UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
***
BRIEFING ON
REACTOR INSPECTION, ENFORCEMENT, AND ASSESSMENT
***
PUBLIC MEETING

Nuclear Regulatory Commission
One White Flint North
Rockville, Maryland
Wednesday, January 20, 1999

The Commission met in open session, pursuant to notice, at 9:35 a.m., Shirley A. Jackson, Chairman, presiding.

COMMISSIONERS PRESENT:

SHIRLEY A. JACKSON, Chairman of the Commission
NILS J. DIAZ, Commissioner
GRETA J. DICUS, Commissioner
EDWARD McGAFFIGAN, JR., Commissioner
JEFFREY S. MERRIFIELD, Commissioner

STAFF PRESENT:

ANNETTE L. VIETTI-COOK, Secretary of the Commission
KAREN D. CYR, General Counsel

PRESENTERS:

WILLIAM TRAVERS, EDO
SAMUEL COLLINS, Director, NRR
FRANK P. GILLESPIE, NRR
PATRICK W. BARANOSKY, NRR
BRUCE S. MALLET, RII
MICHAEL R. JOHNSON, NRR
RALPH BEEDLE, Senior Vice President & Chief Nuclear Officer, Nuclear Generation, NEI
TONY PIETRANGELO, Director, Regulatory Reform and Strategy, Nuclear Generation, NEI
DAVID LOCHBAUM, Nuclear Safety Engineer, UCS

P R O C E E D I N G S

[9:35 a.m.]

CHAIRPERSON JACKSON: We'll now begin the Commission meeting on the Commission's oversight program for operating power reactors.

The Commission is pleased to welcome members of the NRC staff and representatives of the Nuclear Energy Institute and the Union of Concerned Scientists here today.

This meeting is being conducted to discuss the NRC staff progress in developing a revised power reactor

oversight program and to solicit stakeholder feedback on the program.

By way of background, criticisms have, over time, been leveled against the NRC reactor oversight process, citing, among other things, an inspection program which did not consistently focus on issues of greatest safety import, a resource-intensive, unpredictable and lagging assessment process, and an enforcement process which presented burdens which were not commensurate with the issues under consideration.

While industry and public interest groups certainly have made their feelings on the subject known, what may not be appreciated by our external stakeholders was that a considerable number of internal stakeholders had similar concerns, including concerns expressed by me and my

Commission colleagues.

In March of 1998, the staff issued SECY 98-045; namely, the status of the integrated review of the NRC assessment process for operating commercial nuclear reactors, which forwarded to the Commission the staff's recommendation for a new integrated assessment process.

The Commission provided extensive comments to the staff and the paper ultimately was released for public comment. In parallel with this public comment period, the staff received proposals from NEI on improving the assessment process and began an effort to reach out to stakeholders in the development of the new oversight process.

The staff recently has forwarded to the Commission SECY 99-007, recommendations for reactor oversight process improvement. This paper, which was made publicly available last week, presents recommendations for improving the NRC's inspection, assessment and enforcement processes and includes a transition plan for implementing these changes.

The proposed process being discussed today represents the results of a synergistic process. It includes input from representatives of NRC power reactor licensees, industry advocacy groups, public interest groups, individual states, and last, but certainly not least, NRC staff members who have taken a lead in this, including

in-depth and substantive involvement from all the regions.

The NRC staff requests that the Commission acknowledge the concepts and scope of the changes presented and following a public comment period, the staff will return for final Commission consideration.

It is the Commission's hope that by making appropriate changes to our processes, greater scrutability, predictability, efficiency and safety focus can be produced in NRC activities.

On that basis then, we look forward to presentations from the NRC staff, followed by comments from the Nuclear Energy Institute and the Union of Concerned Scientists.

I understand that copies of the viewgraphs and 007 are available at the entrances to the meeting room.

So unless my Commission colleagues have any comments they wish to add. Dr. Travers?

COMMISSIONER MERRIFIELD: Actually, I was just going to make one comment. I'm pleased to see our fellow Commissioner back. It's been kind of lonely at this end of the table, so I look forward to your continuing wisdom and guidance and assistance on this side.

CHAIRPERSON JACKSON: Now, he's been doing the best he can, Commission, but it's not the same.

COMMISSIONER MERRIFIELD: It's not the same.

CHAIRPERSON JACKSON: It's good to see you.

COMMISSIONER MERRIFIELD: I think he's doing great.

DR. TRAVERS: Good morning, Chairman Jackson and Commissioners, and particularly good morning to Commissioner Diaz. We're glad to have you back.

This is the third Commission briefing that we've had in the last two weeks that focuses on improvements to several very important regulatory processes. Briefings on January 11 and 13 covered risk-informed and reactor licensing initiatives, as you know.

Today's briefing, as the Chairman outlined, will cover improvements in the reactor oversight process and it's structured, on our part, to provide you with an overview of our overall direction in this area.

Included in this overview is the status of the key reactor oversight activities or initiatives described in my response to the Chairman's August 1998 tasking memo. SECY 99-007 specifically addresses these issues and the paper represents a substantial effort by the NRC staff, as well as many of our stakeholders who have been key participants in a number of the meetings that we've had on these issues.

It should be noted that the NRC resources that have been utilized in developing this have included resources principally from NRR, but have also included many

resources from the Office of Research, the regions and so forth. So it's really been quite a team effort and, in some measure, it's been made possible by the suspension of SALP and the resources that are not currently being applied in that process.

Our objective in submitting the SECY paper is to present the concepts and scope for improvements to the regulatory oversight processes. The staff is requesting initial Commission endorsement of the concepts presented in the paper, along with the recognition that the staff will continue further development of many of the implementing details and processes.

The staff intends to follow up SECY 99-007 with a second Commission paper in early March 1999, and this paper is intended to provide supplemental information to the Commission such as the results of a 30-day public comment period and additional process benchmarking results.

The second Commission paper will request final Commission approval of scope and concepts contained in SECY 99-007, including moving forward with the transition plan, which is described herein, and which includes a six-month pilot at a select number of sites.

At the table with me are Sam Collins, Director of NRR; Mike Johnson, who is the Section Chief of the Performance and Evaluation Assessment Section in NRR; Frank

Gillespie, the acting Branch Chief, Inspection Program Branch, NRR; Bruce Mallet, who is the Director of the Division of Reactor Safety in Region 2; and, Pat Baranosky, Branch Chief of the Reliability and Risk Assessment Branch in the Office of Nuclear Reactor Research.

With that, I'd like to turn it over to Frank.

MR. COLLINS: I'm going to pick up to the ball, actually.

DR. TRAVERS: Then I'll turn it over to Sam.

MR. COLLINS: Madam Chairman, Commissioners, good morning. I do not have a card here, but I hope I'm recognizable to most of you here.

CHAIRPERSON JACKSON: I think we know who you are.

MR. COLLINS: I was searching my memory. I believe, since I've been here, this may be the first time where we have actually had a full Commission when I have been at the table, and that's certainly a welcome sight.

I'd like to open my remarks by acknowledging the effort that was accomplished by the staff and the stakeholders to come to this point in the process. I will limit my talking points to some philosophical approaches that were pinned in place at the onset of this effort.

The content and scope of the regulatory oversight improvements described in this SECY paper were developed to meet a number of pre-defined objectives. One was to

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establish a regulatory oversight framework that ensures that plants continue to be operated safely. That's our core, that's our mission.

Additionally, to improve public confidence by increasing their predictability, the consistency and the objectivity of the oversight process.

Additionally, to increase the efficiency and effectiveness of the oversight process by focusing agency resources and licensee resources on those issues with the most risk-significance. Finally, to reduce unnecessary regulatory burden as the process becomes more efficient and effective.

During the definition of the process, as we sit here today, to the level that it has been defined, a number of cross-cut program issues are in front of us. These issues range in scope and level of detail. Some of them are the level of staffing or effort to implement the proposed programs; the consistency with other programs, such as enforcement and reporting; event response and evaluation of events is an additional area.

Organizational issues may arise as a result of these processes, particularly in regional offices and defining inspector disciplines. That's yet to be developed.

The fit of this process with the ability to predict the appropriate level of NRC response, including

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budget assumptions and consistency with the PBPM, planning, budgeting, performance measurement processes.

Licensee willingness to provide PI data is an issue. And as Hub Miller, who represents the regions here today, has emphasized to us in the program office, the acceptance and effective implementation will require communication, education, and changed management process.

As Mark Twain is quoted as saying, "I was gratified to be able to answer promptly. I said, 'I don't know.'" And you may hear that today, because the process is not fully developed. But certainly we're here to receive guidance and to acknowledge those areas that need to be developed.

Consistency will have to be monitored during the pilot. That's one of our ultimate goals, and it will be a

challenge with the new process. And some of these may be potential policy issues. You'll notice later on, in slide six, we raise some of these issues. That's not a full plate. Many of the issues are yet to be fully defined and there will be others as we go through the process itself.

Certainly, once these issues are identified, they will be forwarded for assessment, for options, and we will provide those to the Commission as appropriate for direction.

With that brief opening statement, I'd like to

turn the agenda over to Frank Gillespie. Frank is representing the program office and the efforts of many in the development to this point today, the primary focus for NRR.

MR. GILLESPIE: Good morning. We are here today to provide a brief overview, although there's 29 slides, of the staff recommendations. So I'm going to go fairly quickly and hopefully answer many, many questions along the way.

Recommendations for the improvements of the regulatory oversight process as described in SECY-007. The recommendations contained in this Commission paper reflect an agency-wide integrated effort, as was discussed, to develop improvements in the inspection assessment and enforcement process for nuclear power plants. These recommendations were developed by task groups that focused on developing concepts for a regulatory oversight process, risk-informed baseline inspection, integration of the enforcement policy, and then, of course, development of a transition plan, which is the last enclosure on the paper, to get us to where we like to envision ourselves being.

We will present a brief overview and background on these efforts, followed by then a more detailed presentation by each task manager, and in the overview we will try to focus on the major policy issues that we feel we want to

extract from the paper to make sure we get those addressed at this meeting.

The staff last briefed the Commission on November 2.

CHAIRPERSON JACKSON: For the record, as you go along, can you just identify the task managers for each part of it? I mean, they are sitting here.

MR. COLLINS: I can do that. Let me start with the oversight group, which is Pat Baranosky, from the Office of Research, and he developed -- his group developed the overall framework in which all this fits in. Bruce Mallet, the inspection program, with the regional lead and a lot of help from within the regions. Mike Johnson, who did the assessment process, which includes the public and licensee interface in the assessment of licensee performance. So these are the main speakers that will be coming up here.

I'd also like to acknowledge some extra effort in the former office of AEOD in what I will call ad hoc support that we got from the performance indicator people, last-minute effort in development and brainstorming. While their names weren't officially there, we really couldn't have done without them. They came in and helped us out a couple of times, very necessarily.

The staff has continued in this process since

November 2nd to have numerous interactions with stakeholders

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during this development. The three task groups were closely coordinated and integrated and did involve, as you heard the broad participation of not just the people named and sitting at the table, but their peers and connections and networking throughout the agency.

So the Office of Nuclear Reactor Regulation, of course, was deeply involved, but the Office of Nuclear Regulatory Research, AEOD before that, which has now been absorbed into them, and the Office of Enforcement were all key players and all four regions contributed.

The staff selected to participate in this activity were agency experts and all the various aspects of regulatory oversight, inspection and assessment. Each of these task group participants devoted almost two months of their time to work on these activities and we do greatly appreciate it. It couldn't have been done without them.

As you will see when the transition plan is discussed, significant development work still remains in completing the implementing details.

Recognizing this proposal is a departure from current practices, the staff is requesting Commission endorsement that the concepts developed are consistent with the Commission's previous direction to the staff.

This would include a positive affirmation by the Commission on the concepts of establishing a system of

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risk-informed thresholds for agency interaction and applying them as we've described it; approval of the approach taken to define information needs for assessment; approval of the approach taken to integrate performance indicators with inspection, and approval of the approach taken to take a graded regulatory response to findings is best illustrated in the matrix that's presented as an enclosure to the paper.

We also would like to include in this approval of the transition plan, as described, so that we will continue working to include a pilot program at a selected number of plants, with final approval coming, as Bill said, after the public comment period. And it's not just a public comment period. That's internal and external comments, as this is the first time people have gotten to see the integrated whole, and we felt it was very important for people to be able to comment on the whole rather than just pieces.

MR. COLLINS: Chairman, I believe it's appropriate to acknowledge that the paper that's in front of you has been on the internal and the external NRC web for a period of time. We also have plans for a Federal Register Notice, which would provide acknowledgment of the paper and access to the paper to key stakeholders, both in the industry and on the staff.

That's part of the communications plan that is key to buy-in and also key to ensure that we have a broad

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spectrum of comments on the paper.

DR. TRAVERS: As is the fact that we're transmitting the Commission meeting to all of the regions this morning, as we have done for the previous two meetings.

MR. GILLESPIE: Going to slide five, the three task groups assigned to the project, we believe, met their objective to develop a concept and supporting detail for

improvements to the oversight process.

Slide five presents an overview of the concepts on which the staff is requesting Commission endorsement. The overall objectives in developing these changes to the regulatory oversight process were to, one, ensure that plants continue to operate safely, improve public confidence by increasing the predictability, consistency and objectivity of the oversight process, increase the effectiveness and efficiency of the regulatory oversight by focusing agency licensing resources on those issues which are most risk significant, and reducing unnecessary burden as the process becomes more efficient and effective, as Sam touched upon.

The staff proposes to accomplish this through the use of performance indicators and the risk-informed baseline inspection results, which will provide information that produces an indication, and this is an important point relative to the whole philosophy behind it, an indication of

licensee performance and identifies when additional regulatory interdiction is necessary to ensure proper diagnosis of problems.

The risk-informed baseline inspection would be performed at all plants, regardless then of licensee performance.

The objective of the framework task group was to develop a hierarchical structure in which risk-informed performance indicators and inspection results could be used to measure safety performance.

To accomplish this, the task group developed a risk-informed scale to be applied to performance indicator results. Continued work remains to develop methods for applying an equivalent scale to inspection findings that may not be conducive to quantification.

The objective of the baseline inspection task group was to take a risk-informed approach to identifying the necessary areas to be inspected, integrate that with performance indicator information to meet the cornerstone objectives.

It is important to note that the implementation of the inspection program as developed may require different up-front planning than is currently accomplished. The approach used to apply risk insights to inspection also tries to address both the strengths and the weaknesses of

PRA.

The objective of the assessment task group was to develop a streamlined and structured review process that uses an action matrix to provide more consistency in NRC actions taken. Work remains to develop the methodology for applying a risk scale to inspection findings, again, and detailed industry data reporting still remains to be finalized.

Finally, the Office of Enforcement worked closely with these three task groups to ensure that proposed enforcement policy changes are consistent with the recommendations developed by the task group. These groups agreed that any risk-informed criteria for violation severity levels should be consistent with the risk-informed scales being developed for assessing performance indicators and inspection results.

Proposed revisions currently before the Commission to the enforcement policy are consistent with the oversight process recommendations contained in the SECY paper. NRR and the Office of Enforcement are continuing to evaluate options, which are listed in the paper, as we move forward, on future enforcement policy revisions that would be implemented.

COMMISSIONER McGAFFIGAN: Madam Chairman?

CHAIRPERSON JACKSON: Yes.

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COMMISSIONER McGAFFIGAN: Could you amplify a little bit more on your point on inspection, that you're taking into account the strengths and weaknesses of PRA, because --

MR. GILLESPIE: I think Mr. Mallet is going to talk to that.

COMMISSIONER McGAFFIGAN: Is he going to do that?

MR. GILLESPIE: Yes. I think Bruce is going to address that.

COMMISSIONER McGAFFIGAN: Mr. Lochbaum addressed it last week and I want to make sure we're addressing his concerns before he comes to the table.

MR. GILLESPIE: Yes. Slide six, the development of these recommendations has resulted in potential policy issues, and Sam summarized some of these that the staff would like to highlight to the Commission and will require continued staff work to address.

The staff will need to further evaluate how these oversight processes recommendations affect 10 CFR Part 50 and other licensing functions. In particular, the use of a risk-informed scale or measure will have to be closely coordinated with other regulatory improvements that are being made.

I would like to highlight that if you look in Reg Guide 1.174, you will find that our risk scale and their

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risk scale are quite similar. It's just that we put the lower one on top and they put the lower one on the bottom. But I didn't bring a whole bunch, but you will note on the top one, in the descriptions, which are very hard to read in my Xerox copy, are very similar to the scale we had.

So this coordination has already started to make sure that we're in synch.

