to be looked at in a couple different ways. You're bringing together a multi-discipline team and using the process to kind of focus their attention on a particular issue, bringing their varied perspective to the issue. That's the value. How you apply it can vary. You can apply it to look at multiple issues to give a relative ranking, which is, really, the primary focus here, but there's also value in informing, on a particular issue,

what's important, you know, how's the best way to address it.

I mean, you know, we saw that in our generic assessment expert team process where, applying it to a particular issue with this team allowed you to identify, what are the characteristics that make the issue important, that would then inform you which plants it applies to the most, and that, in turn, can inform how best to address the issue, whether you address it generically, more on a plant-specific basis, or that could affect the time table that you apply, you know, so it helps inform the best way to move forward on the issue.

CHAIRMAN STETKAR: The dangers, of course, with that, or the group thing of, the experts telling the plant what they should think about rather than the plant deciding what's important for themselves. I'll just say that on the record.

MR. BUTLER: Well, as I started out saying, there's a value in applying this process, not only generically, but also plant-specific, because you've, you know --

CHAIRMAN STETKAR: Provided that the plant has enough wherewithal to say, we don't agree with those generic experts and we think something is more

important, and I haven't seen that happen. That's the danger of the group of industry experts telling the plant what they should think about.

MR. BUTLER: Option 3, I think we're in favor of this. How it's presented in the draft SECY is that, you know, it would be piloted. It's not clear whether we're talking piloting for a single rulemaking or applying it during a pilot period where you would apply it to any rulemakings during that period. The value of this really depends upon which rulemaking you choose to pilot, and I think that's where my concerns would be, and whether or not, you know, you would be able to choose the right rulemaking to use to inform whether or not this is a valuable process.

That being said, it's just, you know, I think it's worth trying, but there's a caution that it may take multiple rulemakings to really inform the value of this process and answer some of the questions that are going to be inevitable as part of this. That was it. That's my slides.

CHAIRMAN STETKAR: Does NEI have any thoughts on Option 4?

MR. BUTLER: Yes.

CHAIRMAN STETKAR: Okay.

MR. BUTLER: Option 4, I think it's worthy

of discussion, but I would have to agree with the staff right now, there's a lot of questions that would come up. I think it would be valuable for us to get some experience. The processes that are talked about in Options 2 and 3, that would place us in a better position to understand better how Option 4 could be applied.

I'd like to continue discussion of Option 4, but, you know, there are answers that are needed, more experience that is needed, before we really jump into Option 4.

CHAIRMAN STETKAR: Okay. Good. Anything else for John?

MR. BUTLER: Thank you very much.

CHAIRMAN STETKAR: Thank you very much. And we're going to have -- Dave Lochbaum from UCS has comments. While we're getting his line open, I think we've all received the written form of those comments and I hope Members have had a chance to read them. The written comments will be included as part of the record of the meeting, in addition to whatever Dave has to say.

Dave, are you out there?

MR. LOCHBAUM: Yes, I am. Can you hear me?

CHAIRMAN STETKAR: Good. Yes, yes. That was the test of our sophistication. So you have the floor.

MR. LOCHBAUM: Well, thank you very much. My name is David Lochbaum. I'm the director of the Nuclear Safety Project for the Union of Concerned Scientists. I first want to start with my appreciation for the accommodation that allowed me to participate remotely. I would have preferred to be there in-person, but my schedule didn't support that, so I appreciate your allowing arranging for remote participation.

I also noticed that there -- we've been monitoring this process for a couple years and feel that the discussion has been very helpful and has value, or at least intangible value, of helping the NRC staff and the industry better understand each other, similar to the process that was followed a few years ago with safety culture, where everybody wanted good safety culture, but there was some communication barriers, some language issues, and different people had meant different things to different people.

Our monitoring the process the last couple years has shown that there's been intangible value of better understanding of prioritization, what factors go into it, how it's discovered, and there seems to be a narrowing of the gap between the NRC staff and the industry as to what needs to be done, and what works and

what doesn't work along the way. So I can't put a price tag on that, but that seems to have had some intangible value already, in addition to whatever else is down the road.

There was discussion earlier during the session about, during the staff's presentation about, working under way and to be completed to try to narrow the gap on cost estimates where the NRC's regulatory analysis of various things, regulatory requirements, turned out to be a little bit lower than the actual costs to when those requirements are ultimately implemented.

In the spirit of trying to close gaps, identifying closed gaps, the concerns or the issues we'd like to raise and put on the table are two other gaps that we think need to be considered along the way as these tools, or these processes, are implemented.

The first is, there's a big gap between the pace of resolving nuclear business items and the pace that nuclear safety issues get resolved. And the second gap is, there's a gap between the perception of risk between what the NRC sees and what the plant owners see, and our concern is, particularly if that second gap isn't narrowed, if not closed, then that first gap is only going to widen, because if the industry perceives risk of an issue far lower than the NRC does, then that's

going to affect where issues are prioritized and ranked, and therefore, when they get resolved.

We also don't have any -- aren't commenting on who's right in the risk perception. It doesn't really matter who's right because the gap itself means that the outcomes are wrong. If the NRC's risks are right, then the industry underestimating risk means that things that should be done sooner may get done later, and if the industry's risk calculations are typically more right, then that means that the NRC's perception of risk may drive things that don't need to be done into being done sooner than they need to be, kind of like the discussion about green findings and who's wearing the hat of who finds it.

So we think it's important, similar to the way that the cost estimate issues are being addressed, and hopefully the gap narrowed, that the risk perception gaps also represent an issue that needs to be resolved, because if you're doing a cost-benefit study, which, essentially, risk prioritization does, if you're wrong on the cost side or if you're wrong on the benefit side, the outcome of the decision you make isn't as fully informed as it should be or is wrongfully informed.

As far as some of the evidence that we would cite that there is a gap between the pace of resolving

business issues and safety issues, the three examples we provide in the paper was licensing actions, which get reported to the Congress every six months. The NRC had set a goal many years ago of resolving all licensing actions within two years, and 95 percent of those licensing actions within one year, and the semi-annual reports that go to Congress showed that the NRC does a really good job of meeting those goals.

I would note that that's not just reflective upon the performance of the NRC, because it also inherently, or tangibly, or implicitly reflects on the performance of the licensees. If the license amendment requests and the other documents that are submitted to the NRC for review and approval were not of sufficient quality, then it would be difficult for the NRC staff to meet its one-year, two-year goals.

So collectively, the fact that these goals are being met for hundreds of items year after year, show that the NRC and its licensees have developed the processes and the discipline necessary to submit quality work and have it reviewed in an expeditious manner consistently.

The second data point that I would point to to show that nuclear business is done at a different pace is license renewals. Technically, they're a subset of

licensing actions because they do require license amendment requests, which is a licensing action, but I pulled them out as a subset because license renewals are much more extensive, it's a lot of work on part of both the licensee and the NRC staff to prepare, review, and approve a license renewal.

But if you look at the track record over the last decade, it's been a pretty -- with a couple exceptions, Pilgrim and Indian Point, the license renewal applications are of sufficient quality to allow the NRC to review and approve them within three to four years; repeatedly; consistently.