The second issue is event response and evaluation processes that may need to be revisited by the staff as we develop this new perspective on risk. The new oversight processes do recognize that a certain number of random events occur in the industry basically independent of plant performance.

The N+1 policy for resident inspectors may warrant reevaluation. The proposed new oversight process recommends a certain level of baseline inspection effort to be performed at all plants. The resources to require this performed inspection may conflict with the N+1 policy.

In addition, the type of inspector needed to carry out the focused program will cause a need to evaluate specialists versus generalists.

Finally, there may be an impact on headquarters and regional organizations. The structure of these organizations, the roles and responsibilities of the staff may need to change to support the new framework and

oversight process.

CHAIRPERSON JACKSON: It strikes me that what you've outlined here on this particular slide are not necessarily what I'd call stand-alone policy issues, but really are policy implications of the process that you're asking us to endorse, the concepts of today and ultimately on a want-to-go-forward basis.

So I think the important thing is if it's not built into what we have, that when you're talking about getting the Commission's approval to go forward with implementation on a pilot basis, that there is a clear flow-through in terms of what the policy implications are in all of these areas.

Because if Mr. Mallet is going to talk about a risk-informed baseline inspection program, that has implications for both, as you say, the number and the types of inspectors. I think that's the point, the linkage, that one wants to not have it as a disjointed set of policy issues.

MR. GILLESPIE: Absolutely.

CHAIRPERSON JACKSON: I'm sorry. Commissioner?

COMMISSIONER DIAZ: No, that's okay. Just in response, it hit my eye in here. I think sometimes we think ourselves as the cavalry coming to the rescue and we used to send teams every time something happened.

I understand that your new process, being risk-informed, will actually bring into the area of how we respond to events some kind of solid feedback that will make those things happen only when they are needed and not just because an incident happened that might not have any safety significance. Is that correct?

MR. GILLESPIE: Exactly, and that's why we're bringing this implication in. If, by policy, we apply a scale to inspection findings, that same scale has a broader application across the board. In fact, we're drawing on things like, in developing that scale, precursor insights and other data which is available to us to try to get that sense.

COMMISSIONER DIAZ: Of course, it will have an implication on resources as we learn more about the process. You will be able to martial resources in a better way by not having to respond to things that you don't really need to respond to.

MR. GILLESPIE: Right, exactly.

MR. COLLINS: That's correct. I think that will be brought out during the next transition phase, as the program is developed and we gain some experience with the pilots. The key is between the risk-informed approach, our transition, where we have the discipline, which is a key word here, the discipline to monitor licensee performance

when licensee performance warrants their independent ability to assess, react, and provide corrective action, will be a key factor in a graded approach to our response to these events.

That's part of the change process that we have to work through, but that will result in your statement of the graded approach to response.

COMMISSIONER McGAFFIGAN: Are we going to come

back to these policy issues at some later time or do we ask questions on them now?

CHAIRPERSON JACKSON: I think it would be useful actually to let each of the groups go through, put a dog-ear on this page, and to have us have an opportunity, as appropriate, to then talk about what we see or what the staff brings out as the implications, because, again, these are not things that can be evaluated in a vacuum. They're basically implicated by the overall approach, which is why the staff is asking for the Commission's -- whatever it is you're asking for -- endorsement of the concepts at this point, with a clear understanding that they will have implications down the line here.

It could be that there could be an implication in each of these areas, but then irrespective of that, the Commission may want to make a particular decision of a particular line in the sand. So that's part of it.

COMMISSIONER McGAFFIGAN: I just hope that they're going to address the implications as they go further. Otherwise, I'll ask questions. Are you going to address what the implications are? I can guess what the implications are, I could probably read it in this tome, but --

CHAIRPERSON JACKSON: I think he's trying to tell us that at a certain level, it's -- but I don't want to put words in your mouth, but if I heard you right, that all of this has not totally been worked out at this point. That's part of a pilot, once there is a go-forward.

MR. COLLINS: I believe those issues which probably strike a resonance with the Commission, which are perhaps the middle two, are fully explored during the discussion.

I was very careful to say during my remarks that these are potential issues.

COMMISSIONER McGAFFIGAN: I'm interested in one point.

MR. COLLINS: What we're trying to do is give the Commission really early notice, if you will, that as we work through the process to these points, we acknowledge that there is an impact, given the current policy in these areas, for that policy to be reassessed.

That doesn't necessarily mean that there will be a

change, but we run into a point where we say is it time now to look at the way we have done business in the past and in order to provide continuity, we would have to change the business to maintain the status quo or do we want to reassess these functions in general and make them more in line with the overall approach.

Those options will be explored in the future.

MR. MALLET: Let me give one example of the organizational --

CHAIRPERSON JACKSON: Let me let you just -- let's try to have it as a structured presentation, if we can, and if you could just fold that into your presentation.

MR. GILLESPIE: Last, going to slide seven, the plan to transition to these recommended oversight processes and the remaining staff work to be completed, to complete the process development and implementation of the new process, will be covered last in the briefing and we'll come back to the schedules and other things and major steps.

However, there are two key points that warrant highlighting at this time. First, the schedule proposed for process implementation is described in the transition plan. It differs from the schedule currently in the Chairman's tasking memo dated August 25, 1998.

The staff has projected that a new oversight process could become effective at all plants by January 1,

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2000.

CHAIRPERSON JACKSON: What is the current schedule?

MR. GILLESPIE: That's six months later than the current schedule. It would have projected in the current schedule that we would have had something in place by June of this year.

CHAIRPERSON JACKSON: Now, is that because of the six-month pilot program?

MR. GILLESPIE: Yes, exactly.

CHAIRPERSON JACKSON: So you're proposing that the pilot program would begin when you originally would say that the overall process would begin.

MR. GILLESPIE: Yes.

MR. COLLINS: June to December.

MR. GILLESPIE: June to December.

CHAIRPERSON JACKSON: Would be the pilots.

MR. GILLESPIE: Would be the pilots.

CHAIRPERSON JACKSON: And that's what you're proposing to build in, basically.

MR. GILLESPIE: The delay is due to the proposed six-month pilot program that would be performed at a sample of plants. This pilot program, scheduled to be conducted from June to December, would involve a complete test of the system, the collection of PIs, the institution of the

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risk-informed baseline inspection program, and the exercise of the new enforcement options that would be developed, and complete exercise of the assessment process.

So it would be a true -- we envision a true pilot.

CHAIRPERSON JACKSON: And would your intent be that the pilot would be carried out in each region at some subset of plants?

MR. GILLESPIE: The way we've tentatively sketched it out, working with NEI and the industry, is two plants per region, which would be selected based on things happening at the plants. If a plant is having nothing happening, then there is nothing to prove your PI is working or not working.

CHAIRPERSON JACKSON: Let me understand the point of the pilot. The point of the pilot, relative to a Commission decision-making, is that if the Commission says go forward, the intent is, in fact, to migrate the regulatory program; the pilot being to re-normalize, as necessary, based on lessons learned from the pilot.

MR. GILLESPIE: Yes.

CHAIRPERSON JACKSON: Not that the pilot is, well, we're trying this out to see if we really want to do it.

MR. GILLESPIE: No. It's a normalization. We've really completely revised the inspection program and while in the paper there are some first estimates about how long we think a test could take, the proof is going to be in

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actually doing the task over a span of time at the facility.

Also, our ability to collect performance indicator information consistently from a range of facilities and testing of the instructions to do that, and the assessment process itself; how would we assess, what would the piece of paper look like that's an assessment, and, also, in public confidence base, that piece of paper is not only going to the licensee, but working with other stakeholders, because it will go to states and the public.

CHAIRPERSON JACKSON: I understand. But I guess my basic point is, for clarity, that you're asking that both the decision today, but particularly the March decision, is that in making that decision, it is a decision to modify the reactor oversight program.

MR. GILLESPIE: Yes, it is.

CHAIRPERSON JACKSON: The pilot program being to do the kind of normalization and re-normalization that you're talking about. But the decision is, in a certain sense, to begin the pilot program, is the decision to modify the oversight program.

MR. GILLESPIE: That's correct.

MR. COLLINS: Perhaps a clearer way to state that is that there will be certain lead plants that will be chosen and those lead plants will be used to further define the process.

DR. TRAVERS: And then, of course, any refinements that are identified, as necessary or advisable, would be ones that we would come back to the Commission.

MR. GILLESPIE: Also, that's six months internally -- now, that's externally. Internally, we've got communications, training catching up with the computer systems. If we get all of this data recorded, who --

CHAIRPERSON JACKSON: It's all right. Adams is going to take care of that.

MR. GILLESPIE: So there's a multitude of infrastructure questions which we need to get straightened out over the course of that six months, also.

The second item I'd like to highlight is that although the recommendations for approving the regulatory oversight process should result in overall resource savings, some of these savings have already been anticipated and factored into the fiscal year 2000 budget. And we can talk about more of that in detail, but --

COMMISSIONER DICUS: I have a question. We can talk about it in more detail right now, then. Actually, I had a question about how were these anticipated savings derived for the year 2000 budget.

MR. GILLESPIE: Based on the fundamental improvement in agency performance, if we go back into the early spring in budget development and we had some insights

then that we were going to do what was then called phase two of the inspection program, which is what this has become.

We had anticipated that based on improved performance in the industry that we would need less reactive inspection for '99, 2000, and then going out into 2001. So it's that less reactive inspection that this reduction was focused, already focused on.

MR. COLLINS: There's a little bit of a mix in the budget process. The two years, for '99 and 2000, were minus ten FTE for each year. In the year 2000, there was a

build-in of approximately seven for the cost, if you will, of implementing the new process. Then the next year, that cost is taken away and it's a further reduction.

The third year, which is fiscal year 2001, is when we get into the actual credits for the oversight program, for phase two of the oversight program. That delta is approximately eight.

COMMISSIONER McGAFFIGAN: Madam Chair.

CHAIRPERSON JACKSON: Please.

COMMISSIONER McGAFFIGAN: You're saying we bet on the come, it's going to come later, therefore, we have a budget issue. I mean, our 2000 budget may be a bit low compared to what --

MR. GILLESPIE: No, no, no, no, no. What we're saying here is we would right now not recommend further

changes until we can develop the pilots, make sure that our estimates have some validity to them, that they're not just first estimates.

CHAIRPERSON JACKSON: I thought I heard you say that in a certain sense, you could argue that, in a way, the second bullet of resource savings is somewhat disjoint from what you're asking the Commission to do, because what you're doing is you're looking at what has been the industry performance, anticipating fewer reactive inspections, even within the existing programs.

MR. GILLESPIE: Even within the existing programs.

CHAIRPERSON JACKSON: And that's the minus ten FTE. But you've built in, in fact, a plus seven for FY-2000 to implement the new program, but the actual minus has to do with fewer reactive inspections in the existing program.

MR. GILLESPIE: That's correct. Right.

COMMISSIONER McGAFFIGAN: People haven't seen our budget request yet, but my recollection is the FTEs were the least of it. The contractor support of inspection is at, I think, an historic low, by any count. We are assuming success and the major reprogrammings required if anybody falls off the --

MR. COLLINS: We derive that number based on the conclusion of the architect engineer inspections, but did provide resources for the regions under the new optional,

supplemental module, if you will, for engineering and design, and the numbers do support that.

Just as an elaboration, I think Frank mentioned it, but it's important to note that the reduction in 2001 is in the core program and that reflects going to the risk-informed baselines.

MR. GILLESPIE: Risk-informed baselines.

CHAIRPERSON JACKSON: And that one is, right.

MR. COLLINS: The previous two years were in the --

CHAIRPERSON JACKSON: But we haven't submitted that budget yet.

MR. COLLINS: Right. That's a projection.

MR. GILLESPIE: That was the projection last spring. By the way, I'm bringing these up because we did spend some time in the paper itself discussing these points, and I just want to make sure they're in perspective as to why.

Finally, it's worth noting that although the staff

anticipates long-term overall resource savings, substantial resources will be required in the short-term to complete program development transition. Well, these short-term resources, as Sam mentioned, have been already factored into the budget and operating plans, with the suspension of SALP and what we already had pre-programmed in, to put the new

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program in place.

We feel that we're in reasonable shape to make progress here.

Next, I'm going to turn it over to the task group leaders to get into the details of the framework, then inspection and assessment. So I'm going to call on Pat Baranosky right now to start the oversight piece.

MR. BARANOSKY: Good morning. Today I'd like to briefly discuss the logic of the technical framework and the identification of key performance attributes that were used to identify the performance indicators and inspection areas that are a vital part of the proposed performance assessment process.

I will also discuss the role and relationship of the performance indicators and risk-informed inspections. I will identify the performance indicators and associated thresholds that we identified for near-term implementation. I will discuss the conceptual model that we used to evaluate the performance information and set the thresholds for performance.

Lastly, I will present some information on the performance indicator benchmarking that we did. Can I have viewgraph nine, please?

This viewgraph, which we provided in our last meeting in November, is a pictorial of the conceptual

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framework that was developed prior to and during the performance assessment workshop held September 28 through October 1, 1998.

I'm going to briefly discuss this concept, again, for continuity purposes and because this logical concept is the underpinning for the performance indicators, inspection activities and the assessment process that make up the proposed reactor oversight process that we're here to discuss today.

The very top box of this conceptual framework relates this activity to the NRC's mission of protecting the public health and safety with respect to civilian nuclear power plant operation. This box is then broken down into three strategic safety performance areas; the first associated with reactor safety, the next one with radiation protection, and the third one with safeguards.

The cornerstones of safety that were associated with each of these strategic performance areas are basically the safety functions or objectives that are needed to meet each of the strategic areas and assure that the overall safety mission objective is met.

With regard to reactor safety, we had four of these cornerstones. The first was initiating events. Its objective was to limit the frequency of those events that upset plant stability and challenged critical safety

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functions during shutdown, as well as power operations.

Mitigating systems was the second cornerstone.

Its objective is to ensure the availability, reliability and capability of systems to mitigate initiating events to prevent reactor accidents.

The third item is barrier integrity. The objective of this cornerstone is to ensure that physical barriers protect the public from radionuclide releases caused by accidents.

The last element for this strategic performance area is emergency preparedness. Its purpose is to ensure that if implemented, actions taken by the emergency plan would provide adequate protection of the public health and safety during a radiological emergency.

The next strategic area is radiation safety and there are two cornerstones here. The first one has to do with public protection. Its objective is to ensure adequate protection of public health and safety from exposure to radioactive material released into the public domain as a result of routine civilian nuclear reactor operations.

The next cornerstone in this area is occupational worker protection and the objective is to ensure adequate protection of worker health and safety from exposure to radiation from radioactive materials during the routine civilian nuclear reactor operation.

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The last strategic area is safeguards. It has a cornerstone of physical protection. The purpose of this cornerstone is to provide assurance that the physical protection system can protect against the design basis threat of radiological sabotage from both external and internal threats.

To reiterate once again, this framework is constructed such that if performance is acceptable in each cornerstone area, the overall objective of protecting the public health and safety will be met.

Let me also mention, with regard to this figure, that you will see some things under the cornerstones that we called cross-cutting issues. They seem to affect a number of the cornerstone areas. These include items such as human performance, problem identification and corrective actions. They are not cornerstones, but they are generally perceived as being important performance considerations within several cornerstones. These items are usually associated with root causes of performance problems.

Adequate performance in these cross-cutting areas will be assessed either explicitly through inspections, in some instances, or, more typically, through inference based on cornerstone performance results derived from both performance indicators and supplementary inspection results.

What you see listed at the very bottom of this

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figure are the other elements of this framework that were developed during the last several months. They include the performance indicators and performance thresholds, inspection activities, and other factors such as licensee self-assessment findings that would be factored into the overall assessment of performance.

CHAIRPERSON JACKSON: Let me ask you a couple of quick questions here. I guess I'm somewhat curious as to why emergency preparedness is not also associated with radiation safety; namely, protection of the public, because, in fact, when you discussed it, you talked about it from

precisely that point of view.
I understand the issue having to do with during routine operations, but an aspect of radiological protection, in fact, relates to emergency preparedness in terms of how the public --
MR. BARANOSKY: First of all, I think our logic for each of the strategic areas is that all of them have to do with protecting public health and safety. In this case, it would be radiological protection, since we're not really talking about OSHA type of issues.
So as you stated, Chairman, correctly, our thinking was the first cornerstone has to do with reactor -- the first strategic area has to do with reactor accidents. The next one has to do more with routine operation, and so

we separate it on that basis.
CHAIRPERSON JACKSON: And then the only other question I have is you talk about safeguards from a physical protection point of view, but, in fact, if you're looking at non-diversion or theft, I mean, there are two aspects to safeguards, and you might feel that the one is not so important in typical reactor operations in terms of fissile material content.
However, you speak about physical protection from a threat point of view, but usually it's an integrated whole of MPCA, material, protection, control and accounting, and control and accounting, material control and accounting is a key part. The physical protection system is a piece of it, and a big piece, but, in fact, it's an integrated system, and that is consistent with the approach that we take internationally when we deal with other countries and when we deal with counterpart regulatory agencies, that it's material, protection, control and accounting.
MR. BARANOSKY: I think we would agree with that. As you stated correctly, the concern about the fissile material is rather small in comparison to the threat to plant protection from external sources.
CHAIRPERSON JACKSON: Right, except that it is also true that if there is a move to use a MOX, that it is an issue and, therefore, in terms of a go-forward look, and

licensees have those systems already.
So I don't see that you just leave it out.
MR. BARANOSKY: Good point. Thank you.
COMMISSIONER DIAZ: I guess in that same vein, I got confused, now, I'm a little rusty. The lines actually are just indicating some priority system, because reactor safety has to be with -- has to do with initiating events, there were mitigation systems. So you're just focusing on what is either an end point or a priority in this graph, right?
MR. GILLESPIE: Yes. Let me help out. Emergency planning, independent of which block it would be under, would always likely be a separate block because of its public impact. It was convenient to put it with reactor safety, because it was related to the ultimate end of an accident relative to public protection from an accident, as separated from a transportation event or a packaging problem or an off-normal occurrence, a steam generator tube rupture, lifting of a relief valve so there's a release.
COMMISSIONER DIAZ: I'm actually going left of that. You've got this line going from reactor safety to

barrier integrity and to emergency preparedness. In reality, you're capturing all of the initiating events and --

MR. GILLESPIE: Absolutely.

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CHAIRPERSON JACKSON: The line should be there to all of them.

MR. GILLESPIE: Good point. Yes. The line could continue then to emergency preparedness. It's the ultimate --

CHAIRPERSON JACKSON: No, no. I think he's saying that you ought to have a line from reactor safety to --

MR. GILLESPIE: Okay. A line coming down from the block. Okay.

CHAIRPERSON JACKSON: From reactor safety to mitigation systems.

MR. COLLINS: For the purposes of some illustration, with some latitude, if you will, what we're trying to show is that initiating events drive those.

COMMISSIONER DIAZ: I understand.

MR. COLLINS: When you get to the point beyond mitigating systems, then you're depending on those last two.

CHAIRPERSON JACKSON: But it's really a question of public understanding, that you're making sure that you're making -- even though there is the arrow from the one to the other, from the left to the right, that from a public perception point of view, that reactor safety means you're crossing in all these areas.

COMMISSIONER DIAZ: The fact is if you look at consequences, you will emphasize not having initiating

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events.

CHAIRPERSON JACKSON: Because it could almost imply that you don't start looking till you get down the line, and that's not your intent.

MR. GILLESPIE: The intent was to display more defense-in-depth. Breaking the chain at any point is what we want to ensure. We want to ensure we can break it at all points.

CHAIRPERSON JACKSON: In addition, I think that just, again, for a public understanding point of view, that your explanation that what you're calling reactor safety relates to accident prevention and mitigation, what you're calling radiation safety refers to protection in terms of routine operations, and that in safeguards it's -- you know, you really have to deal with MPCA, as well as the -- but giving some emphasis to the physical protection part.

I think that helps in terms of public understanding. It certainly helps in my understanding.

MR. BARANOSKY: Can we have viewgraph number ten? An important aspect of our work was to determine the role and relationship of performance indicators and risk-informed inspection activities. Together, the performance indicators and the risk-informed inspection activities are meant to provide a broad sample of data to assess licensee performance in the risk-significant areas of each

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cornerstone.

Licensees have the primary responsibility for the safety of the facility. They're responsible for a more

comprehensive and complete assessment of their plant and for taking appropriate corrective actions to address safety issues and declining safety performance.

The NRC is responsible for providing regulatory oversight of those licensee responsibilities and associated actions.

The performance indicators, to the extent practical, are meant to provide the principal indication of what the licensee's performance is. They are meant to be the principal measurement tool, if you will, but we know that the PIs, or performance indicators, have limitations. We know that because of all the work that we've been doing over the last few months and from past experience in which we've used performance indicators, in part, as part of our licensee assessment process.

Thus, we have a risk-informed baseline inspection program that provides complimentary inspections in the risk important areas that are not covered by the performance indicators. It also includes inspections in areas where the performance indicators exist, but they have recognized limitations in their ability to capture performance data relevant to all important performance attributes of the

cornerstones.

Lastly, verification inspections are included to assure ourselves that we are getting good indication from the performance indicators. Thus, both inspections and performance indicators provide a broad and complimentary information base upon which to draw conclusions about licensee performance.

Now, we also recognized that there will be a need for increased regulatory engagement to address instances of licensee declining performance, and this would include things like the use of reactive inspections to evaluate such factors as licensee assessment of root causes and adequacy of corrective actions.

In addition, we expect to continue to use follow-up inspections to assess licensee response to risk-significant events as they occur and in response to allegations. Our intent would be to cover those more exceptional cases of declining performance or safety-significant events with another level of inspection beyond the baseline.

However, this escalated regulatory engagement will be focused on risk-significant aspects of licensee performance and risk-significant events.

CHAIRPERSON JACKSON: Let me ask you a question. Now, the PIs are to be provided by licensees, is that

correct?

MR. BARANOSKY: Yes.

MR. GILLESPIE: Yes.

CHAIRPERSON JACKSON: And what will you do if a licensee fails to participate? What does that then do to the overall program?

MR. GILLESPIE: One of the positive elements from the way that Bruce and Pat approached it was, first, to define the overall information needs that we needed for a specific area. So going back for a licensee or a set of licensees who do not want to participate on the PI end, we would then fill in where our dependence was on PIs for inspectable areas.

CHAIRPERSON JACKSON: So if a licensee doesn't supply PIs for those areas where we believe the PIs can cover the attributes or the cornerstones, then they're basically inviting more inspection.

MR. GILLESPIE: Yes.

MR. COLLINS: That's correct.

MR. GILLESPIE: That's correct.

CHAIRPERSON GILLESPIE: This is the program.

MR. GILLESPIE: This is the program. That's correct.

MR. COLLINS: The program will still work. In other words, the backup is for the program to proceed, but

the information source be from NRC inspections rather than PIs.

CHAIRPERSON JACKSON: Commissioner McGaffigan.

COMMISSIONER McGAFFIGAN: I'm still stuck on last week's briefing with Mr. Lochbaum and I have not had the benefit of watching the interactions between the staff and Mr. Lochbaum, but he has raised fundamental issues about the risk-informed framework and last week he, for instance, cited Wolf Creek versus Calloway, same plant, meant to be identical significantly different contributors to core damage frequency and significantly different initiating events analyzed and emissions.

Does that have implications for an inspection program? If the PRAs don't really identify the risk-significant stuff very well, then are we building something on a house of cards?

MR. COLLINS: If we can go to slide 11 and --

MR. BARANOSKY: But I wouldn't say that PRAs don't identify the risk-significant stuff very well. I think what I would say is that there are some limitations to the PRAs and some of those limitations may be risk-significant, but most of the risk-significant aspects of plant design and operation are captured by the PRAs.

In fact, we have looked back at past history with regard to issues that weren't captured well by PRAs through,

for instance, the accident sequence precursor program and determined that, yes, there were some incidents where our current inspection program or the PRAs didn't have information, neither did the licensees, about the design of their plant, that was somewhat risk-significant.

But once we were able to determine what that was, we can factor those kinds of findings into future inspections. That would happen whether we were using a risk-informed approach or some sort of a general deterministic review of licensee design.

CHAIRPERSON JACKSON: Let me ask you two questions, because I think they relate to the Commissioner's question, and I know Commissioner Merrifield is waiting to ask a question.

One question is, do you believe -- and you're the PRA expert around here -- that -- at the table anyway -- that irrespective of the specific numbers, that the PRA approach and methodology allows you, in a relative sense, to uncover where, in a given plant, the most risk-significant areas of contribution should be?

Let me preface my statement by presenting you a bias. So truth in advertising. My bias is that I'm not

sure that I'm such a big believer in specific core damage frequency or large early release frequency numbers, but I am a bigger believer in the ability, properly applied, of the

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PRAs to give you a relative sense of where the risks are in the plant.

So the question is, do you agree with my bias or not, or what is your point of view.

GILLESPIE: Let me try one --

MR. COLLINS: I'm not sure how many options you have, Pat.

MR. GILLESPIE: Let me take -- let me say I agree and then say Bruce will be able to cover this in more detail in his, because the way we approached this at a generic level, looking at, I'll call it, all the insights from all of the IPEs, was, in a sense, and I'm going to try to remember as best I can, if you took the dominant sequences that resulted across all PWRs and you used those basically to define, and it has to be important at at least two plants, but not necessarily important at all of them, and you use those to define your inspectable areas, and then when you go to apply and pick your sample on a plant-specific basis, you can then pick the specific sequences and what equipment is involved in those sequences on a plant-specific basis.

CHAIRPERSON JACKSON: So that's how you go from a basic template to the plant-specific.

MR. GILLESPIE: Yes. And what you're trying to do is both capture that sequence that this plant picked up that

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this didn't because of difference in analysts, but then you're saying, okay, that gives me the area to look at to get an indication of performance, but then you become plant-specific when you get to your specific sample.

And we haven't written this piece yet, Bruce and I have talked about it, but that's the next level of detail in the procedure.

CHAIRPERSON JACKSON: Let me ask you a question.

MR. GILLESPIE: Did I come close?

MR. MALLET: Yes. Let me add one thing to that. When we go through the risk-informed inspection program, part of the planning process is to first use this template that you referred to, Chairman, to talk in general about licensees by plant types, but then to modify that based on the SRAs and risk analysts during the planning process to bring in the specifics about that particular plant.

MR. GILLESPIE: Actually, that's what I meant in my opening remarks when I said we tried to address, as a process question in development, both the strengths and the weaknesses as best we could.

And then the additional insights from precursors and unanticipated events would then be factored in as a learning lesson on an ongoing basis.

CHAIRPERSON JACKSON: Will the risk-informed baseline strictly be predicated on PRA results one way or

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the other?

MR. MALLET: No. It's risk-informed, so it uses other things besides a PRA analysis, such as history of problems at the plants or neatness of design of the plant.

MR. GILLESPIE: One of the retrospective things

that Bruce's group did was say what design, for example, is the preeminent area that's not covered by the PRA. It's an assumption that the design will work, it's assumed.

So design is still a significant inspection area within the inspection program because of that.

CHAIRPERSON JACKSON: You're speaking to Commissioner McGaffigan particularly on that and I think that's a concern.

MR. GILLESPIE: So it was an integration. Then you have to say what are the assumptions that aren't quantified in the PRA and then you have to make sure you've touched those assumptions, because it's predicated on the fact that those things are going well.

CHAIRPERSON JACKSON: Let me, if I can, because Commissioner Merrifield had been holding on the line and then Commissioner Diaz.

COMMISSIONER MERRIFIELD: Not to get down into the weeds, but just to say we spent a good chunk of the weekend reviewing this.

CHAIRPERSON JACKSON: So he's in the weeds.

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That's good.

COMMISSIONER MERRIFIELD: I am struggling with your indicator of risk-significant scrams per three years, and this is referenced on page ten, and it's thresholds.

I was wondering if you could give me a better ability to sort of understand risk-significant as it applies to this particular indicator and why it takes 20 risk-significant events before the NRC would view that as unacceptable performance. Let me just finish.

Later on, in appendix five, on page A5, you also refer to risk-important scrams for a 12-quarter moving period. So that gives me a -- what's the risk-significant versus risk-important. I'm wondering if you could clarify that for me.

MR. GILLESPIE: Let me ask, because this is an important, ask Pat to go through how the first threshold versus the other thresholds were established, because it's risk-informed, but it's also performance --

MR. BARANOSKY: We are getting a little bit ahead, but I can address that now. We did come up with a subset of reactor scrams that, based on PRA insights, we thought were the most risk-significant in terms of the severity of the challenge that it presented to the plant and that subset we felt should have a lower threshold or fewer of them should occur than the other scrams, which were relatively benign

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and didn't really challenge the plant very much.

I don't know if there is a problem with terminology in one part of the report from another, that's a possibility, but there are really only two different groups of reactor scrams that we are trying to talk about.

The thresholds for these things were derived based on performing a number of risk sensitivity analyses using PRAs to see what happens when we put in certain frequencies, how the risk changes.

For the most part, we selected numbers to go into the table one there on performance indicator thresholds, and their thresholds, that were enveloping a number of PRA results. So even though you see, for instance, some of these numbers for reactor scrams that are very large, that's

a risk-informed thought as to what the maximum number of scrams that might be allowed as one approaches unacceptable performance.

It's not really very likely or, in fact, it's totally unlikely that any of them would get that far, because we would expect that as reactor scrams go up, other elements of the performance indicators are going to be tripped. One can't have such sloppy operations that you would have 20 reactor trips in one year and everything else going smoothly. We would, from past experience, expect to see a whole lot of indicators hit as the reactor trips move

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up, even to much less than what you see in these tables.

Therefore, we didn't have a concern that this was a large number of reactor trips.

COMMISSIONER MERRIFIELD: I understand. I'd just say, though, from a transparency standpoint, what you're doing is you're saying -- you're separating scrams from risk-significant scrams. You have the overall global perspective, then you have the subset which are more risk-significant.

Again, to meet the -- even though it's one of many criteria, even to meet that unacceptable performance, you've got to have 20 risk-significant scrams, not 20 scrams, but 20 risk-significant scrams to be deemed unacceptable, and I just -- that seemed high to me. That seemed high to me.

MR. BARANOSKY: That's based on risk.

COMMISSIONER McGAFFIGAN: Madam Chairman.

CHAIRPERSON JACKSON: No. Commissioner Diaz.

COMMISSIONER DIAZ: I'm going to be finished quickly. I was just going to direct us to the fact that Chairman Jackson's bias must be correct, because it matches mine.

[Laughter.]

MR. BARANOSKY: Well, I guess we can just end this meeting.

MR. GILLESPIE: I think that the most important

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threshold in this whole thing, and let me focus on the first one. The first one is where we pass from a program that is looking for indication to a program that becomes more diagnostic and we get engaged.

The threshold where we get engaged is when we're starting to ask the licensee the question what is the root cause of this, how have you diagnosed it.

Also, the threshold on the three scrams -- I thought you were kind of going a different direction. Let me see if I touch the other part of your question. Three scrams is very few. Three scrams is not risk-significant.

But the industry has a multi-year history that says three scrams easily envelopes the performance of most facilities. What we're looking at is that first threshold is risk-informed, but it also has to be cognizant of what's happening in the industry and how they are performing.

So the three scrams is a very low risk number, Pat. Is it fair to say that industry performance also influence some of those first thresholds?

MR. BARANOSKY: Yes.

MR. GILLESPIE: What's the envelope, when we should be concerned, to get more engaged, because something off-normal is happening?

CHAIRPERSON JACKSON: I think the difficulty is

this, but it's one that I've actually kind of cautioned or

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expressed some concern to the staff about in the past, and that has to do with it's very good and I would dare say, and I'm not speaking for him, he'll probably jump and disagree with me, but I think this relates to some of what Mr. Lochbaum has concerns about.

It's nice to lay out conceptually, and I happen to think it's a beautiful concept, a program, but until you have clarity about what the NRC is going to do based on what it finds, then it is difficult to kind of be able to swallow the whole thing lock, stock and barrel, because that relates to this issue about increased regulatory response band, required regulatory response band, and what does unacceptable -- does that mean it's a shutdown order.

These are the kinds of things, because that is where the public has confidence or can develop confidence or lose it relative to what the agency is going to do based on what it finds.

And in the end, the agency has to talk about what it's going to do based on what it finds.

Commissioner Dicus has been waiting, and then Commissioner McGaffigan.

COMMISSIONER DICUS: We have a long waiting list here, I think. I have several questions on table one, or comments.

They fall much along the lines of what the

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Chairman has been talking about and Commissioner Merrifield's question. I, too, looked at the greater than 25 and greater than 20, and I know we're taking you ahead of where you wanted to go, but I think that's where we were leaping to, and your explanation helps, but I think from a perception point of view, it's a little bit troublesome.

As just a very general statement, I tend to agree with the cornerstones. Probably some refinements are necessary. My questions may deal more with some of the thresholds and whether these are really banding thresholds or absolute thresholds.

It looks like, in some ways, we're almost heading into a risk-based situation rather than risk-informed, and perhaps bands are a little better.