And the last example, similar to that, is power uprates. Even extended power uprates are being reviewed and approved in a fairly short order. Even the more complex ones, like extended power uprate, which involve a wider scope, they're still being done. You know, Table 3 of the paper that I submitted shows some safety issues with a different track record.

The GSI-191, which was actually started before I joined USC more than -- sometime last century, are still open, and it's like 18.4 years and counting on being unresolved. And, you know, if it's important safety issues, then nearly two decades is wrong, and if it's not on important issues, then wasting everybody's

time for nearly two decades is equally wrong, so I'll let the industry and NRC pick which of those two wrongs it is, but 18.4 years is just unacceptable.

And that's, maybe, the longest one, but fire protection issues for nearly three dozen plants have been open for more than a decade. In fact, the three reactors at Browns Ferry that started all this, back in -- still don't meet the fire protection regulations after three decades, and that's unfortunate.

We're not saying, you know, these generic safety issues are complex and we're not saying they should be resolved as expeditiously or in the same timeframe as the licensing actions, the license renewals, or the power uprates. What we are saying is that the same discipline, and process, and rigor that the industry and the NRC staff exhibit by doing those other things consistently in a timely manner should be applied to the resolution of these safety issues.

The benefit that would be derived, other than the safety benefit, the safety gain that's derived from that, is that, by taking some of these issues off the table, instead of wasting everybody's time for 18.4 years, you would free-up resources to do a bunch of other things.

So instead of metering how many more balls the juggler gets up in the air, we think more effort should be focused on getting some of the balls that have been up in the air for nearly two decades down off the ground and free-up resources to do some of these things that the industry and others want to do.

The second gap that we think needs to be closed is the gap between what the licensees see as risk and what the NRC staff sees as risk. I went back through the yellow and red findings issued by the NRC since the ROP was adopted in April of 2000 and compiled the results in Table 4. I didn't capture every one of those, because they're kind of hard to find. There's no one repository for these things, and it does take some time to wander through ADAMS and fetch them.

But the ones I found showed -- and I didn't ignore any that showed that there was agreement, so I didn't cherry-pick the results to only pick the ones that they disagree. But of the ones I found, the closest agreement was the issue at Oconee involving the safe shutdown facility, where the NRC's estimate of what the risk was from that non-conforming condition was double that of the licensee.

The more recent flood protection issue at Watts Bar was three orders of magnitude different

between what the licensee thought and what the NRC thought. If we're seeing these kinds of differences when you apply it to risk rankings, and the NRC thinks that the risk will be derived using their methodology and their computers, and the licensees are using one that's up to three magnitudes lower, that's going to skew the results.

So we're a little concerned that just as the wide cost estimate gap needs to be narrowed, this risk gap also needs to be narrowed, otherwise, you're not ranking things properly per risk. And again, I'm not -- I have an opinion as to who's right or wrong in terms of whether the licensee or the NRC's risk calculations are right, but in some respects, it doesn't matter. That gap itself is inappropriate when you're trying to then rank issues based on risk.

In terms of the actual NEI guidance and the results from the pilots that were conducted last year, we noticed some issues that could affect how emerging issues are ranked. The NRC, in the report on their observation of the pilots, staff noted that in at least one plant, the NFPA-805 modifications that were scheduled, the licensee didn't use some of the fire modeling techniques that are available.

You know, if you can cherry-pick what

inputs you use in order to have the lower outcome, then that's not the way this thing should be working. There should be more objectivity, more repeatability amongst the risk rankings and not, you know, work backwards from the answer you want to figure out what inputs should go into it, and that's not right.

Similarly, the NRC staff noticed that the security factor, which is one of the five factors used to rank issues, that one licensee was comparing the compensatory measures that were in place for the security violation with the final configuration after the security problem was fixed, that it really should the as-found condition versus the to-be-fixed condition, not some unregulated interim point that gives you a low answer.

Again, it seems like that's a neat way to come up with the lower ranking and obviously, then, reduce the prioritization of those issues. And the last factor that could be gained to, basically, just whatever answer you want to come up with, is the radiation protection factor.

You know, recently, USC and others have advocated accelerating the transfer of irradiated fuel from pools into dry storage. The industry was quick to point out that that would entail more radiation exposure

to workers, and therefore, would be a very bad thing, and they opposed it for the increased radiation exposure.

Yet, around the same time, the NRC staff and the Indian Point licensee came up with this weird scheme where Indian Point Unit 3's pool doesn't have a high capacity crane, so they load 12 assemblies into a little bitty canister, move it over to the Unit 2 pool, and then load it into a big canister, 32-assembly canister, to move out to the ISFSI in the backyard.

That moves fuel about two or three times more often than it needs to be, but this whole worker exposure thing somehow disappeared from the view when this licensee chose to do that cockamamie scheme rather than just upgrade the Unit 3 crane like they did the Unit 2 crane.

Similarly, in just the last year, San Onofre, Kewaunee, and Vermont Yankee have all announced that they're going to offload their spent fuel pools as quickly as they can into dry storage, with target completion dates of about six years, the same timeframe we are proposing for the safety gate, but none of them mentioned the increased worker exposure that that plan would entail.

So this whole worker radiation exposure

thing, and workers are being used as pawns, concerned about their health when there's dollars involved and you might have to spend a few more, and no concern at all about their radiation exposure when you're saving money. So therefore, this radiation exposure factor looks like a wildcard that can be used to either bump up or drop down a priority level dependent on what you want before you started, and that's just a waste of time.

If you don't want to do it, don't do it. Don't play with the math and use voodoo math to justify some answer you already had in mind. And lastly, we emphasize was the point made by the NRC staff in their report on the pilots. The process in the NEI draft guidance could result in continual deferral or delay of corrective actions. We don't need anymore of that.

That kind of nonsense was what led to the near-miss at Davis-Besse when outage after outage, the plan to go in there and modify the service platform to facilitate inspections and cleaning of the reactor vessel head was deferred for economic reasons.

In addition, in 1999, when workers found problems with junk clogging the radiation filters, or the air filters on the radiation detectors, it was dismissed because it's a low priority, non-safety system, so, you know, we can continue to dilute

ourselves into missing safety issues, and this seems like an enabler of that practice rather than one that controls it and ensures that important stuff gets done in a timely manner.

With that, I'd be glad to entertain any questions or comments, and I, again, appreciate both your listening to our perspectives and providing for the remote participation.

CHAIRMAN STETKAR: Anything for Dave? Dave, thanks a lot and everything that you said, and as I said, your written comments are on the record. I don't know if you're planning to participate. I think we're scheduled March 5th for the Full Committee briefing, and we could accommodate your remote participation at that time also, if you want to do that.

MR. LOCHBAUM: I appreciate that. We have an annual report on the NRC and nuclear power plant safety that, right now, may come out on March 5th, which would keep me busy --

CHAIRMAN STETKAR: Oh, okay.

MR. LOCHBAUM: -- so I just need to nail that down, but I do appreciate that offer and we'll get back to Mike as quickly --

CHAIRMAN STETKAR: Yes, just coordinate it with Mike so that we know what to plan for for the Full

Committee.

MR. LOCHBAUM: I'll do that. Thank you.