This needs refining, I recognize that. But let me ask you a question on the front end. Are these cornerstone weighted?

MR. BARANOSKY: No.

COMMISSIONER DICUS: Okay. Then given that, when we get into predominantly where it's radiation safety and safeguards, a little bit down here, and barriers, and we get into unacceptable performance, all the rest of those are N/A.

MR. BARANOSKY: Yes.

COMMISSIONER DICUS: Is that governed by tech

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specs? That once you go past the required regulatory response band and you get into unacceptable performance, have you tripped the tech specs and the plant would go down?

MR. BARANOSKY: In some cases, that's true. In other cases, our feeling was that the performance indicators in this area are relatively new and that what they can

indicate doesn't match up with the severity levels that are associated with the performance bands that we identified and that the inspection activities would probably be a better measure of whether licensees were in compliance with what we think is necessary to satisfy the cornerstone objectives.

So the performance indicators in a couple of these cases had some limitations. For instance, you can't go beyond a tech spec without shutting down, and yet we didn't want to talk about certain tech specs being in one of these unacceptable performance bands where we were talking about fairly high risk situations, because there was a mismatch in reactor safety severity, if you will, from what the tech spec required versus what the indications were of being in that particular performance area.

It's this whole business of risk-informing Part 50, for instance, where some of the elements of Part 50 have much less risk implications than others, and we have to deal with that here. That's part of the problem with taking things that are not risk-informed and figuring out how to

put them in boxes that make sense with things that are risk-informed, because I'm dealing with both.

COMMISSIONER DICUS: Let me ask you a question then about one of -- down on containment leakage, and I think this was an issue Mr. Lochbaum will probably bring up to us, as well.

Is that -- how do you make that a meaningful -- explain how you're making that a meaningful indicator, when, in fact, that's not something that's going to be evaluated unless the plant is down. So it's always going to be green.

MR. BARANOSKY: It's not necessarily always going to be green, but it is one of those indicators that's less informative than others, but was included because we wanted to have some indication of completeness in terms of defense-in-depth.

It's not risk-informed. The leakage rates that one finds from doing these kinds of tests have minimal impact on public health and safety based on all the analyses that are available, but from a defense-in-depth point of view, it was one of the indicators that we put in there and, as you can see, we have limited value associated with moving beyond thresholds on that one.

COMMISSIONER DICUS: And one last question. On physical protection, you have three to five reportable events or six more reportable events. Is that per year or

per what sort of time-frame?

MR. BARANOSKY: That normally would be per year. I'd have to go back and check the details, because I don't remember all of them.

COMMISSIONER DICUS: That's the only one that didn't have a bounding -- it's per year?

MR. GILLESPIE: It's per year.

COMMISSIONER DICUS: Thank you.

MR. GILLESPIE: Everything was done on an annualized basis.

One of the limitations, and we talked about this on November 2 when we were here, that we had, and this directly addresses, I think, one of Mr. Lochbaum's concerns, was we limited ourselves in something we thought we could put in place by June, the data, in some cases, that we could get, and reliability of heat removal systems in containment,

while we talked about it, it wasn't something we immediately could get a number on. So that got left in the inspection realm.

And this is a package. There's inspection and PIs. So it's both. So it was kind of a matter of what we could do right now, not foregoing anything in the future that might be developed.

MR. COLLINS: Just a slight correction. The table indicates, I think, David signaled me from the -- his chair

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there. The table here indicates the frequency. Some of those are three-year, some of those are annually. So it's so indicated in those instances where it's more than a year.

MR. GILLESPIE: Where it's more than annual.

MR. COLLINS: But as you picked up, that should be per year.

MR. GILLESPIE: I will try to adjust things a little bit here in light of this discussion. If I could have that backup slide on the mitigating systems, I'd like to just make a point, I think, if that's available. Backup slide two.

This is a little bit busy, but this is the kind of charts that we put together for each of the cornerstones. The point that I want to make is that we looked at a number of factors.

I know you can't read it very well, but there are things like design, human performance, configuration control and so forth up there, and the groups that we had went through these factors and asked the questions of what was it that performance indicators could cover, what were the insights from risk analysis, and what were other considerations that we need to keep in mind from a defense-in-depth point of view in terms of identifying both performance indicators and inspection program interfaces with those performance indicators.

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That information was compiled for each of the cornerstones and provided to Bruce Mallet's inspection group. I think having said that, I will move off of that particular topic.

Let me just ask if there are any other questions on the performance indicator tables, because I'll move ahead to the threshold discussion.

COMMISSIONER McGAFFIGAN: Thank you, Madam Chairman. I just want to, I guess, follow up on a question that Commissioner Merrifield asked.

As I understood the answer on scrams, there aren't a lot of plants that are going to trigger these thresholds, but we expect them to trigger other thresholds and so we'll still catch them somewhere.

I think that says -- I'm not sure what that says, but if somebody gets into the white region on the A indicator, are they in the white region everywhere or are they in the white indication only for that section? Because if you're really saying that the scram indicator isn't going to be all that hot and something is going to go in the white somewhere else long before it hits these scram numbers and gets into white or yellow, then I'd want -- I guess I'd want to trigger a fairly broad white for the -- and all the implications that come with being white or yellow, or else I want these things to line up better. One or the other.

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MR. GILLESPIE: Right. And it's that weakness which is why we have multiple indicators and also how you react is laid out in a table. I don't want to steal Mike's -- Mike Johnson has a whole presentation on the assessment piece, how many whites in one cornerstone, whites across multiple cornerstones, which brings this risk-informed aspect up to what would the agency's reaction be to different combinations.

So if I could defer. The answer is if you're in white in one indicator, it is an indicator, we'd be looking across 20 indications in seven inspection areas.

CHAIRPERSON JACKSON: So why don't we let Mike Johnson do his thing, but we can only get there by letting Mr. Baranosky finish.

MR. BARANOSKY: Let me address, before I get off this table, one more thing about some of these comments that I heard.

If performance is not declining to the point where it's risk-significant, there is a question as to whether or not the performance indicator is poor or maybe the industry's performance is so good that in that particular area, we're not going to see very many hits.

So I wouldn't necessarily say that we're missing things. I think the real thing is we're giving indication what the true state of the performance is.

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Now, we know that this could be important from a risk point of view, so it is included in here. And occasionally, very occasionally, a plant will trip probably on the reactor trips into the white zone.

Not very likely will they go into the next regulatory zone because performance has been emphasized at nuclear utilities in this particular area. But certainly we would want to know and we would take significant actions if there was a decline in these risk-significant areas.

CHAIRPERSON JACKSON: I think, again, as you go along, and maybe Mr. Johnson is going to talk about this, you have to talk about what increased regulatory response band means, what is that, and the required -- I mean, what does that mean, because I think that, again, because the regulators' responsibility is -- your supposition is probably true that it is unlikely because of overall improvement in industry performance that people -- that a plant might go from a white to a yellow band or beyond.

But what we have to do relates to what we have to do, under the assumption that there could be one licensee who might go all the way through. But to be clear on what the minimum is that we need to do.

So I think if Mr. Johnson can speak to that, I think that can help to clarify some things for the Commission.

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DR. TRAVERS: Chairman, we think it might be advisable to -- and we'll just change the order of the presentation just a big -- we were going to go next to risk-informed baseline inspection, but we'll save Bruce for third and we'll put Mike up in second place, if that makes sense. But let's let Pat finish.

CHAIRPERSON JACKSON: I'm not sure. I'm not sure, because I think that since what Mr. Johnson is going to talk

about -- I mean, if I'm not right, is how you draw on both the performance indicators and the inspection results in the assessment program.

DR. TRAVERS: Whatever your preference is.

CHAIRPERSON JACKSON: My preference is that we stay the course. We just have to move faster along the course.

MR. BARANOSKY: Let me move to viewgraph 14 then. This is the conceptual model for evaluating licensee performance indicators and I did work closely with Mike Johnson on setting up this concept to go along with his assessment matrix.

The characteristics of this model are that there are multiple levels of performance with clearly defined thresholds to allow unambiguous observation and assessment of licensee performance. The thresholds are risk-informed to the extent that they can be.

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They're consistent with other regulatory risk applications, like Reg Guide 1.174, for instance, or tech spec requirements, and they could apply to inspection results as well as performance indicators.

The thresholds are sufficiently separated to allow licensees and NRC the opportunity to identify declining performance and take corrective actions before reaching an unacceptable level of performance.

Now, there are four bands here. The first band identifies the licensee response band, is characterized by acceptable performance on which the cornerstone objectives are met, and the performance indicators and the inspection findings are in the normal range, within nominal deviations from expected performance.

The thresholds from this band were derived from a review of past industry-wide performance and evaluation of the risk implications of the bounds of this band.

In this band, licensees would have the maximum flexibility to manage performance issues and the NRC would have a baseline risk-informed inspection program.

When the performance is outside of the licensee response band, a decline in performance will put the licensees in what we're calling the increased regulatory response band. Performance is still considered acceptable and cornerstone objectives are still met, but there is a

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small reduction in safety margins.

Performance would be within technical specification limits and the risk implications of operating within this band are characterized by changes in risk less than a core damage frequency change of ten-to-the-minus-five or large early release fraction of ten-to-the-minus-six, and this would be associated with either performance indicators or inspection findings.

By the way, currently, we only use core damage frequency in our analyses to try and derive some of the thresholds for this particular zone.

CHAIRPERSON JACKSON: Commissioner McGaffigan.

COMMISSIONER McGAFFIGAN: Are we capable of making these calculations in real time?

MR. BARANOSKY: Yes. In fact, that's a good point. We aren't planning on making any real-time calculations. What we did was a number of sensitivity

calculations to draw a perspective on where we should set the performance indicator thresholds, what you saw in the prior chart. So we did 13 or 14 PRAs' worth of sensitivity analyses in trying to see how the risk would change as we varied parameters associated with the performance indicators and would match up with the kind thresholds that we had here.

We then basically enveloped those results in

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selecting the performance thresholds that you see in that prior table. So we wouldn't expect any calculations.

If performance were to decline substantially, then one could potentially, but unlikely, enter the unacceptable performance band. We call this the point at which there would be such a substantial change in at least perceived risk and confidence in plant safety that there's likely to be plant shutdown or at least operation wouldn't be allowed in this range. Either, whether it's by tech spec requirements or NRC order.

CHAIRPERSON JACKSON: Let me make two kind of -- perhaps they're semantic, but public perception comments relative to this page with the conceptual model.

One might argue -- and this is separate than a shutdown decision, I'm looking at the yellow band, which you kind of skipped over.

I mean, one could argue that if cornerstone objectives are met, but with significant reduction in safety margin, and that tech spec limits have either been reached or exceeded, that one would not call that acceptable performance, that you would have to call it minimal, minimally accepted or marginal performance, because that's really what it is.

But to advertise that it is acceptable in the sense that the green and the white are acceptable, I think

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marginal performance or something like that is -- has to be said, particularly if there is a required regulatory response band.

And the issue is if it's acceptable, why is there required regulatory response. So that's number one.

Then the last comment I have is that you go down to the chart and you have the red and between each area you have dotted lines. Then below the dotted line you have unsafe performance. There is no below that dotted line.

Once you've gone to the red, you're where you can go, and, therefore, you shouldn't have a line on here that says unsafe performance, because you're not going to let anybody operate. There is no such thing. You've already said that plants -- and, you know, and you say plants not normally permitted to operate within this band.

That seems to beg the question a bit, too. I mean, if it's really unacceptable, unless there is some compelling other reason, plants should not be permitted to operate. And if that's the case, there is no such thing as unsafe performance.

So I think that is a bad thing to have at the bottom of this page, because it implies somehow that the regulator will get down to unsafe performance, and that doesn't make any sense, because you've already said that it's unacceptable when you're above that dotted line.

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MR. BARANOSKY: I agree with you, and that's our intent, to say that basically once you've crossed into this so-called red zone here, that performance is unacceptable at that point and we're not going to wait until it degrades any further.

The intent is to show that there is still some margin from the point at which we would take these fairly drastic regulatory actions and the point where we would say the plant is unsafe.

CHAIRPERSON JACKSON: But if, in fact, it's unacceptable performance, you're saying that the plant performance is significantly outside the design basis. There is a loss of confidence in the ability of the plant to provide assurance of public health and safety with continued operation and there is an unacceptable margin to safety. There is no question.

So that's what I'm trying to say. I don't understand the issue, why there is a "normally" in there, particularly when you've already said that you're not even -- you don't believe that, given the overall industry performance, that there's likely to be a migration from the white to the yellow.

Therefore, if something gets to the red, what is there to hedge about, when you've got these points here.

MR. BARANOSKY: I don't think we would hedge.

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CHAIRPERSON JACKSON: The "normally" is not appropriate.

COMMISSIONER McGAFFIGAN: But I think it does get to the question I asked earlier about if you're red in one of 35 indicators, does everything come down on you or not.

CHAIRPERSON JACKSON: That's a good question. Is this a performance indicator specific or is there some -- is this overall red when you have so many reds.

MR. BARANOSKY: I think Mike Johnson will show you that. One red indication, that's enough.

CHAIRPERSON JACKSON: All right. I understand. Go ahead, I'm sorry.

COMMISSIONER DIAZ: This is strange. I was going to agree, partially, again, with the Chairman, again. In a matter of semantics, if we're really going to deal with this, I mean, green should be something like satisfactory performance and white could be acceptable and yellow could be marginally acceptable and red could be unacceptable.

The only way you can get them be on safe is through an accident in which you bypass all of these things. So an accident could get you into this line.

CHAIRPERSON JACKSON: But it should be

COMMISSIONER DIAZ: That's the only way.

CHAIRPERSON JACKSON: But it should be a box that says accident.

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COMMISSIONER DIAZ: Right, it should be a box.

CHAIRPERSON JACKSON: But it should not be something in terms of the gradation of regulatory response.

MR. COLLINS: I accept that comment. I believe what we were considering, and I'm trying to work my way into the minds of others here, at the risk of going -- elaborating perhaps on our intent.

There are many stakeholders who say, well, the NRC never really has a threshold by which you bounce a situation

where plants are truly unsafe. When does the agency ever come to that conclusion?

This was meant, and it can be certainly indicated in a different way, but this was meant to acknowledge that we take regulatory responses above that point. But that point does exist and we can acknowledge that it has occurred under certain unforeseen, God forbid they ever happen, circumstances.

CHAIRPERSON JACKSON: The real question is whether unsafe performance is only an accident or if you have plant performance significantly outside design basis, loss of confidence and ability of plant to provide assurance of public health and safety with continued operation, an unacceptable margin to safety, is that not the actual point, as opposed to an accident.

It's a subtlety, but it's an important point.

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MR. COLLINS: It is a subtlety.

CHAIRPERSON JACKSON: Why is it that if somebody has all these things, a licensee, are you -- you know, you've lost ability, you've lost your confidence in the ability, then that's where the -- I think he'll speak for himself, but that's where the folks who worry about these things say, you know, the NRC hedges on this kind of thing. Whatever you call it.

COMMISSIONER McGAFFIGAN: Madam Chair, I have a sense, as Yogi Beara said, of deja vu all over again. One of the first briefings that Commissioner Diaz and I attended was on Maine Yankee and we got into what did they mean by acceptable, good, superior, and various things, and is there unacceptable.

But in looking at this in light of that conversation, in some sense, green is the old superior, white is the old good, yellow is the old acceptable, however marginal, and unacceptable. We had that discussion in the Maine Yankee briefing, when do you trip into --

CHAIRPERSON JACKSON: It's probably more satisfactory, acceptable, marginal and unacceptable/unsafe.

MR. COLLINS: We actually try not to draw those parallels, but --

COMMISSIONER McGAFFIGAN: I know, you're desperately trying not to. So it's like I have to do it for

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you.

CHAIRPERSON JACKSON: But you basically have said it. I mean, you are saying it, in so many words. And people may not like it, but you've actually said it. And whether it's because a green light is on or a white light or a yellow or a red, the light that shines on you is basically making the statement.

COMMISSIONER DIAZ: Yes, because unsafe means there is a consequence to public health and safety, there's been a radioactivity release of some sort. That's the only way where we can say a plant is unsafe.

So that brings it into the accidental category and it can be boxed somehow. I agree.

CHAIRPERSON JACKSON: But don't call it unsafe performance, because you're not going to let anybody perform unsafely. You've already said you're not going to let them perform when they're at the unacceptable level. It's not "normally."

MR. BARANOSKY: If I could go to the viewgraph 15,

I'll finish up.

CHAIRPERSON JACKSON: This has been very interesting.

MR. GILLESPIE: This is exactly the kind of feedback -- taking "normally" out is kind of a policy issue.

MR. BARANOSKY: The last thing I want to cover is

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some of the benchmarking work that was done on the performance indicators. The benchmarking was done against a set of plants with histories of poor, declining, average and superior performance, as identified by the current assessment process in the senior management meetings over the last several years.

We also looked at some plants that had significant accident sequence precursors to see if the performance indicators showed signs of declining performance associated with these events, and our observations are as follows.

The vast majority of indications of declining performance were in the increased regulatory response band performance indicators were in the required regulatory response band, and no performance indicators were in the unacceptable performance band.

The performance indicators were found to differentiate the NRC's watch list plants and the superior performance very well and the transient and safety system failure indicators were the best differentiators with respect to the results of the current licensee assessment process.

The performance indicators showed some ability to lead the watch list, plant performance declines, but there were several cases where the watch list plant performance did not correlate with the performance indicators. It was

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our judgment that the performance issues associated with those plants were more suitable to inspection activities than were the performance indicators.

We also noted that the occurrence of accident sequence precursor events seemed to be random with respect to performance indicator results.

However, when we consider the performance indicators together with inspection findings, we believe that the proposed performance assessment process will provide good indication of licensee performance, with opportunity to observe declining performance and take corrective action before unacceptable performance is reached.

CHAIRPERSON JACKSON: The question I have for you is where do human performance, safety conscious work environment, and problem identification and resolution come into play? Are those areas that are inspectable areas or how do they get covered?

MR. BARANOSKY: Those are the so-called cross-cutting issues which we believe are either implicitly captured by performance indicators and the kinds of inspections that have been identified or, in some cases, there will actually be some explicit attempt, for instance, at the corrective action programs, to look at those particular attributes.

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CHAIRPERSON JACKSON: How do you get safety

conscious work environment and how do you get human performance?

MR. BARANOSKY: We're not really trying to measure safety conscious work environment, per se, because we know that safety conscious work environment is like a causal factor associated with a decline in performance in a cornerstone area. So what we're looking for is decline in performance in cornerstone areas and then implement inspection activities to diagnose whether or not it would be a safety conscious work environment, attitudinal type of problem, or whether there are other fundamental technical breakdowns that are the root cause of the declining performance.

MR. COLLINS: Let me elaborate on that just for a moment.

CHAIRPERSON JACKSON: Please.

MR. COLLINS: The safety conscious work environment process, as was discussed somewhat yesterday, will cross-cut through this area. It will be an external effort, to the extent we still have the agency allegation advisor who does the annual reviews of allegations and has the thresholds for those plants that are focused on as far as safety conscious work environment.

That's based on a paper guidance from the

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Commission, where there are pre-set criteria for those plants that come up as a result of typically a confirmed HNI. That will continue.

We'll still have the regional allegation coordinators, with the panels, that will engage OI resources at the appropriate time, if there appears to be harassment and intimidation issues. Those confirmed cases will, again, drive our enforcement process, which will cause data, which would drive the agency allegation advisor.

More to the point of this process, which relies heavily on corrective action, our corrective action procedure, the 4500 procedure, does contain words, as they exist today, which will be reevaluated in conjunction with this new process, which allows and provides for the questioning of workers directly, the review of satisfaction for corrective action and problem resolution, on a case by case basis for the tracking and pursuit of issues that are brought to licensees for resolution.

So we have those tools. To the extent that we'll be focusing more on corrective action and correction action effectiveness, there will actually be the opportunity for heightened inspection in those areas, when those thresholds are engaged. Those thresholds will have to be engaged by the PI indicators that would indicate that the corrective action system is not working.

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Otherwise, the normal agency processes would prevail.

CHAIRPERSON JACKSON: Please.

COMMISSIONER MERRIFIELD: Since the Chairman has walked through the door of enforcement or opened the door of enforcement, I will walk through it.

CHAIRPERSON JACKSON: It's a window, but it's the 35th floor.

COMMISSIONER MERRIFIELD: Well, I'll see if I can parachute out successfully.

In the SECY, it states that the changes to the

inspection and assessment programs were integrated with changes that were made to the enforcement program. It goes on to state the assessment and enforcement processes are more closely aligned and integrated to prevent redundant and conflicting messages on licensee performance. Fair enough.

Yet, on page one of attachment five, the staff indicates that it is premature to develop specific changes to the enforcement process due to the ongoing efforts to make improvements to the inspection and assessment processes.

So I guess my question is, can you clarify the overlap between integration between enforcement and inspection and also to what extent have we reinvented enforcement as it relates to this document.

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CHAIRPERSON JACKSON: The two statements seem to conflict with each other. Is that what you're basically saying?

COMMISSIONER MERRIFIELD: Yes.

MR. LIEBERMAN: In the past, the enforcement process, to some degree, led the assessment process and with this effort that we're working on now, we want the assessment process to lead the enforcement process.

So our thought process is we have to look at the severity levels that we have in existing policy, compare them to the thresholds that we're using in the assessment process, make adjustments to the thresholds in enforcement, the severity levels in enforcement, to make them match more.

The reason why we said it is premature is because we wanted to work out the inspection process, the assessment process, and once we're comfortable in how those processes are going to interrelate, then we can work on developing the severity levels. We want to have that done before the pilot process is started.

So in the March time-frame, we need to provide the Commission more specific thoughts on how the policy should be changed.

In attachment five or enclosure five, we talk about some of the principals that we want to use and there are some options that we have to consider, especially in the

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area when we aggregate level fours, where, in the past, we've aggregated level fours and how should we be doing that with this new process, and we have some stakeholder meetings that we're planning to have to get some more input before we're prepared to provide a recommendation.

COMMISSIONER MERRIFIELD: But is your intention in the March time period to come back to the Commission having gone over the three options that are included in attachment five, and come back to us with recommendations as to how you would implement that integrated with the inspection?

MR. LIEBERMAN: Yes. We plan to do that, so we can test that or trial it as part of the pilot program.

CHAIRPERSON JACKSON: Thank you. Are we ready to go to risk-informed baseline inspection?

MR. MALLET: Good morning. I will try to go through as quick as possible. If there aren't any more questions, I'll pass it along to --

[Laughter.]

MR. MALLET: Let me turn to slide 16. As we indicated during our November briefing, we staffed a

14-person team to develop the concepts for the risk-informed baseline inspection program. As Frank Gillespie indicated, we're here today to describe some of those concepts of that program, answer any questions you have, and ask that you approve of our going forward with the concepts in this

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program in some sort of a pilot program.

Before I discuss the concepts, however, I wanted to go through and discuss the methodology used by the task force, briefly, on slide 16, and the product we produced. I believe this will address some of the issues you raised in the November Commission briefing and I felt it important to go back and do that.

As far as project methodology, as I indicated, we staffed a 14-person team. One of the issues that you had for us was to make sure we have inspectors on that team, both region-based and resident inspectors. We did have.

You also asked us to make sure we talked to the stakeholders, internal and external, during the process to factor in their concepts, as well, and we did that.

I would also make a comment here about the Office of Research. They had an independent project in the beginning where they were looking at risk-informing the baseline inspection program or some sort of inspection program. They changed and combined with us and provided input into this program.

In fact, some of the risk tables were done by their contractors for us. I think that's a very important point on integration to make.

We first used the framework output as a guideline and for this we used the cornerstones of safety and the

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objectives of each one to determine what to inspect. And the backup slide number two that we referred to earlier, that's a little busy, if you look at that, shows you the link between the cornerstones of safety for the mitigation system, if you take it as an example, down to the inspectable areas.

There are two objectives in there for their mitigation system, is to have equipment alignment at power and equipment alignment during shutdown conditions. If you look down below that, it shows you the inspectable areas that we chose to determine whether those objectives are met.

We also indicated performance indicators in conjunction with that. So it's an important link to make.

Also, Commission Diaz, you asked us to make it clear what the objectives were for the cornerstones and we attempted to do that in the paper this time.

Another concept that's important to understand is that this program was developed as a replacement for the current core program. In other words, it's a baseline or minimum level that will be performed at all power reactor facilities. The concept is that it would replace the core portion of the current manual chapter 25.15, but not replace the initiative or the reactive inspection portions. But it is a minimum level that will be done at all plants and any further would be an increase above that baseline, any

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further inspection.

We also benchmarked other agency programs. You all asked us to do this to make sure we gleaned anything we

could from that. We took two programs, that for the Environmental Protection Agency and that for the Federal Aviation Administration.

In the case of the FAA, there was a government accountability report done in February of '98, of this year, and it listed weaknesses in that program from a risk perspective and how they could improve the program. We took those, and I'll just give you a couple of examples.

One was that they felt the program needed to have a team approach. They thought you glean more information from teams that look in-depth at programs. Another was that you must have checklists for inspectors to use to be consistent in their approach.

This is consistent with our experience, both these concepts, and they were factored into the program.

Last, in the product methodology I mentioned, but certainly not least is we solicited stakeholder comments and issues throughout and we factored those into our final product.

An example of some issues are how would a performance indicator relate to an inspectable area, and we captured this in something called a basis document, which is

in appendix I or the first appendix to attachment three. We did an explanation of that.

If you can turn to slide 17, I'd like to talk about the product produced and some of the concepts. We did produce a product called, and I made an error on the title, we called it NRC nuclear power reactor baseline inspection program. We left out risk-informed, one of the most important parts of the program. So if you would add that to your slide, I would appreciate it.

This program is described in attachment three to the SECY paper. It's broken into nine sections. Each of those sections describe a specific concept of the program.

It was meant to be one package, so that you could take it off your shelf and use it to describe the entire program instead of having to look at multiple manual chapters as you do currently.

The next concept and the product produced was something called risk-informed matrices. There are two of these. They were developed, as I said, by experts on our team in risk analysis. They were also developed by the Office of Research and contractors they had to provide insights.

We have them as examples, two sheets from them, as backup slides three and four to the slides in your package.

RIM number one, risk-informed matrix number one,

talks about the frequency, how much you sample, and the bases for that frequency and how much you sample determinations.

RIM number two, risk information matrix number two, talks about the important systems that you would select to inspect during the inspection process. And, Commissioner McGaffigan, you asked the question about PRA and some of the strengths and weaknesses. One of the strengths, we felt, for including in these two RIM tables was the data analysis that's occurred across the industry. There's a lot of data being collected and it describes pretty good what are the safety important systems.

One of the weaknesses, though, as Dr. Lochbaum has mentioned earlier, are the uncertainties in some of those analyses and the assumptions that were done to arrive at the results of those analyses. So in the process, we've chosen to do two things.

One is we didn't limit some of the systems we included in that table just because they were a low frequency. We put some of them in. We felt that it was important to have them in there.

The other thing we did was in the planning process that I'll describe in a few minutes, we also said you've got to, when you're doing looking at the generic table, you've got to factor in site-specific information from the senior

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reactor analysts in the region and from the residents in the region.

The last item I want to mention about the product produced, we did go back and do -- I used the preliminary on purpose. We did a preliminary analysis of how we propose the program would lead an inspector to areas where there have been past problems in plant performance.

We chose five plants. We took them from the list that Pat Baranosky and his group had looking at performance indicators and we looked at, first, how those plants performed based on did we have a diagnostic evaluation team there, did we have an independent review team, and what were the lessons learned from those teams. Then we looked, second, at would our current program bound that with the inspectable areas.

It's important to understand. We felt it would be too biased to say that we would exactly pick upon that finding. I'm not sure you can ever say that. In hindsight, you certainly can. I'm not sure up front. But we did feel that our program, in all those cases we picked, the inspectable areas would bound the problem. In other words, we would be looking in the same area where the problem occurred, and you should pick up, we felt, the fact that there was a problem and be able to expand your inspection program to look more in-depth.

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COMMISSIONER McGAFFIGAN: One of the points that Mr. Lochbaum makes is that he doesn't see, and I must admit I haven't gone through this document, objective criteria whereby if you go into one of these inspectable areas, you decide that -- I don't know -- your red, green, white, yellow, whatever, you know, if we're doing that, we're back to grading items, which may or may not make sense.

But he doesn't see objective criteria. So we might be inspecting there and without objective criteria, an inspector might not -- in his eyes, it may be acceptable, and in another inspector's eyes somewhere else, it might not be.

So is the intent at some point to have thresholds for if you find this, then this really is -- even though the PIs are all running along in green, this is a significant issue and could bring this area into white or yellow?

CHAIRPERSON JACKSON: Let me ask a question. Will the inspectors be doing the grading or is it that they're going to get guidance relative to what Commissioner McGaffigan is raising in terms of what gets written up or not?

MR. MALLET: They will get guidance, but they will

also have the ability to do the grading with the manager in the post-brief from the inspection.

But let me answer the question a little

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differently. It's a good point that was made. We have a hole in the program right now and that's one of the work remaining items that we have, to develop a risk rule, if you will, for the inspection findings and what these mean from a significance standpoint. We recognize we have to do that prior to any pilot.

The other thing, however, we have to develop are the specific procedures the inspectors will use to look at these inspectable areas and the vision is that those procedures will have the reference to the criteria they're measuring against as far as a particular regulation or requirement.

So you want to have them some sense before they go out to do the measurement what the criteria is they're going to measure it against and linked to the objectives of that cornerstone.

COMMISSIONER McGAFFIGAN: It sounds like -- if it's a hole, it sounds like a significant hole. How quickly are you going to fill it?

MR. MALLET: WE have people working on that, in December and today, working on this risk rule as a guideline.

CHAIRPERSON JACKSON: So it's going to come back when you come back in March.

MR. MALLET: Yes. If we don't have it by then, we

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won't be ready to do the pilot. That's correct.

CHAIRPERSON JACKSON: The only comment I would have is -- and maybe it's a question of presentation. But you talk about -- you present your RIM in terms of hours per site and then you have something called level of effort, and it strikes me that what the migration is to samples.

You have an inspectable area, but the question is you have your risk-informed sample and that drives some baseline of hours.

MR. MALLET: That is correct.

MR. GILLESPIE: That is a presentation problem.

CHAIRPERSON JACKSON: All right.

MR. MALLET: It's also, when we put the table together, if you look at RIM number one that you're referring to, some of the areas -- an example I'm looking at is in the mitigation system cornerstone. If you look at equipment alignment, we specified, under level of effort, the number of systems you would look at and how often you would look at that.

It's a concept that eventually that will be filled in for everything. But in the two months, there were some things we said we don't have a good guideline, let's just put some hours down there that we think it would take and not have a specific sampling.

But to do it right, you will have a specific

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sample on each category.

CHAIRPERSON JACKSON: It has to be a sample-based inspection.

MR. MALLET: That's correct.

MR. COLLINS: Chairman, that's not to say that the PBPM process won't have accountability as far as level of effort.

CHAIRPERSON JACKSON: That's fine. I understand.

MR. COLLINS: Or clearly that doesn't drive the process. It's planning first and planning is determining what you have to look at and what the scope is.

CHAIRPERSON JACKSON: Right, what's the goal, what the outcomes are, which means what you inspect with a sample, what the resource load is.

MR. MALLET: When we laid out the risk-informed matrices, we laid out first how much we want to look at and how often. Then we said, however, we need some budget tool for resources, so we need to put some hours to this.

MR. GILLESPIE: And that's important, because a lot of people have focused on the hours. But just as Bruce said, first, it was to sample how many, how often, and then it was a best estimate to get a perspective on the hours.

CHAIRPERSON JACKSON: Okay.

MR. MALLET: If I could have slide 18. I want to talk about some other key concepts in the program. What you

may want to do is, on a blank piece of paper, draw some blocks for a flow diagram. I did it on a three and a half by -- a three-by-five card. You may want to take more space.

But if you go to the left of your blank piece of paper, you first want to draw a box that says the scope of the program. That scope of the program, then draw an arrow going into that box that says framework, cornerstones and inspectable areas. We lost our budget for graphics in Region 2.

[Laughter.]

CHAIRPERSON JACKSON: So framework is coming from above.

MR. MALLET: That's correct. Framework is coming from above to the scope of the program in the large box.

MR. COLLINS: We had to pay your per diem up here, that's why.

MR. MALLET: And if you go down to the fourth bullet on slide 18, you'll see we talk about the scope of the program is defined by something called inspectable areas. These are not only listed in the charts, we used an example in backup slide two, but they're also listed in table one of attachment three by cornerstone.

They're also included in the program based upon their need to monitor the objective, whether it's being met

at that cornerstone, and whether or not it was risk important.

The next concept I want to talk about -- and by the way, I skipped over the first three bullets on this page. We've talked about them previously.

The next concept I want to talk about is the last bullet on this page, called the basis documents. We took -- in the current program, you have inspection procedures that have a checklist of things to look at, then you also have something called guidance, which is experience, insights into why you look at certain things.