CHAIRMAN STETKAR: Thanks a lot. Mike, was Dave on the public line? We only had one line open? I'm confused. Maybe just tell me we have phone lines and --

MR. SNODDERLY: You should open up the public line.

CHAIRMAN STETKAR: Is it open? It is not. Okay. Leave it. That's my confusion. While we're doing that, let me ask if there's anyone in the room that has any comments that you'd like to make. Come on up and identify yourself and do so. Hearing nothing, we'll get the public line opened up soon. It is allegedly open. If there's anyone from the public out there, do me a favor, please, and just say hello, or something, so that we can confirm that the line is open.

Hello. Thank you. Honestly, it's a high-tech system. That's the only way we have to find out that it's open. Now, if there is anyone, a member of the public, who would like to make a comment, please identify yourself and do so. Okay. Hearing none, we'll close that. And as we always do at the end of Subcommittee meeting, I'd like to go around the table and ask for any final comments by the Members. And

we'll start with Steve this time.

MEMBER SCHULTZ: Thank you. I would just like to thank the staff and all the participants in the meeting for the presentations this afternoon. Those presentation have shed a lot of light on, not only the paper, but also the interpretations of the paper, and the comments on the paper by the UCS and NEI have been very helpful as well. So that's really all I have.

A lot of questions that I had in reading the current draft have been answered through the presentations and I appreciate that very much. Thank you.

MEMBER SKILLMAN: No further comment. Thank you.

CHAIRMAN STETKAR: Thanks. Dennis?

MEMBER BLEY: I trust the staff will take note of what Steve said. Just about everybody had trouble understanding this without the explanations, which implies there's something not clear in the text, so better next time.

CHAIRMAN STETKAR: Mike?

MEMBER RYAN: The only thought I'd add a little bit to is that complex facilities that have more than a radiological hazard and, you know, where you're kind of embarking on this risk analysis sort of

approach, I think it's important to at least think about, or maybe even get some experience from other industries, you know, on the next waste facilities that might be out there that could be helpful to see if there's anything to learn there as you embark on trying to sort this out for the licensees.

They may have a competing risk that needs equal attention, and perhaps more attention, than the radiological risk. And we heard, you know, Mr. Lochbaum, talk a little bit about that. So I appreciate the discussion and it's clear the staff's done a tremendous amount of work to think this through and get organized, but I think there's a few more feet in front of us before the finish line to maybe get it to the next level and really make it workable, and clear to everybody, which is good. Thank you very much for your time here.

MEMBER BALLINGER: No comment.

CHAIRMAN STETKAR: Charlie?

MEMBER BROWN: I got some better appreciation, understanding, of what was going on that I didn't gather before, so other than that, I had no additional comments.

CHAIRMAN STETKAR: Joy?

MEMBER REMPE: No additional comments, but

I triple or quadruple the comment about the clarification in the SECY because it's important to have it as clear as possible.

CHAIRMAN STETKAR: Good. And I don't have anything further to add, so I'd like to thank the staff and also, again, I echo the thanks to NEI. I think your presentation helped. It certainly helped to flesh-out some of what we discussed here in terms of oral clarifications, and also, I'd like to thank UCS for a very thoughtful set of written comments and oral comments that we'll certainly include in our deliberations.

And with that, if there's nothing more, we are adjourned.

(Whereupon, the meeting in the above-entitled matter was concluded at 4:19 p.m.)

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ACRS Subcommittee Briefing: March 2015 Cumulative Effects of Regulation/Risk Prioritization Initiative Paper

February 20, 2015

Steve Ruffin
NRR Division of Policy and Rulemaking
Antonios Zoulis
NRR Division of Risk Assessment

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Purpose

- Provide an overview of draft SECY-15-XXXX, “Cumulative Effects of Regulation Process Enhancements and Risk Prioritization Initiative: Response to Commission Direction and Recommendations”
- Brief ACRS Subcommittee in advance of the Full Committee meeting
- Obtain letter from ACRS Full Committee

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Outline

- Background
- Update on Cumulative Effects of Regulation (CER) Efforts
- NEI Draft Guidance
- Discussion of CER and Risk Prioritization Initiative (RPI) Options
- Recommendation

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Background

- SECY-12-0137, “Implementation of the Cumulative Effects of Regulation Process Changes” (October 5, 2012; ADAMS Accession No. ML12223A162)
- SRM-SECY-12-0137 (March 12, 2013; ADAMS Accession No. ML13071A635)

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Background (Cont'd)

- SRM-COMGEA-12-0001/COMWDM-12-0002, "Proposed Initiative to Improve Nuclear Safety and Regulatory Efficiency" (February 5, 2013; ADAMS Accession No. ML13037A541)
- COMSECY-14-0014 (April 9, 2014; ADAMS Accession No. ML14069A061)
- SRM to COMSECY-14-0014 (July 18, 2014; ADAMS Accession No. ML14199A187)

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Update on CER

- Fuel Cycle Facilities and Agreement States
  - NMSS Fuel Cycle maintains an Integrated Schedule of regulatory activities
  - NMSS Fuel Cycle conducts quarterly meetings with stakeholders to discuss and adjust the regulatory milestones
  - NMSS is working with Agreement States to identify Agreement State CER impacts

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Update on CER (Cont'd)

- Regulatory Analysis Improvements
  - Report outcome of CER case studies
  - Improvements to the Regulatory Analysis Process
- CER Expansion to Generic Communications Program
  - Six CER questions in the Federal Register notices
  - Generic Letters
  - Other Generic Communications (CER enhancements not necessary)

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NEI Draft Guidance

- Development and Demonstration Pilot Exercises
  - The proposed guidance consists of Generic Assessment, Plant-specific Assessment, and Issue Aggregation
  - NRC staff participated in the demonstration pilots (ADAMS Accession No, ML14302A269 and ADAMS Accession No. ML14349A378 contain summary reports from NRC staff and industry, respectively)

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NEI Draft Guidance (Cont'd)

- NEI process was effective in applying objective decisionmaking attributes to prioritize both regulatory and plant issues
- Integrated Decisionmaking Panel (IDP) used rational methods, asked challenging questions, and considered both the positive and adverse effects of the proposed issues
- Insights from the site-specific probabilistic risk assessment (PRA) models, when included in the IDP discussion facilitated the process.

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NEI Draft Guidance (Cont'd)

- Emergency Preparedness, Radiation Protection and Security are not easily amenable to risk quantification
- The staff would have to rely on qualitative risk insights as well as other attributes of the risk-informed framework
- Improvements have been made in the proposed NEI guidance but additional work is still necessary to ensure those issues are being characterized correctly and consistently

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Discussion

- Incentivizing PRA
  - COMGEA-12-0001/COMWDM-12-0002 proposed an initiative to explore ways to incentivize PRA by allowing licensees to prioritize regulatory and explore proposing alternatives and in some cases eliminate based on full-scope level 1 and 2 PRA
  - Options promote the use and in some case the development of PRA
  - NRC staff explored methods to allow elimination of issues without prior NRC approval

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Discussion (Cont'd)

- Inspection Findings
  - SRM to COMSECY-14-0014 directed the NRC staff to consider "how corrective actions for findings, violations, and degraded or nonconforming conditions adverse to quality will be treated as part of the risk prioritization initiative"
    - Reactor Oversight Process (ROP) is a mature process
    - Uses risk-informed criteria to establish significance of findings

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Discussion (Cont'd)

- Inspection Findings (Cont'd)
  - Fundamental assumption of ROP is that corrective actions (CA) associated with "green" and other findings would be promptly addressed.
  - Inspection guidance (IMC 326) discusses what is meant by "prompt" for certain operable, but degraded SSCs, consistent with regulations
  - Rescheduling of CAs associated with findings can complicate or hinder follow-on supplemental inspections

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Discussion (Cont'd)

- Inspection Findings (Cont'd)
  - Current proposed guidance only allows prioritization of docketed commitments resulting from inspection findings

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Regulatory Process Changes

- "Obviate the Need for Exemptions"
  - SRM to COMSECY-2014-0014 directed staff to explore "regulatory process changes required to support reliable, efficient, and effective implementation of the RPI in the long term"
    - Develop a process to allow licensees to be exempt from regulation with appropriate level of PRA for low or very low significant issue
  - Staff consider options and determined that rulemaking would be necessary to support such a method

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Issue Management

- SRM from the Commission directed NRC staff to examine how issue management under RPI would be addressed
  - Commission is concerned with the continuous deferral of issues i.e. imposing a backstop
  - Should the significance of an issue determine the number of deferrals?
- Options presented in the paper discuss the applicability or need for a backstop

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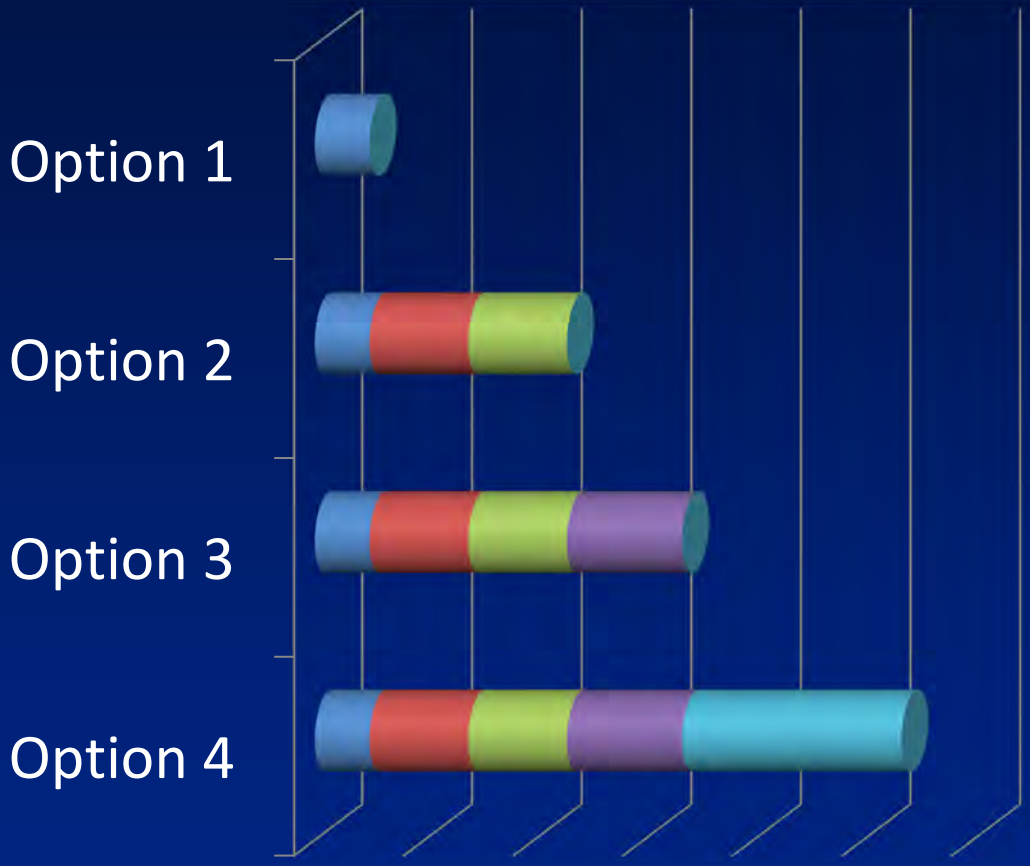
CER – Options*



* Options could be implemented in a phased approach

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Option 1

- Rulemaking process enhancements
- Continue to improve cost estimating within regulatory analyses
  - Increased (and early) interaction with stakeholders on draft regulatory analysis
  - Explore use of contractors to develop independent cost estimates
- Expanding CER to Generic Letters

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Option 1 (Cont'd)

- Pros
  - Will not require additional staff resources
  - Maintains the existing regulatory processes
  - Continues the current approach to regulation that is well understood
  - Continues to implement approved CER process enhancements across the agency

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Option 1 (Cont'd)

- Cons
  - Would not incentivize licensees to use or develop PRA models
  - May not resolve some industry CER concerns with existing or future requirements

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Option 2

- Establish pilot of an NRC expert panel to consider CER impacts for operating reactors
- Panel would characterize and prioritize regulatory actions using risk insights
  - Pilot across the operating reactor business line
  - Screen and prioritize prospective regulatory actions
  - Comprised of senior managers and subject matter experts

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Option 2 (Cont'd)

- Existing applicable regulatory processes augmented with a risk-informed prioritization process for scheduling
  - Augments existing processes with a risk-informed prioritization methodology to facilitate the submittal, review, and approval/non-acceptance
  - Regulatory Guide that would endorse a risk-informed method to justify the regulatory action
  - Development of templates for the licensees to facilitate submittals and ensure consistency in the information provided