We took that and put it into an appendix which we call basis documents for each inspectable area. So if you're drawing the flow diagram, you would draw an arrow up

and put the words basis documents factoring into the scope of the program.

We also took, in the basic document, and described what would be the scope if you go out to inspect this inspectable area, what are you expected to look at and how much, and we attempted to describe that or each one in those basis documents.

If you go to slide 19, the next block, you want to draw over to the right of the scope of the program, is planning inspections, and we've talked about this just briefly, but I would mention some things about it.

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It's based on a 12-month cycle. We wanted to correlate it with our fiscal year. That's how we do our other planning in the agency. It would be guided by risk-informed matrices. So under planning inspections, you want to draw an arrow up and put RIM number one on there. The first thing you do when you sit down in your PPR process -- I'm sorry -- plant performance review process, planning piece, is you look at RIM number one to decide how much sample should I take, how much should I look, how much time by each inspectable area.

CHAIRPERSON JACKSON: How do the RIMs relate to the PIMs?

MR. MALLET: Well, they're two different things. The PIM is a summary of the finding from an inspection and a RIM is a template, as you call it, for planning of how much you might look at a particular inspectable area to arrive at a good sample of that objective.

Now, your results of your inspection that you would get out of PIMs, however, should be factored into your RIMs as a feedback loop, and we did that when we created the RIMs. We not only looked at risk analyses, but we took inspectors' experience on the team. We talked to NEI and industry, we talked to the regions, to factor that into those RIMs. So there is some correlation.

CHAIRPERSON JACKSON: But don't the PIMs also have

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to be aligned according to the cornerstones that you talked about?

MR. MALLET: Absolutely, yes. You would have to -- if you're planning to look by cornerstones, your findings should definitely be --

CHAIRPERSON JACKSON: By cornerstones.

MR. MALLET: -- by cornerstone, that's correct.

MR. GILLESPIE: Which is one of the procedures with 610, how do you write an inspection report, which we have to reevaluate.

MR. MALLET: The next item you draw in your flow diagram is how you select the sample and you draw plant inspections and over to the right of that you put how you --

CHAIRPERSON JACKSON: Forget it. Just talk to us.

MR. MALLET: Okay. RIM number two was meant to decide how you select your sample. You go to the generic template for a BWR or a PWR and it tells you the risk-significant systems or activities and you select those.

But as you indicated earlier, it has to be modified by plant-specific information, from senior reactor analysts during the planning process.

The last concept, if you skip to the last bullet on page 19, I want to talk about the assessment findings.

We discussed this earlier. This is where, Commissioner McGaffigan, you indicated we have a hole that we have to

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fill.

The idea or concept here is that we will categorize the findings when we develop our PIM into certain categories or bins that's would relate to a threshold of significance, if you will; is it risk-significant, is it not risk-significant, and we're developing that and we recognize that we have to complete --

CHAIRPERSON JACKSON: But it makes no sense, again, if you haven't linked them to the cornerstones that you start with.

MR. MALLET: That's correct. It also has to match the RIM tables. If you say it's important to look at in the first place, you find it must be important. So that's correct.

COMMISSIONER McGAFFIGAN: Madam Chairman, we keep talking about risk-significant, but we still have this deterministic framework. I can imagine you'd get an inspection finding that somebody violated something, it may be something that shouldn't still be on the books because it isn't risk-significant, the risk-significance is precisely zero, but it's a clear violation of a rule.

How do you write that up if you're only caring about risk significance?

MR. LIEBERMAN: It's in how you disposition it. And if the Commission approves the proposal for the level

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fours, that would be considered as NCV, left to the licensee's corrective action program, and not be subject to formal enforcement action.

COMMISSIONER McGAFFIGAN: But my recollection is, from Mr. Lochbaum and NEI's evaluation of our evaluation of our escalated enforcements, they found risk significance that might be less than or close to zero, even in some of our escalated enforcements.

CHAIRPERSON JACKSON: That's why he's saying there is a phase two on the enforcement policy.

MR. GILLESPIE: A reconciliation to the risk scale that we've proposed is going to be an important step in the next two or three months, which will give us a different perspective.

CHAIRPERSON JACKSON: And they haven't had the chance to do that yet. When will we be getting that, Jim?

MR. LIEBERMAN: That will be the March -- a lot of things are happening in March. But I hesitate to, and I probably shouldn't, but I will, raise the -- the debate is, that's where the options in attachment five address and that's what we have to resolve for the March paper.

CHAIRPERSON JACKSON: Commissioner Merrifield says beware the Ides of March. Do you want to make a comment?

COMMISSIONER MERRIFIELD: No, no. That's fine.

COMMISSIONER McGAFFIGAN: April Fool's Day, also.

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MR. COLLINS: I have more confidence in the staff than that.

COMMISSIONER MERRIFIELD: So do we.

CHAIRPERSON JACKSON: Absolutely.

MR. MALLET: Let me go through two more concepts. If you look at the second and third bullets on slide 19, two

other parts of this program, very important parts, are the verification and performance indicators.

As we said, in some instances, we would only inspect areas where we do not have performance indicators or where the performance indicator is not all inclusive. So it's important that we do a sampling process for that verification.

The last is, Chairman, you asked about problem identification and resolution. We've factored it into the program from two aspects. One is we put ours and we plan to put in the procedures, when you look at each inspectable area, you will look at their problem identification and resolution programs to see if they are identifying problems and fixing those problems.

But we also put that every two years we will have a biannual independent review of that, of the program, which will be across cornerstones and would also be independent of the individuals that routinely looked at these areas during the year.

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CHAIRPERSON JACKSON: I see.

MR. MALLET: This addresses one of the issues by the regional administrators, is how can we get this cross-look across all the cornerstones. You may say be looking all your effort in one cornerstone and you may have the same problem in another one, and this is one of the ways we felt that we could approach that process.

I would end my part with saying what can you expect from this proposed program. We expect that you will have focused on risk-important activities and the planning process. We expect that it will be less subjective and increases -- the increase that you would perform an inspection above baseline will be defined, and we would expect that if anyone asks why do we inspect something or what we're inspecting, you can draw a direct link to our mission of protecting public health and safety by looking through the cornerstones and their objectives.

With that, I'll turn it over to Mike Johnson, who, long awaited, is going to talk about the assessment.

MR. JOHNSON: Thanks, Bruce. Good morning. Slide 20, please. I will discuss our recommendations for revised reactor performance assessment process, including the key concepts of the proposed process. I will also describe specific assessment activities and what I believe is the heart of the process, which is the matrix that identifies

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actions to be taken based on performance results.

Finally, I will discuss the approach we will use to verify process feasibility and efficacy prior to implementation and to measure success and provide for continued improvement feedback after implementation.

Slide 21, please. Before I mention the key concepts, let me remind us that the purpose of the assessment process within the oversight framework is to assemble and integrate performance indicator and inspection results within the cornerstones, to arrive at objective conclusions, to identify resultant regulatory actions based on those conclusions, to communicate the assessment results and actions to the public, and to provide feedback to the process to verify that actions taken by licensees are effective.

Slide 22. There are several key concepts of the process I'd like to highlight. First, as mentioned earlier, both performance indicators and inspection results grouped by cornerstone area -- again, grouped by cornerstone area, as the Chairman said, will be inputs to the assessment process. Both have thresholds associated with them and crossing the PI or an inspection cornerstone threshold will have similar meaning and will result in the NRC considering similar action.

Second, the process results in the evaluation of

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the plant's performance over a 12-month rolling window. As I'll discuss shortly the process has both an ongoing and a periodic assessment activities associated with it throughout that 12-month window, and we'll describe that a little bit.

As is true with our current assessment processes, we would not wait for a formal assessment activity to take action in those situations where an immediate response is warranted.

Number three, the process provides a graded approach to management participation, inspection resources, actions and communications, as you will see as we look at the action matrix itself.

The process does not provide for use of the watch list or superior performer recognition, and, again, when we focus on the action matrix, that will be readily apparent.

Last, but not least, plants in an extended shutdown would be removed from this process and would be governed by other oversight processes, as is our current practice today.

Slide 23. Now I plan to spend a few minutes describing the specific activities of the proposed assessment process. This slide actually indicates the basic steps that we believe have to be accomplished for any assessment process. I'm not going to spend any time really discussing the bullets on this slide, but I would like to

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point out that our recommendation provides for a single assessment process, an integrated process that accomplishes these activities.

The framework provides a structure for organizing and compiling the data and the thresholds to be used in evaluating the PIs and the inspection results. Following the comparison of the results against the established thresholds, actions are determined based on a matrix.

The assessment results and actions are communicated to licensees in a graded manner, as you will see. The effectiveness of the actions are monitored through future PIs and future inspection results both through the risk-informed baseline inspection program that Bruce has described and our other inspection activities that we'll do where those inspection activities are warranted.

CHAIRPERSON JACKSON: Let me ask you a question. Your paper states that there will be two meetings held per year that would result in inspection plans being promulgated, but only one will contain an assessment of performance.

Now, how does that play off against where we are today with the PPR, where, in fact, there are assessments in letters that are transmitted twice a year?

MR. GILLESPIE: Let me -- the vision is that the once a year assessment will be actually more than what we

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have today.

CHAIRPERSON JACKSON: I see.

MR. GILLESPIE: So we're looking at potentially one, two or three pages of additional real assessment information that would be derived and put out. Not a SALP report, but based on an explanation, in prose for people to understand what the indicators information are telling us.

The mid-cycle, if you would, or the every six month one would clearly articulate changes in the inspection program or our reactions to changes relative to the threshold is broken and we have to have some reactive effort. It would not be a complete assessment package.

So it would be a scaled-back adjustment in the inspection schedule, but it clearly would have to articulate why inspection would change and what our reaction is.

CHAIRPERSON JACKSON: And that's an implicit assessment.

MR. GILLESPIE: And that's an implicit assessment.

MR. COLLINS: In the vernacular of planning and budgeting and performance measurement, the annual is the planning, the budgeting. The performance, calibration and the measurement would be the mid-cycle and that would loop back through.

CHAIRPERSON JACKSON: So the full one is on an annual, but it's mid-cycle in the PBPM.

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MR. COLLINS: That's correct, and it's meant to be aligned, if possible, with the budget cycle.

MR. MALLET: With the fiscal year.

CHAIRPERSON JACKSON: That's interesting.

COMMISSIONER McGAFFIGAN: Madam Chair, could I ask?

CHAIRPERSON JACKSON: Please.

COMMISSIONER McGAFFIGAN: I guess I'm still working on this hole. How is the inspection results -- really, it's -- it's Commission Dicus' earlier question. How are they weighted? If you have some findings in an area, you're saying you organize and compile the data, but then what is -- how do we then weight the data, give weight to PIs versus inspection findings versus whatever?

MR. JOHNSON: If I can, and we haven't, again, worked out all of the details of this, but if you will, as inspections are conducted, those inspection results would be captured in the PIM or something that is a replacement to the PIM by cornerstone area. So you would have -- for an individual cornerstone, you would have PIs associated with that cornerstone and the threshold associated with it.

In addition, you would have that collection of findings and it's our intention to develop an ability or a tool to allow inspectors to look at the individual findings, to grade those findings high, medium and low, if you will.

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Basically, the ability of that finding to impact the cornerstone.

So you would look at, for that cornerstone area, what does that collection of findings tell you. If you have, for example, only low significance findings, if you will, then that is analogous to not crossing -- that would be analogous to not crossing a threshold for PI, and so you

would be in the green band, if you will, with respect to that inspection area.

So as you then look at the findings and you have a medium significance or, for example, a high significance finding, that would cause you to cross an inspection threshold in a similar way as you would cross a PI threshold.

So we're going to look at setting up some criteria to enable us to, in a qualitative way, gauge the significance of findings and then based on two or three mediums or one high, for example, assigning some crossing of a threshold that enables you to take similar action as you would if you crossed the PI threshold.

COMMISSIONER McGAFFIGAN: What I hear Mr. Lochbaum saying, Madam Chairman, is we'd better be pretty specific, because whenever you say qualitative around here, it gets translated as subjective and I think people are looking for fairly objective judgments.

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The other question I have is, do our inspection findings get -- if there is a significant violation found, does it get in the PIM or whatever the follow on to the PIM is or is there a lag? How does the interaction between inspection findings, assessment and enforcement work, if, indeed, you all are thinking of taking somebody to an enforcement conference or something?

Is there going to be a lag?

MR. GILLESPIE: Let me address that. Given we'll probably reformat the inspection reports to line up with cornerstones, the PIM will be put in just as it is today and it's basically coincidental with the issuance of the inspection report or very shortly thereafter.

So the lag is -- there fundamentally is no lag with the issuance of it. The PIM is just a summary of the inspection results. It's not a unique document that has new information on it, and every entry in the PIM is intended to have -- to be tied to a public document. So it's not an original document, it's not a source document, if you would. It's a summary for use.

We're going to do our best to be as specific as we can in a rule-based process to give inspectors a way to judge the findings.

CHAIRPERSON JACKSON: Does this answer your question?

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COMMISSIONER McGAFFIGAN: No, not totally.

CHAIRPERSON JACKSON: You'll have to rephrase it, because --

COMMISSIONER McGAFFIGAN: I'm still trying to figure out how you add it all up in an objective way so that we're not accused of -- well, plant X had three significant and one whatever, but we gave them a pass, and this one had the same thing and we decided it was significant.

Are there going to be objective criteria for -- and it's hard, because an inspection here may be very different from an inspection there. So there is some subjectivity, I understand that, but how do you -- how do we avoid the subjectivity complaint that's the complaint about the existing system?

MR. GILLESPIE: Again, we're right in the process of developing it. I'm being cautious to give out examples that I've kicked around with some of the staff that's

working on it until we do it, but there is --
MR. MALLET: Let me mention one thing, Frank. The individual inspection findings would -- the difference from today, they would all use this risk rule. So hopefully they would be consistent in that if you had a significant finding at plant A, you would have that -- and you have that same finding at plant B, it would also be considered significant. So there is some leveling, if you will, or equalizing, thank

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you, of those inspection findings individually.
Then Mike is going to show you an action matrix that's going to talk about how you might compare the number of findings you have in a particular cornerstone.
MR. COLLINS: I don't think that challenge is that much different than the challenge we have today with consistency of findings, although we're subject to comments in those areas, certainly. But I believe the structure of this process will help that environment.
COMMISSIONER DIAZ: I am trying to see this thing in here and if I visualize what you're trying to do, you're trying to put an entire process which, in a certain way, because of the amount of information and the flow of information and the time limits of information and infrequency, you are actually self-correcting when there is an inspection process and there is a discrepancy.
That will actually be matched with some other piece of information. So in that way -- you know, these things are not isolated issues, where you're trying to make them an integral process in which both inspections and the performance indicators and so forth, once they get together, if there is a discrepancy and, of course, engineers are driven by discrepancies, how we correct processes, then that becomes a way to correct what the discrepancy is, rather than looking at them as just an isolated issue.

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Is that correct?
MR. COLLINS: Yes. And just to show you that NRR is a learning organization, Mark Twain was wrong. It isn't acceptable to say "I don't know." But we will work on these and we'll take them away.
MR. JOHNSON: We truly recognize that this is one of the challenges. In fact, I think I mentioned in November that this was going to be one of the difficult areas, and it will be, and we've been working and we'll get there.
We think that it makes a lot of sense. In fact, we don't see a way to make the process work unless you find a way to look at each individual finding and gauge for yourself, gauge for the regulator, gauge for the licensee whether it's significant, and then, based on that, to put it in the same process where we're looking at PIs, and you need to do that.
So we need to get to an answer and we're working and we'll get there.
Slide 24. We've already been talking about this a little bit. This table provides a summary of the assessment process activities that would occur during the annual assessment period, including when they would occur, who would conduct the activity, and what the activity is intended to achieve.
As indicated by the table, inspectors maintain a

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continuous awareness of the performance of a plant through ongoing inspections. Beyond this continual monitoring, as PIs are received each quarter, the regional branch chief will conduct an informal review of the PI and inspection results to verify their accuracy and identify performance trends.

Typically, only small changes in assessment inputs would be expected and resultant incremental changes to plant inspections would be made as appropriate.

If significant changes occurred, the quarterly review could be used to trigger significant action. Following this review, the PIs and inspection results would be released to the public.

So as a minimum, each quarter, we would look at the PIs, we would look at the inspection results for trends, make any incremental adjustments to the plant inspections, and we would issue the PIs and the inspection results to the public and to licensees.

CHAIRPERSON JACKSON: What do you do if you just find a big problem tomorrow? It's not your quarter, it's not on your quarterly review time line. What happens then?