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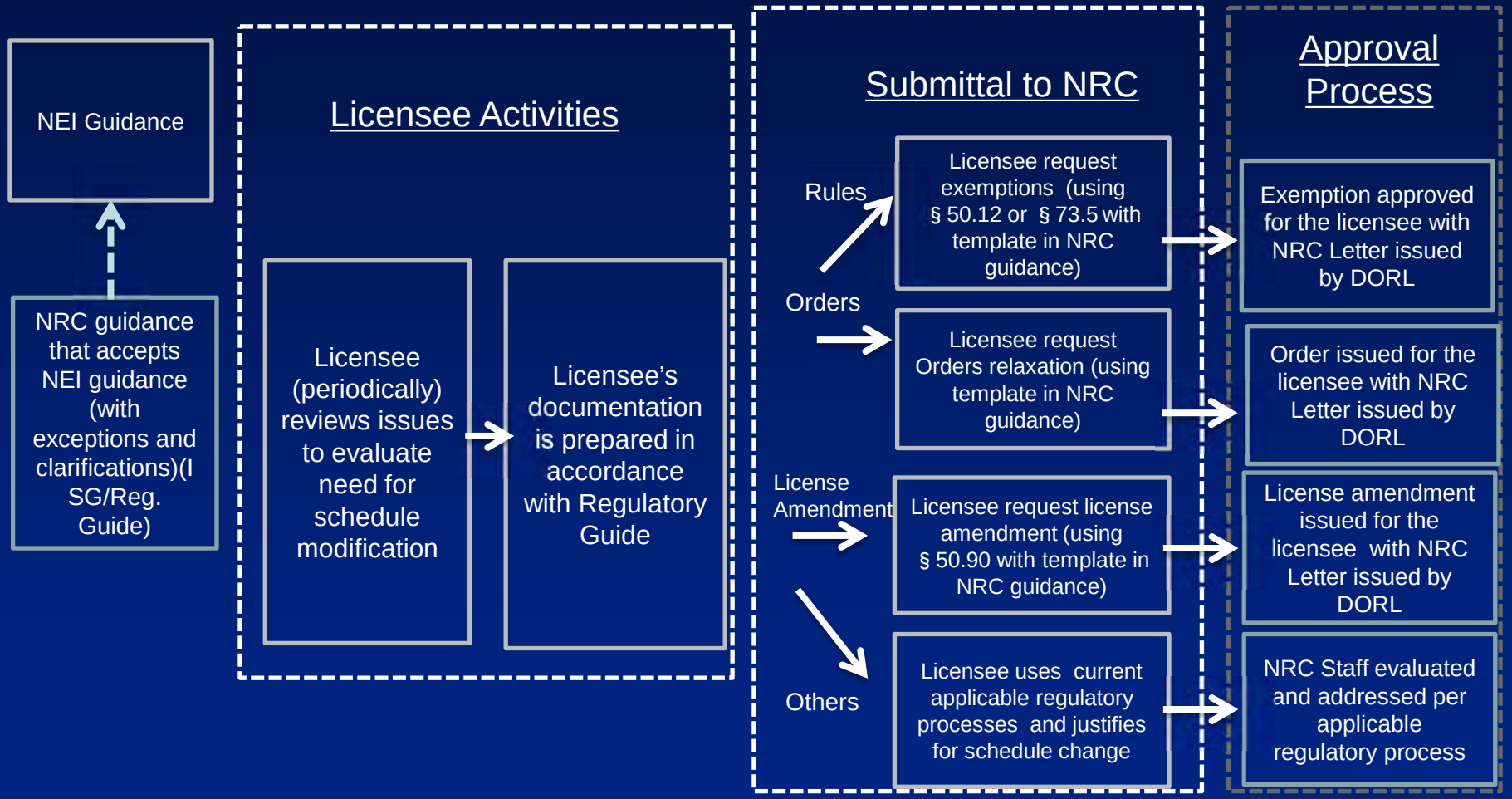
Option 2 (Cont'd)



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Option 2 (Cont'd)

- Pros
  - Further the use of PRA risk insights
  - Support industry and agency's efforts in CER by focusing resources on existing issues of greater safety significance
  - May reduce review time for exemptions/order modifications/commitment changes in the long-term
  - Use of expert panel could ensure NRC's resources and skill sets are focused on the items of highest safety significance

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Option 2 (Cont'd)

- Cons
  - Voluntary - would not incentivize licensees to further develop or enhance PRA models
  - May increase number and associated review time of certain exemptions/order modifications/commitment changes and also the number of reviews in the short-term
  - Would require additional staff resources to develop supporting templates and standard review plans

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Option 2 (Cont'd)

- Inspection and Enforcement
  - Staff would review and approve any changes to the schedule of implementation in accordance with existing processes
  - Inspection and enforcement would be minimally impacted since changes would be made on a case-by-case basis

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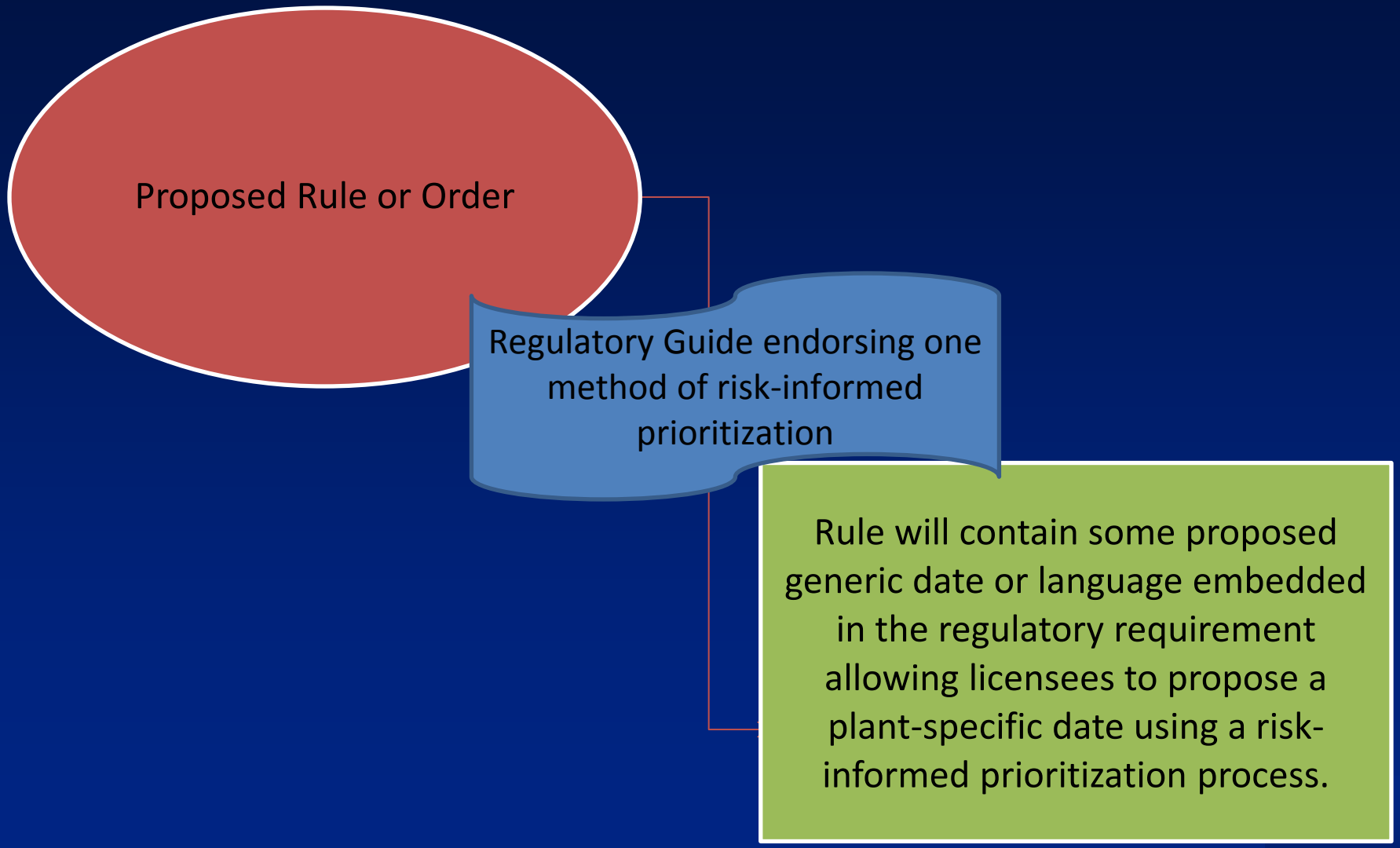
Option 3

- Prospective rules/orders that allow for licensees to submit plant-specific implementation schedules using a risk-informed prioritization process
  - Licensees would be allowed to implement future rules or orders using a plant-specific schedule
  - Important feature is the use of plant-specific risk insights to inform the implementation schedules of new rules or orders or other regulatory actions.

Option 3 – Plant-specific Schedule Implementation



Option 3 (Cont'd)

- Pros
  - Allow licensees to propose a flexible plant-specific date of implementation of a new rule/order
  - May reduce the number of exemptions
  - Further the use of PRA risk insights
  - Support industry and agency's efforts in CER (consistent with EO 13563) by focusing resources on current and future requirements of greater safety significance

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Option 3 (Cont'd)

- Cons
  - Voluntary - would not incentivize licensees to develop or enhance PRA models
  - Would require additional staff time and resources to develop final rules

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Option 3 (Cont'd)

- Inspection and Enforcement
  - Inspections planning (e.g., temporary instructions, baseline inspections) would need to be adjusted to reflect licensees flexible implementation schedules
    - Potential to impact inspection schedules
  - Overall, enforcement and inspection would be manageable if sufficient coordination is provided

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Option 4

- Explore rulemaking to develop a new process that would allow licensees the flexibility to reschedule regulatory requirements without the need for prior regulatory approval

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Option 4 (Cont'd)

- Level of PRA development will dictate degree of flexibility
  - Development of full-scope level 1 & 2 PRA would allow deferral and proposal of alternatives and perhaps elimination commensurate with their plant-specific safety significance
  - Current and available risk insights would allow for scheduling flexibility

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Option 4 (Cont'd)

- Pros
  - Allows licensees flexibility in scheduling and implementation of regulatory requirements
  - Enable staff to enforce deviations from process
  - Establish requirements for level of PRA development and regulatory flexibility to promote regulatory stability/predictability
  - Further the use of PRA risk insights and potential development of PRA

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Option 4 (Cont'd)

- Cons
  - Will not address current industry CER concerns with existing requirements
  - Would require additional Staff time and resources to develop new RPI rule
  - PRA is not applicable in the areas of Emergency Preparedness, Radiation Protection, and Security

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Option 4 (Cont'd)

- Inspection and Enforcement
  - Modeled after other performance based risk-informed regulations
    - Pilot, roll-out to all licensees, audit of the process, and then eventual inclusion into the baseline inspection
  - Deferring regulatory actions adds challenges to our assessment of the date of a violation and when compliance was required

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Option 4 (Cont'd)

- Inspection and Enforcement (Cont'd)
  - Enforcement actions may be more varied and require additional time and resources to close
  - Requires new baseline inspection procedure and additional resources
  - Requires additional training for inspectors
  - May be difficult to disposition a finding/violation
  - Potential to impact Regional inspection planning and create unforeseen resource challenges

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Recommendations

- Approve Option 2 in full. Part 1 augments existing regulatory processes with a risk-informed prioritization methodology. Part 2 permits the staff to explore the use of an internal expert panel
- Approve the pilot for Option 3, which would provide a voluntary opportunity for power reactor licensees to submit a plant-specific implementation plan when NRC adopts a final rule.

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Recommendations (Cont'd)

- After obtaining feedback and lessons-learned from Option 2 and results of the pilot of Option 3, the staff would return to the Commission to seek direction on whether to pursue additional steps.

NEI Comments on Draft SECY Addressing CER/RPI

ACRS Reliability and PRA Subcommittee
February 20, 2015

John Butler, NEI
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Basic Principle

"Nuclear safety is advanced when licensees and the staff focus their time, attention, and resources on the issues of greater safety significance at each plant"

(COMGEA-12-0001/COMWDM-12-0002)

- The process described in NEI 14-10 will enable operating plants to prioritize and schedule plant activities on the basis of their importance to plant safety.
- The prioritization framework can be adapted by NRC to improve the management of emerging regulatory issues

Site-specific Prioritization

- Implementation of site-specific prioritization is a fundamental component of actions to address CER
- Enables tasks with greatest impact on plant safety to be implemented first
- NRC endorsement of NEI 14-10 will facilitate industry-wide implementation
- Value of process was demonstrated during pilot
  - Generic assessment highlights key attributes that impact importance
  - Site-specific application enables unique attributes to be taken into account

Option 2, Part 1 – Endorsement of Industry Guidance

- Possible endorsement of industry guidance via a Regulatory Guide
  - 1 to 2 year Regulatory Guide development and approval process
- Consider letter endorsement of NEI 14-10 as interim step
  - Would enable sooner application of process by industry
  - Provide means to gain experience on licensee submittals using prioritization results
  - Will assist development of Regulatory Guide

Option 2, Part 1 – Schedule and Scope changes are possible

- Important to not preclude possibility of project scope changes in addition to schedule changes
  - Insights gained from Integrated Decision-Making Panel deliberations can identify distinct differences in importance within a project.
  - Example from pilots: Open Phase Resolution
    - Monitoring and Alarm
    - Offsite Power separation

Option 2, Part 1
– Treatment of Corrective Actions for Inspection Findings

- NEI 14-10 guidance revised to address concerns
- Limited to corrective actions for inspection findings for which a schedule has been established by commitment with NRC

Option 2, Part 2 – NRC Expert Panel Pilot

- NRC staff will pilot the use of an expert panel
  - would use risk insights and other relevant technical information to make recommendations to prioritize and eliminate (when appropriate) proposed regulatory actions
- Details on use and application of expert panel are needed
  - Expert panel representation
  - Expert panel objectives
  - Scope of regulatory actions considered
    - Proposed generic communications
    - Rulemakings
  - Opportunities for stakeholder input

Option 3
– Voluntary Plant-Specific Implementation Schedules

- How will Option 3 pilot be conducted?
  - Pilot of one rulemaking, or
  - Multiple rulemakings during conduct of pilot

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Comments by David Lochbaum, Director, Nuclear Safety Project before the ACRS Subcommittee on Reliabiltiy & PRA

The Cumulative Effects of Regulation (CER) process enhancements and Risk Prioritization Initiative (RPI) will not be successful unless two gaps are eliminated, or at least significantly narrowed:

1) Gap between pace resolving nuclear business items and pace resolving nuclear safety issues

2) Gap between licensees' perception of risk and NRC's perception of risk

The last sentence of the first paragraph under the Background section on page 2 of the draft SECY paper (ML15036A181) states:

> "*The goal of RPI is to enable NRC staff and licensees to focus resources on issues that are most significant to public safety using risk insights and incentivize the further use and development of probabilistic risk assessment (PRA).*

Unless the second gap is eliminated or significantly narrowed, the first gap will likely widen to have the opposite effect from this stated goal. It is vitally important that steps be taken to address both these gaps.

GAP BETWEEN NUCLEAR BUSINESS AND NUCLEAR SAFETY ISSUE RESOLUTION

The nuclear industry and the NRC have the capacity to resolve nuclear business issues in a timely, effective manner. Three examples demonstrate this capacity.