MR. JOHNSON: I think what we envision is if you find a significant problem, then you take a look at that problem and ask yourself should that problem be dealt with in our routine assessment process or do we wait it out; that

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is, do we wait till the next quarter or does that problem that we found --

CHAIRPERSON JACKSON: What is Hub supposed to do? Something has happened in a plant in his region.

DR. TRAVERS: We're going to do what we do today, and that is react appropriately, involve the appropriate levels of management, first in the region and perhaps in headquarters, to evaluate and react.

CHAIRPERSON JACKSON: I'm just making sure, and understand me, we have him out there. You're handcuffing him to a quarter? He still gets to do his job.

MR. GILLESPIE: The key to your question was significant. Once you've made the significance judgment, then we're in a diagnostic mode and we're reacting.

CHAIRPERSON JACKSON: Okay.

MR. JOHNSON: At the six-month period, a mid-cycle review would be conducted. This review would be similar in purpose to our current PPRs, plant performance reviews, and would be conducted with a similar level of regional management participation.

Again, the purpose of that mid-cycle review is to evaluate the performance and plant inspection activities for the next six months and to issue an inspection look-ahead letter to the licensee.

At the 12-month period, the end-of-cycle review

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would be conducted. The end-of-cycle review would provide a comprehensive evaluation of plant performance and will plan inspection activities for the next six months.

Whereas the mid-cycle review is conducted by the regions, the end-of-cycle review will include participants from both the regions and headquarters. This will help facilitate consistency between the regions.

The results of the assessment, along with the inspection plan, would be documented in an annual assessment

letter to the licensee and would be made available to the public. For most plants, the end-of-cycle review will complete the annual assessment cycle.

However, those plants warranting consideration for agency level action will be forwarded to the agency action review meeting.

CHAIRPERSON JACKSON: Will all these reviews be done in time? I mean, you're planning to structure them to coincide with the planning and budgeting cycle. Is that the whole point?

MR. JOHNSON: Yes. The agency action review is conducted by senior agency managers shortly after completion of the end-of-cycle review meeting. This meeting is analogous to today's senior management meeting and is intended to provide a collegial review by senior managers of the performance of plants requiring additional oversight and

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of the proposed actions to ensure the agency's response is properly coordinated, balanced and consistent.

Upon completion of the agency action review, the staff will brief the Commission on the results for all plants, with a focus on plants that require approval of agency actions, if any. The Commission would approve the results by negative consent prior to their release.

The staff will then issue assessment letters and inspection plans for all plants and communicate each plant's results via a public meeting.

COMMISSIONER McGAFFIGAN: So we replace the watch list with the agency action list. It strikes me that there's still -- if you focus on discussing plants X, Y and Z at the meeting, it doesn't take our colleagues in the press much time to say that these are the plants that are giving the NRC staff the most trouble over the preceding year and while they've gone -- don't use the term watch list anymore, this is the equivalent of the old watch list.

MR. COLLINS: That's correct, Commissioner. There will be, potentially, and this is not predictive in any way, but there is potentially a category of plants which the normal processes will not solicit very appropriate response and corrective action.

And in those cases, the reasons for that may not be fully understood. That would normally, historically at

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least, prompt a diagnostic or a situation in which we engage a licensee through more contemporary tools, like the ISAT recently, to try to understand the root cause of that plant performance. That will be a specific potential category of plants.

MR. GILLESPIE: But I think more importantly, one of the strengths of this whole system is going to be a clear articulation of what our expectations are and Pat looked at some data on this. There is an expectation that about 50 percent of the facilities should be able to operate in a satisfactory zone on all indicators. Right now, just based on historical information, and the idea here would be that it's reasonable to assume that everyone should be striving to work toward that area.

This data will be available quarterly. So there will actually be more data, more relevant and more timely for the safe operation of these facilities available to the public than there is today.

So it would lead down that path, but the information would be out on a quarterly basis.

MR. COLLINS: The difference between the historical senior management meeting and this process will be, as Frank mentioned, that all the information is available throughout the course of the annual cycle. The trends, in the instance of a plant that doesn't respond

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appropriately, and, again, this is predictive, would be well known not only by the agency, but by the licensee.

Any corrective actions that are implemented over the course of the year would be agreed upon based on the engagement thresholds and either the trend in response, which would be upward, or the lack of a trend, which may be neutral or downward, would be well known.

COMMISSIONER McGAFFIGAN: Madam Chairman. Would they all have received -- I'm looking at the sequence here -- these assessment letters at the end of cycle review, do all 103 plan 70 licensees receive their assessment letter before the senior managers meet to decide about agency action?

MR. JOHNSON: No. In fact, there is something -- it's not by accident that all of the plants -- what we intend is that all the plants would get their assessment letters at the same time and it would happen after the Commission meeting.

One of the reasons we're doing that is because we're trying to prevent setting up something that could create an unofficial watch list, if you will. I mean, we try to be very careful not to send one group of plants a letter at one time and then have a separate group of plants that get a letter at a separate time. They all get the letter at the same time after the completion of the

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Commission meeting.

COMMISSIONER McGAFFIGAN: I'm just following up on an issue that Commissioner Diaz has raised in the past, this due process issue. They all will have the first three quarters of data. They won't have the last quarter and what the end-of-cycle summation of the entire year, which oftentimes, in our old SAW process, put particular emphasis on the most recent.

So there might be some value in just -- you know, even if you're going to raise the plant to agency action level, give them all their assessment at the end-of-cycle and then give them, those few plants that come to the senior management meeting, they get an additional letter after -- whatever you call it -- the annual meeting and the Commission briefing, they get an additional letter following that.

So everybody gets their letter, everybody knows what your last quarter view is and what the overall view is and they can sort of read between the lines; gosh, I'm going to get another assessment in two weeks based on this thing or I'm home free.

One of the complaints has been that you -- at some point, you get in the room and --

CHAIRPERSON JACKSON: It's a big surprise.

COMMISSIONER McGAFFIGAN: And there are surprises

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that come out of it.

MR. GILLESPIE: The expectation here is a gradual engagement from the first threshold that's crossed, proportional to the problem that's seen. So as one threshold is crossed, there would be more engagement between us and the licensee; anything from asking them how did this happen to a special inspection.

I think important to note here is that we believe, in the thresholds, there is enough room for a well operated facility to function without crossing a threshold. So the fact that one threshold is crossed and then a second and a third is an indication of a problem, and that would progress -- you see that progressing through the year.

So there would be an ever increasing engagement as you get to the year. Also, the data on the PI part is coming from them, so they would have their last quarter data. In fact, they'd have the data before we did and I would expect that if a facility had poor data, that if I were them, I'd send a letter in saying what I'm doing about it at the same time I sent my letter to the NRC telling me the thresholds I crossed.

Just fundamentally, it's in the nature of people, I think, to do that.

MR. COLLINS: The structure of the meeting, however, is subject to clearly Commission guidance. Your

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points are well taken and we'll take those under advisement. The second issue that you touched upon is a very good issue, and that's due process. It's not unforeseen that there may be dual presentations to the Commission, one with the staff's view of what that data and what that information portrays, the other being the licensee's view.

That would allow the Commission perhaps to balance the information and balance the licensee's intent and their insights into what that information means. And that would allow the Commission then to proceed.

COMMISSIONER McGAFFIGAN: I'm not trying to drag this out, but based on what Mr. Collins has just said, that's another argument for putting that assessment letter out. So if you're going to give them the chance to be at the table that day, you sort of have to have some mechanism to communicate, even before the negative consent paper comes to the Commission, that you may be in the hot seat in a month, because the end of cycle comes, two weeks after that this management meeting comes.

Nothing happens around here in less than two weeks. Two weeks after that, the Commission briefing comes. So you're probably talking first of March, well after the quarter is over, and if they got their letter at the end of February -- excuse me -- at the end of January, like they would at a typical quarter, they would have that month to

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prepare and maybe try to disabuse the senior managers of what the findings say.

I'm trying to think about the sequence, and I'll leave it at that.

MR. COLLINS: I understand.

CHAIRPERSON JACKSON: Okay.

MR. JOHNSON: I'd make just one last comment on this table, and that is it should be noted that if no plants warranted agency action level review, we wouldn't conduct -- we would not conduct an agency action level review. The

Commission briefing would still be held and assessment letters would still be issued.

Slide 25. Now I would like to briefly, hopefully, review the heart of the process, which is the action matrix. First, let me point out that although the action matrix guides staff actions during the quarterly and mid-cycle reviews, its formal application is intended for use at the end-of-cycle review.

So it's really intended, this table is really set up for use at that end-of-cycle review that we've just talked about.

The action matrix establishes the expected ranges of responses and communications to be considered by the staff based on licensee performance. Along the left column of that table, you will see responses include management

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meetings, inspection, licensee actions and regulatory actions. As I mentioned earlier, as you go across and, for example, look at those actions, you'll see missing, again, use of the watch list, the trending letters, a recognition of superior performance.

As you can see by looking at the left column of this table, of the matrix plants for which all PIs and all cornerstone inspection areas are in the green band would receive only the risk-informed baseline inspection program. The assessment report would be issued following the annual Commission meeting, along with all the other plants.

The letter would be signed out by the regional division director and the branch chief would conduct the public meeting. So we're talking about pushing down, from today or -- I'll say days of old, the SALP process, who signs out, how we conduct -- what the level of interaction is for a plant that has all indicators in the green band, all inspection areas for each cornerstone in the green band.

Then if you move over one column, for plants with one or two whites, we would continue to conduct the risk-informed baseline inspection, with additional inspection to follow up on those areas where thresholds have been crossed. So that the real trigger is to cross a threshold. If you cross a threshold, that's where we're going to look within that particular area that you've

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crossed a threshold to do some additional inspection beyond the risk-informed baseline inspection.

We would document the licensee's response to the degraded area in an inspection report. But as with the left column, where all the plants performance indicators and inspectable areas are green, the inspection -- I'm sorry -- the assessment letter would be signed out by the regional division director and a branch chief will conduct the public meeting.

In fact, if you'll think back on the action matrix and what we discussed with -- what Pat discussed, the bands, if a plant fell in the left column or the second to the left column, we really consider that that plant is in the green band. That plant is in the utility response band. That plant has no more than one or two PIs crossed, no more than one or two inspection areas crossed. So that's a plant that, in general, we think performs fairly well.

That's why, when you look at the actions we're taking, we're talking about the risk-informed baseline, with additional inspection for those one or two areas where we've

crossed some thresholds.

MR. COLLINS: Commissioner McGaffigan, you made a point earlier and I want to be sure we have addressed your issue in the context of the discussions so far.

This is where the resource implication potentially

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comes in. We're looking at the difference between a two-unit site presently which contains approximately 2,200 hours of core inspection to a risk-informed baseline inspection of about 1,850, somewhere between 15 and 20 percent less.

This cascades down into a number of staffing issues, potentially, depending on the scope and depth of the inspection program, which get to the type of inspectors that are needed to support this level of effort; how many of them should or should not be at this site, what that does to the regional DRS core of independent inspection expertise.

All of those issues will come up as a result of the program being further defined and they will be brought forward as potential policy issues through Bill.

COMMISSIONER McGAFFIGAN: The only question I have on that is I would imagine it's worse at a single-unit site in terms of mismatch between hours and -- because you have three for a two-unit site, if it's N+1, and two for a single-unit site.

Yet, we've always felt that we shouldn't isolate an individual out there. So the dilemma I think is going to be for the single-unit sites and how you use that resource.

CHAIRPERSON JACKSON: And the Commission may have to weigh in and make some statement about what it thinks may be needed or may be fundamental.

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MR. COLLINS: It will be a balance of policy issues, because there is more than one consideration, certainly, when you're staffing sites and providing inspection support.

MR. JOHNSON: Looking at the table, as you can see, as you move to the right, the degradation in performance becomes more significant and our response would become more significant, up to and including issuing an order to modify, suspend or revoke licensed activities for plants whose performance is unacceptable.

In fact, if you look at this matrix, we don't really talk about the overall performance of the plant and, in fact, that chart with the bands on it really is a conceptual model and one that enabled really the assessment guys who talked to the framework guys in terms of what does -- how should we set the threshold and how should we decide the action.

With the exception of the case where we're talking about overall performance, and we do believe that there will be a need to step back or there could potentially be the need to step back and look at a plant and decide that overall the performance of that plant is unacceptable, and that's that band that we talked about a lot when Pat was discussing the areas of the bands.

And so, again, the left two columns are the green

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band, the right column is the red band, and then if you'll look at the middle two columns, one degraded cornerstone or

repetitive degraded cornerstones, those really are shades of whites and yellows and we think it's really too difficult to try to decide definitively where a licensee falls with respect to their overall performance on that chart.

But we do know that we need to engaged, in an increasing way, based on the performance in the PIs and the performance that we find and the results of the inspections that we do. So that's how you see the flow of the actions, if you will, as you move from left to right in the action matrix.

CHAIRPERSON JACKSON: To me, the question you have is when you get all the way to the right and you have this overall red, where they're triggered off for the performance indicators, and you said one will do it, or out of inspection results and usually it's going to be some blend, that you made the point that this typically would be used for this kind of annual or periodic assessment.

But if a licensee gets into the red relative to a cornerstone, that -- something has to trump this. And how are you dealing with that? Are you going to let them operate until you come around, you find -- you know, they're in the red at the six-month period. Are you going to let them operate until you have your annual roll-up?

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MR. GILLESPIE: No. And that goes back to your earlier comment. A risk-significant event or safety-significant event that occurs will be reactive to when it occurs.

CHAIRPERSON JACKSON: Also, no, but there is this issue of the overall unacceptable, when Mr. Baranosky was talking. You get to the unacceptable, what are you going to do? Are you going to let them operate until you say, well, nine months from now --

MR. GILLESPIE: No.

MR. COLLINS: Acknowledging that there's really two ways to get there, Chairman, one is the event-driven, which we responded to earlier, hopefully to your satisfaction.

The other is where you have the gradual, but steadily declining.

CHAIRPERSON JACKSON: And you get to the red and it's six months before your annual roll-up, what are you going to do?

MR. COLLINS: We would engaged the licensee immediately by one of the tools that's acknowledged here, which is probably an order.

CHAIRPERSON JACKSON: So a plant is not normally permitted to operate within this band, unacceptable.

MR. COLLINS: Well, "normally" is the word, of

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course, that we discussed before.

CHAIRPERSON JACKSON: Right. But what I'm saying, not allowed to operate, not permitted to operate.

MR. COLLINS: Correct.

CHAIRPERSON JACKSON: So I'm saying, so you're going to make that decision to shut them down at that point in time?

MR. COLLINS: Yes.

DR. TRAVERS: But a strength, I think, in this process, and we've emphasized this in the past, is that setting the threshold, setting the scheme in the way we have provides us an opportunity early on to, first of all, let

them have an opportunity to arrest degrading performance in the white zone and then provide an early opportunity for us to take action short of the action that we would take in the red.

CHAIRPERSON JACKSON: But if it doesn't work.

DR. TRAVERS: But if it doesn't, you're absolutely correct, we would --

CHAIRPERSON JACKSON: Because the whole point is, and Mr. Lochbaum is going to talk to us in a few minutes, is that theoretically, one could argue that, at least from his perspective, the existing framework would work, if we used it.

Now, we happen to believe in the risk-informed

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approach, but theoretically, one could argue, and leaving aside questions of burden and so on, that from a protection of public health and safety point of view, if we would just do what we -- what our existing framework allows us to do, we'd be doing a better job.

So unless you address that question, you're right, it's a graded approach, graded response. But if a licensee falls into the red and it just happens not to be conveniently on your annual cycle, what are you prepared to do?

MR. COLLINS: We have to, as an agency, be committed to take action or the validity of this process is suspect.

CHAIRPERSON JACKSON: There is no validity.

MR. COLLINS: Right, exactly.

COMMISSIONER DIAZ: But there is one thing that's been added that is very important in this, which is the frequency and the sampling.

CHAIRPERSON JACKSON: Right.

COMMISSIONER DIAZ: And that is really a formidable process that allows you to early detect.

CHAIRPERSON JACKSON: It does, but it also puts you -- your total integrity on the line, because if you argue that by risk-informing it, you're really focusing and you have your cornerstones and you're really focusing on

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what is fundamentally important, you have no excuse for not acting if a threshold is crossed, however you get to it.

There is no excuse for not taking action, and that is -- there is no namby-pamby about it.

DR. TRAVERS: But I want to make clear, Chairman, that we are, today, in fact, as you pointed out, taking appropriate action when we entered into questions of unacceptability. I think what this process does is provide us a more objective way to do it and to convey that information publicly.