Licensing Actions: The NRC issues semiannual status reports to the US Congress. The information provided to the Congress includes the NRC's progress resolving licensing actions. The NRC defines licensing actions to be:

> *Operating power reactor licensing actions are defined as orders, license amendments, exemptions from regulations, relief from inspection or component testing, topical reports submitted on a plant-specific basis, notices of enforcement discretion, or other actions requiring NRC review and approval before they can be implemented by licensees.* (Source: ML14106A293)

Exemptions from regulations, relief from inspection and testing requirements, and notices of enforcement discretion are clearly more nuclear business oriented than nuclear safety oriented. This is not to suggest that nuclear safety is compromised or undermined by exemptions, relief, and non-enforcement, but it would be hard to contend that such efforts improve nuclear safety. At best, they are safety neutral.

Table 1 reflects the NRC's pace in resolving licensing actions from a recent report to the Congress.

Table 1: NRC's Report to Congress on Resolving Licensing Actions FY11 to FY14 (ML14106A293)

PERFORMANCE BUDGET PLAN					
Output Measure	**FY 2011 Actual**	**FY 2012 Actual**	**FY 2013 Actual**	**FY 2014 Goals**	**FY 2014 YTD**
Licensing actions completed per year	849	770	668	900	217
Age of licensing action inventory	90.3% ≤ 1 year and 99.9% ≤ 2 years	95.8% ≤ 1 year and 100% ≤ 2 years	95% ≤ 1 year and 100% ≤ 2 years	95% ≤ 1 year and 100% ≤ 2 years	87% ≤ 1 year and 99% ≤ 2 years
Other licensing tasks completed per year	465	674	529	500	402
Age of other licensing tasks inventory	94.2% ≤ 1 year and 99.6% ≤ 2 years	94.6% ≤ 1 year and 100% ≤ 2 years	97.6% ≤ 1 year and 100% ≤ 2 years	97.6% ≤ 1 year and 100% ≤ 2 years	90% ≤ 1 year and 99% ≤ 2 years

The NRC resolves hundreds of licensing actions (a.k.a. nuclear business issues) each year. In fact, the NRC resolves ALL or a very high percentage of nuclear business issues within two years.

License Renewals: While technically a subset of licensing actions because they require license amendments, license renewals are examined separately because they typically involve more resource efforts by licensees and the NRC. Figure 1 shows the time taken by the NRC in approving several license renewal requests.

The NRC has a long, proven track record of approving license renewals within three years. To be sure, there are some exceptions such as Pilgrim and Indian Point, but the majority get approved like clockwork.

Figure 1: Completed License Renewal Applications from
http://www.nrc.gov/reactors/operating/licensing/renewal/applications.html

Plant Applications for License Renewal

Completed Applications:

(Includes application, review schedule, supplemental environmental impact statement, and safety evaluation report.)

Plant Name and Unit(s)	Application Received	Renewed License Issued	Date Entering Extended Operation
Calvert Cliffs 1 & 2	04/10/98	03/23/00	07/31/14 (Unit 1) 08/13/16 (Unit 2)
Oconee 1, 2 & 3	07/07/98	05/23/00	02/06/13 (Unit 1) 10/06/13 (Unit 2) 07/19/14 (Unit 3)
Arkansas Nuclear One 1	02/01/00	06/20/01	05/20/14
Turkey Point 3 & 4	09/11/00	06/06/02	07/19/12 (Unit 3) 04/10/13 (Unit 4)
Edwin I. Hatch 1 & 2	03/01/00	06/15/02	08/06/14 (Unit 1) 06/13/18 (Unit 2)
North Anna 1 & 2	05/29/01	03/20/03	04/01/18 (Unit 1) 08/21/20 (Unit 2)
Surry 1 & 2	05/29/01	03/20/03	05/25/12 (Unit 1) 01/29/13 (Unit 2)
Peach Bottom 2 & 3	07/02/01	05/07/03	08/08/13 (Unit 2) 07/02/14 (Unit 3)
St. Lucie 1 & 2	11/30/01	10/02/03	03/01/16 (Unit 1) 04/06/23 (Unit 2)
Fort Calhoun	01/11/02	11/04/03	08/09/13
McGuire 1 & 2	06/14/01	12/05/03	06/12/21 (Unit 1) 03/03/23 (Unit 2)
Catawba 1 & 2	06/14/01	12/05/03	12/05/23 (Unit 1) 12/05/23 (Unit 2)
H.B. Robinson 2	06/17/02	04/19/04	07/31/10
V.C. Summer	08/06/02	04/23/04	08/06/22
R.E. Ginna	08/01/02	05/19/04	09/18/09
Dresden 2 & 3	01/03/03	10/28/04	12/22/09 (Unit 2) 01/12/11 (Unit 3)
Quad Cities 1 & 2	03/03/03	10/28/04	12/14/12 (Unit 1) 12/14/12 (Unit 2)
Joseph M. Farley 1 & 2	09/15/03	05/12/05	06/25/17 (Unit 1) 03/31/21 (Unit 2)
Arkansas Nuclear One 2		06/30/05	07/17/18
D.C. Cook 1 & 2	10/31/03	08/30/05	10/25/14 (Unit 1) 12/23/17 (Unit 2)
Millstone 2 & 3	01/22/04	11/28/05	07/31/15 (Unit 2) 11/25/25 (Unit 3)
Point Beach 1 & 2	02/26/04	12/22/05	10/05/10 (Unit 1) 03/08/13 (Unit 2)

The NRC has a track record over more than a decade of approving license renewals within three years.

Reactor Power Updates: Power uprates are also technically a subset of licensing actions because they too require license amendments. But they are examined separately because they involve considerable resources by licensees and the NRC and often entail plant modifications.

Table 2: Recently Approved Power Uprates (source: ML13098A298)

Table 1 – Power Uprates Approved Since June 15, 2012

No.	Plant	% Uprate	MWt	Application Date	Acceptance Date	Approval Date	Type
1	Grand Gulf 1	13.1	510	9/08/2010	12/09/2010	7/18/2012	EPU
2	St. Lucie 1	11.9	320	11/22/2010	3/03/2011	7/09/2012	EPU*
3	St. Lucie 2	11.9	320	2/25/2011	6/23/2011	9/24/2012	EPU*
4	McGuire 1	1.7	58	3/05/2012	4/25/2012	5/16/2013	MUR
5	McGuire 2	1.7	58	3/05/2012	4/25/2012	5/16/2013	MUR
		Total	**1,266**				

The NRC staff, even for extended power uprates, has demonstrated an ability to approve power uprates within two years after receiving the applications.

Contrast the NRC's pace resolving nuclear business issues with the pace resolving nuclear safety issues.

Table 3: Age of Unresolved Safety Issues

Issue	Beginning Date*	Age, Years	Sources
GSI-191, PWR containment sumps	09/1996	**18.4**	ML14261A178
GSI-193, BWR suction strainers	05/2002	**12.7**	ML14261A178
GSI-199, seismic protection	05/2005	**9.7**	ML14261A178
GSI-204, flooding from upstream dam failure	01/2012	**3.1**	ML14261A178
NFPA-805 fire protection	07/2004	**10.6**	Many

* "Beginning Date" is misleading because it refers to when the NRC established a resolution plan rather than when the NRC first recognized the safety implications of the issue (typically several years earlier).

Nuclear safety issues such as those listed in Table 3 are complex. Consequently, UCS does not expect or envision that complex nuclear safety issues can be resolved within the year or two that it takes to resolve nuclear business issues. However, UCS sees no valid justification for the resolution of GSI-191 needing 18-plus years and counting or for it to take longer than a decade for dozens of reactors to achieve compliance with the NFPA-805 regulation.

The process and discipline that licensees and NRC use to resolve nuclear business issues should also be applied to resolving nuclear safety issues. It seems to be a viable, effective model that could be equally effective resolving nuclear safety issues in a timely manner.

More timely resolution of nuclear safety issues would also reduce the resource burdens on licensees and the NRC. Even the best juggler can get too many balls up into the air. Rather than meter putting more

balls up into the air as CER and RPI seek to do, more effort should be focused on retiring some of the balls that have been up in the air for a very long time. Doing so would better serve safety and would free up resources that could be applied to emerging nuclear business and nuclear safety issues.

GAP BETWEEN LICENSEE AND NRC RISK PERCEPTIONS

UCS reviewed yellow and red findings issued by the NRC since the inception of its Reactor Oversight Process in April 2000. As shown in Table 4, the licensees and the NRC did not come close to agreeing on the risk significance of the events.

Table 4: Comparison Between Industry and NRC Risk Estimates

Event	Licensee ΔCDF	NRC ΔCDF	Risk Difference	Sources
ANO flood protection yellow finding	1.44E-05	1.00E-04	594%	ML14329B209
ANO Stator Drop on Unit 1 yellow finding	4.8E-06	6.0E-05	1,150%	ML14174A832
ANO Stator Drop on Unit 2 yellow finding	1.8E-06	2.8E-05	1,456%	ML14174A832
Browns Ferry Unit 1 RHR Valve red findings	1.0E-06	1.0E-04	9,900%	ML111290482 ML111930432
Fort Calhoun flood protection yellow finding	8.4E-07	3.2E-05	3,710%	ML102800342
Fort Calhoun trip relay contactor white finding	1.0E-06	2.6E-05	2,500%	ML111660027 ML112000064
Indian Point 2 steam generator tube leak red finding	6.6E-06	2.85E-05	332%	ML003770186
Monticello flood protection yellow finding	8.92E-07	3.6E-05	3,936%	ML13233A068 ML13162A776
Oconee safe shutdown facility yellow finding	8.0E-06	1.6E-05	100%	ML102240588
Palo Verde voided ECCS suction line yellow finding	7.0E-06	4.6E-05	557%	ML051010009
Watts Bar flood protection yellow finding	8.15E-09	6.35E-06	77,814%	ML13115A020 ML13071A289

The closest agreement between the licensees' perception of risk and the NRC's perception was the safe shutdown facility problems at Oconee. In that case, the licensee's risk was ONLY half that seen by the NRC. The widest gap involved the flood protection issues at Watts Bar where the licensee's risk was ONLY three orders of magnitude lower than that estimated by the NRC.

This gap is troubling and must be eliminated or at least significantly narrowed for any CER and RPI efforts to be successful. Otherwise, the NRC might accept the process believing that risks for emerging safety issues will be assigned consistent with their perceptions while licensees will actually assign significantly lower risks (and consequently lower priorities).

Unless this perception gap is eliminated or significantly narrowed, the gap between the pace for resoling nuclear business issues and that for resolving nuclear safety issues will likely only widen. The past shows that licensees value licensing actions like power uprates and license renewals while vastly

underestimating—at least in comparison to the NRC's perception—the risks from unresolved nuclear safety issues. For the CER and RPI process to truly work, the NRC and its licensees have got to be on the same page—or at least within the same book—when it comes to risk perceptions.

OBSERVATIONS ON THE NEI GUIDANCE AND THE RPI PILOTS

The NRC guidance document (ML14349A378) describes the five factors used to assign the importance ranking of issues: (1) safety, (2) security, (3) emergency planning, (4) radiation protection, and (5) reliability. A mix of quantitative and qualitative analysis is used to rank issues using these factors.

The pilots revealed a problem with the safety factor. Specifically, the NRC staff noted in their report on the pilots (ML14302A222) that:

> *The NRC Staff noted that for some NFPA 805 modifications, a licensee performed qualitative evaluations for the Safety importance as oppose to quantitative evaluations even though Fire PRA information is readily available. Furthermore, when identifying the "current risk for the issue," there were instances when a licensee used the total risk of the plant versus using the risk associated with the specific issue. This potential inconsistency may affect the ranking of the results.* (page 11)

The cousin of GIGO (Garbage In, Garbage Out) is CICO (Cherry-picked Inputs, Cherry-picked Outputs). The process cannot allow analysts to shop around for the input data that yields the output ranking they desire.

The pilots also revealed a problem with the security factor:

> *Since compensatory measures are in place for most security weaknesses, the prioritization process does not adequately identify any deltas in risk.* (page 9)

The risk analyses must consider the delta risk between the non-conforming and conforming configurations and not between some unregulated mid-point and compliance with security requirements.

And experience reveals a problem with the radiation protection factor. When UCS and others advocated accelerating the transfer of irradiated fuel from overcrowded spent fuel pools into safer and more secure dry storage, the nuclear industry objected on grounds that transferring fuel within six years exposed workers to higher and unnecessary radiation exposures than allowing it to undergo several more years of radioactive decay in the pools.

Yet neither the nuclear industry or the NRC objected to the higher and unnecessary worker radiation exposures from a scheme (ML121230011) whereby Indian Point, with only one high capacity crane between two operating reactors, transfers irradiated fuel from the spent fuel pool at the unit with the low-load crane in small canisters to the spent fuel pool for the unit with the high-load crane which then transfers the irradiated fuel into a normal-sized canister. Upgrading the crane to handle normal-sized canisters would avoid all the radiation exposures to workers from all the inter-units transfers, but apparently costs more than this licensee wants to incur.

And the licensees for San Onofre, Kewaunee, and Vermont Yankee have announced plans to offload the irradiated fuel from spent fuel pools to dry storage as quickly as possible with target completion dates of about six years—the same time frame as we'd advocated, but now it saves licensees money so the worker radiation exposure concern magically disappeared.

Thus, it's clear that radiation protection is highly subjective—being of high concern when licensees want to avoid spending money and being of no concern when licensees want to save money.

It seems apparent that several of the factors used to prioritize issues are subjective enough to skew the rankings. Whether by intent or not, skewed rankings must be avoided. The evidence presented above makes it abundantly clear that skewing is not likely to be in nuclear safety's favor.

UCS echoes and emphasizes this conclusion made by the NRC staff from its monitoring of the pilots:

> ***The process in the NEI draft guidance could result in continual deferral or delay of corrective actions.***
> (page 7)

As table 3 above illustrates, nuclear safety is <u>not</u> served by enabling delays in the resolution of known safety problems. The NRC must be a protector of public health, not an enabler of licensee dawdling.

If an accident were to occur at a U.S. nuclear power reactor that might have been avoided or mitigated had a known safety issue been resolved rather than delayed, the nuclear industry and the NRC would not be able to look the American public in the eyes and honestly claim to have taken every reasonable measure to protect them. The timely approval of power uprates and license renewals does not protect them, but the timely resolution of known safety issues will. The two gaps must be eliminated or significantly narrowed in order to support timely resolution of known safety issues.