CHAIRPERSON JACKSON: But what I'm trying to say is -- let me repeat -- if you're going to do it and it's credible and you're saying you're focusing even more and it's an objective way you come at it, when you come to the point that you cross a threshold, you can't fool around.

DR. TRAVERS: I agree.

COMMISSIONER McGAFFIGAN: Madam Chairman, it's a trivial point perhaps, but in the public assessment meetings, I actually think that current practice is if you're in Region 4, you'd be in the Commission meeting with senior licensee management regime today. And if you're in

the red zone, as we've been talking about, I guess we'd be talking about monitoring the 0350 restart process under an order.

So I think you might want to give us some extra

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work and push us one box to the left and rephrase the final box. At least that's the current practice.

CHAIRPERSON JACKSON: Right.

COMMISSIONER McGAFFIGAN: And there is no sense sparing us meetings. If somebody's performance really is as described before --

CHAIRPERSON JACKSON: Right, just before the red.

COMMISSIONER McGAFFIGAN: Our practice today is, as a Commission, to have some briefings on it.

CHAIRPERSON JACKSON: Right. Because, again, when you get to the red, you're not sitting around chatting it up. Well, thank you -- I'm sorry. Are you done?

MR. JOHNSON: I actually had one more slide.

CHAIRPERSON JACKSON: It's your big chance.

MR. JOHNSON: Slide 26. I'll just hit this very briefly. We recognize that we need to do some things to evaluate the efficacy of the process prior to implementation and to ensure that after implementation, the process continues to achieve our success vision and that we have built in a means for continued improvement and we're working on those things.

Both Pat and Bruce described actions that they have both taken to do some early benchmarking. In addition to that, we plan to conduct a limited application of the entire process for four plants between now and when we come

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to see you again in March; to take a historical look at PIs for those plants for feasibility; to look at the inspection findings and to exercise the criteria that we're building, to compare them to the proposed thresholds, and then to exercise the action matrix to see that.

In fact, the process would lead us into taking action that 20/20 hindsight has told us was warranted. In addition, Frank has talked about the fact that we do plan to do pilots for each of the plants or for two plants in each region and that will enable us to make sure that we've ironed out the bugs before we go to full implementation.

Post-implementation, we plan to conduct a series of ongoing evaluations to provide review and feedback. We're going to look at things, for example, like process compliance; are there deviations from the process and do those deviations mean that -- are they indicative of a process flaw or do they mean that we have problems with implementation.

We'll look at a bunch of other things. We've got some success criteria that we've tried to begin to think about. We'll firm those up and we'll use those success criteria to make sure that the process that we implement does achieve our objectives.

I have nothing else.

MR. GILLESPIE: With that, we'll move on to the

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transition plan. I'm going to try to go through this pretty expeditiously. Slide 27 summarizes the key tasks in the transition plan. They're fairly written out there. I think they're self-explanatory on here.

We do have a lot to do. One of the key elements and the reason for asking the Commission for an endorsement, as Bill said in his paper, is before we proceed to inform, communicate and train 600 people in the regions, the first question a regional guy asks you, a resident asks you is, is the Commission behind this. We need to know that we're on the right track. So that becomes a key element.

Slide 28, this is summarized in the paper, some key things that we've come up with in communications and getting the work done. We are putting together right now a second task force made up of both headquarters and regional people to go on with phase two. We expect that will start in February. We're trying to do the leg work and get the charters and the mission very focused on what the products will be, much the same way we did in the first phase.

We've coined the term "change champion," which Sam has agreed to be, and we've already started his travel schedule. Senior management support is just absolutely imperative to this and he's providing that. And a change coalition, which is a new term, we have people identified in each region who are basically opinion leaders, if you would,

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as thought of by their organizations, who we are going to be communicating with, sending some extra information, giving some extra knowledge to, and asking them to spread that knowledge, because of the people people refer to, and also give us feedback, what is the hall talk, what is the real opinion.

So it's kind of a formal, but yet informal process where we have some people that we're going to give some extra early training to. And we will continue to work with industry and external stakeholders, including a workshop in the fall. We envision a parallel process of training the pilot plant staff and our own staff on what the expectations are for the work.

MR. COLLINS: Chairman, I can't tell you how important this change management aspect is. I know Hub and I have had discussions on the ability to reach out to the inspectors, the individuals who are charged with implementing this process, who to date have been somewhat intentionally shielded from the development of it, just because of the transition phase that we're in during that process.

We are actually working with our Office of Human Resources, I see the inspector is here, looking for some resources to help us with the development and implementation of a fairly defined communications plan, to include

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identifying change agents, change leaders out in the field, define training programs, feedback mechanisms.

As you know, you can't mandate buy-in. We have to provide the tools for that, we have to provide the information, a reason for people to move in that direction.

That will be a fairly significant task for us in the next two to three months. Actually, we're looking forward to it, because this is actually the roll-out of the program and this is where we find out where we are.

MR. GILLESPIE: On slide 29, we highlight some of the key dates. On here you can see that we'll be coming back for final approval once we get internal and external comments on this complete package in March of '99.

The last senior management -- the senior management meeting this April would take place much the same as it has before. We'll have an implementation workshop in October of '99. At that point, we're about halfway through the pilot process. We're three months into the six.

Implement the new process at all plants in January of the year 2000 is our target. The last senior management meeting, in what I might call the traditional mold, would be targeted for April of the year 2000, and the first annual review completely under the new process in the spring of 2001, and then complete the evaluation in June of 2001, are we where we thought we should be.

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CHAIRPERSON JACKSON: You've got to be sure to develop some metrics for measuring -- define what success is.

MR. GILLESPIE: We're going to have to have two sets of metrics, one for the pilots and then one for full scale. It's a different scale, going from eight plants to 68 plants.

MR. COLLINS: Chairman, there is an additional policy issue having to do with the April 1999 senior management meeting. Clearly, the context of that meeting historically is defined. Bill and I will engage the Commission at the appropriate time, which will be soon, on whether we want to use this meeting as a step-off to move in the direction of the new processes or whether, for the sake of continuity, we want to retain the existing process. This is just to give you early notice. There will be further discussions.

CHAIRPERSON JACKSON: Okay. Any final Commission comments? Commissioner Dicus?

COMMISSIONER DICUS: Just a quick question. Are there any remaining or significant differences between where you are and what you've developed so far and where the industry is and what it has relayed to you?

MR. GILLESPIE: I think they're here, so they'll speak.

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CHAIRPERSON JACKSON: She has to leave.

MR. GILLESPIE: The most significant difference, I would believe, from my perspective, is that there is a possible feeling we haven't achieved as much reduction in inspection for the PIs as might have first been desired and there is a specific concern that we still look at corrective action, problem identification problems as key.

So we're maintaining this every two year independent review of an eye ball coming in. Now, maybe after some cycles, we'd find that isn't necessary, but we think that's such a key part to the whole thing right now, that it's very important to have in.

I think those would be the two.

COMMISSIONER DICUS: Will the pilot programs help to ferret that out or is it going to take longer?

MR. GILLESPIE: I believe it's going to take longer to understand that and six months is not going to be enough time to completely resolve the one on looking at corrective action programs on a two-year cycle. That's still already a very extended cycle.

MR. COLLINS: I think an illustration of that would be given the level of information effort, to what degree, once the process matures and we become more

confident in its scope and its depth, to what extent will we allow licensee self-assessments in these areas to provide

input to the PIs and serve as a substitute for NRC direct inspection. That will be an area that we will engage in the future as a further refinement of this process.

CHAIRPERSON JACKSON: Commissioner Diaz.

COMMISSIONER DIAZ: I'm going to try to present a little global question. Since I like to learn from my elders, I'm going to present it in the same manner that Chairman Jackson did. I'm going to give you my bias.

I think the Commission is going to ask to vote, and correct me if I'm not right, this is what my bias is, into a single integrated process that is going to be risk-informed and that's going to be very firm; not fixed, but very firm. So that ambiguities and lack of objectivity is going to disappear.

That, therefore, we can expect everybody, the licensees, the public, the staff and the Commission, to have a predictable process. We'll be not only risk-informed, but we'll be aided by inspection.

There will be an interaction in this process that will result in what I call minimal deviations between inspection processes and predictors.

Is that correct? Are we going on with one thing that is very firm and very stable and very predictable?

DR. TRAVERS: That is, in fact, the objective of what we've been about and as you point out, in risk-informed

space, certainly you use risk to become more objective and we intend to use it as a tool.

I want to make sure that we haven't under-emphasized in the discussion we've had today the importance of the people, the inspectors who are going to apply this and the insights and experience base that they are going to bring to bear as we assess these issues against, as you point out, and I think it's a good term of art, firm, but not fixed criteria.

We have yet to provide, and we will provide, some additional information on how we would assess inspection output in a way that's comparable to what we're suggesting be applied in the performance indicators. But I think you've captured it well.

COMMISSIONER DIAZ: Okay. Because the viability of the process is going to depend on stability. I mean, the information has to be there, the sequences have to be properly, and unless you have that, you will have unstable process and it is very important for us to know what the end product is going to be.

It's not going to be something that somebody can tickle to make it a little better, to change it, you know, this firm process, you're going to have to really have a big two-by-four to say, uh-uh, this plant is really in the red, when it's showing on the white; I mean, that type of a

stability.

CHAIRPERSON JACKSON: Or vice versa.

COMMISSIONER DIAZ: Or vice versa.

MR. COLLINS: Commissioner, could I ask you, just for my own elaboration.

COMMISSIONER DIAZ: Yes.
MR. COLLINS: To explain your last point, the interaction between processes, is that what I heard you say?
COMMISSIONER DIAZ: Yes. Right. The interaction --
MR. COLLINS: The PIs and the inspection?
COMMISSIONER DIAZ: And the inspection, right.
MR. COLLINS: Okay.
MR. GILLESPIE: Our vision is that the baseline inspection, risk-informed baseline inspection is an indicative, not a diagnostic type inspection. We need to keep it on exactly the same scale by cornerstone as the PIs, so that we can deal with it in an equivalent nature.
COMMISSIONER DIAZ: And what I mean by deviations, there's going to be times that they don't match. That's not necessarily bad. On the contrary, it draws attention to the fact that you need to have a corrective action that takes place.
MR. GILLESPIE: Part of the feedback to reexamine, is the PI correct or are we looking at the right thing.

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COMMISSIONER DIAZ: That's right.
MR. GILLESPIE: And we do expect that. This isn't a perfect program. It's our first start.
CHAIRPERSON JACKSON: Commissioner McGaffigan.
COMMISSIONER McGAFFIGAN: Nothing.
CHAIRPERSON JACKSON: Commissioner Merrifield.
COMMISSIONER MERRIFIELD: I do have a comment and a brief question at the end.
I think that I would like to compliment the staff, and by the staff I mean not only the folks here in Rockville, but also the hard work that was done in the regions to make this document. This is a weighty piece of work. It obviously represents significant efforts on the part of a lot of people and for that I think their hard work should be recognized.
That having been said, I'd like to be the fourth person, fourth Commissioner today to make note of Mr. Lochbaum's testimony. And in it, he quotes, he says "The draft documents in the SECY paper may be useful working documents for the NRC and industry, but they cannot be used to educate the public. They contain too much nuke speak; i.e., technical jargon and acronyms."
Well, I don't know if I completely can identify with that, but I think it is a very large document that is difficult, and I spent a lot of time this past weekend

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trying to digest it. I don't think it is as user-friendly as it could be and I think as part of looking toward March, I think -- and, in fact, I presume you intend to spend more time on improving that.
The last piece I would quote would be a memo from Mel Knapp to Sam Collins, dated January 19, talking about the NRR response to tasking associated with public communications. In it, Mr. Knapp said, "In fact, your recommendation to improve the clarity of our writing is supported by the NRC plain language action plan that was submitted by Chairman Jackson in response to a Presidential memorandum dated June 1, 1998, regarding the use of plain language in government agencies."
And I footnote, this is obviously something that Vice President Gore has spent significant time working on

and I think he's to be complimented for it.

In his plan, we have committed to using plain language in all of our documents, other than regulations, as of October 1, 1998, and in all proposed and final rule-making documents by January 1, 1999.

So I leave it with a question. Is it your intention to to go back, now that you've got the document as a whole, to try to perhaps slim it down and make it a little bit more user-friendly and try to eliminate some of the NRC speak, as Mr. Lochbaum has mentioned?

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CHAIRPERSON JACKSON: Let me predicate your question. I hope you're not saying necessarily before it goes out in this form, because they are coming back in March.

COMMISSIONER MERRIFIELD: No. I don't think we should slow ourselves down. I don't. I think we can go out with this document, but I do think we may want to continue to refine it.

MR. GILLESPIE: Actually, the critical task ahead is to take this document, which is reasonably somewhat technical in certain places and is difficult to understand, but for the audience it was intended to do, the next step is, in fact, translating this not only for the public, which we're going to have to do and we're working with Victor Dricks, who is the person we work with in Public Affairs, almost daily now, he's getting very involved in what we're doing.

We also have to translate it for our own staff, into the agency's management directives and inspection procedures and inspection manual chapters, in a very understandable way.

So I don't think our intention would be to try to take this document and make it something it wasn't.

CHAIRPERSON JACKSON: And rewrite it.

MR. GILLESPIE: And rewrite it. It's intended to

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take the concepts and scope and positions and data in this document and put it into a more acceptable form for each of the given audiences. The public is definitely one of our major audiences and we will be doing that, yes.

COMMISSIONER MERRIFIELD: That's fair. That's fair. The only final comment I would make in that regard is Commissioners are an audience, too. As I was reading it, there was a degree of repetitiveness.

CHAIRPERSON JACKSON: We're all rocket scientists.

COMMISSIONER MERRIFIELD: So in the future, maybe a little bit more scrubbing there might be helpful, even for us.

MR. GILLESPIE: And I agree. We were pumping out a very detailed product very fast here.

COMMISSIONER MERRIFIELD: It's very difficult and I give you great credit for that. It is very difficult.

MR. GILLESPIE: I apologize for that one.

CHAIRPERSON JACKSON: No, it's okay. No apologies needed. Thank you very much. A lot of hard work. I'm going to say that anyway in my overall closing comments, but let me just compliment you now on the quality of the work, the intensity of the effort, the involvement with the various stakeholders and commitment to the task. It showed here today and thank you very much.

What we're going to do now is I'm going to call

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forward Mr. Lochbaum from the Union of Concerned Scientists. We always wedge him at the end, and we're not going to do that today.

CHAIRMAN JACKSON: Good afternoon.

MR. LOCHBAUM: Good afternoon. I'm last at my own UCS staff meetings except for the times I get bumped altogether, so I'm kind of used to that. That's my problem.

I would like to start with, if we have the slide, slide 2. A lot of this apparently has already been discussed, so I'll try to cover the remaining parts.

We also would like to join and say that the staff is duly commended for the comprehensive and thorough oversight process recommendations that have been outlined in the SECY paper. They faced a daunting challenge while seeking a Goldilocks oversight process, one that is not too stringent nor too lax, but one that is just right, that that was indeed a challenge, and we think they did a very good job in meeting many or satisfying many of the concerns we have addressed in the past or raised in the past.

On paper, this process appears fundamentally sound and capable of successfully meeting the stated objections or stated expectations; however, it must be noted that on paper, so was the old process. So it's not the process that will make or break the effort; it's the implementation.

A process was developed with the objective of

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increasing public confidence in the NRC's regulatory function. Even though the seven cornerstones to safety are easier to understand than the concepts that were contained in the SALP process, the proposed reactor oversight process is substantially different than the old process. The public needs a chance to understand the proposed process.

The transition plan has a column labelled Communication. Other than a few press releases and a 30-day comment period for the overall process, there's not much in the way of educating the public. The draft documents and the SECY paper are useful working documents for the NRC and industry, as Mr. Gillepsie indicated, but they're not really useful for educating the public.

We felt that a brief plain-English description of the proposed process -- and I'm going to have to take my own medicine here, because in the slide, I misspelled plain-English, so in the future, I'll try to use gooder grammar.

[Laughter.]

MR. LOCHBAUM: We felt that some brief -- not rewriting the document, but a briefer --

CHAIRMAN JACKSON: Up-front kind of summary?

MR. LOCHBAUM: Summary of what it is that's being discussed for people to decide whether they want to wade into the full SECY or not, just like a screening document

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would be helpful, and have that contained in the Federal Notice, Federal Register Notice.

In addition, it appears that this public notice period will -- public comment period will end before the enforcement section is made available. That doesn't seem fair for the public.

CHAIRMAN JACKSON: But it won't be before the

process is implemented.
MR. LOCHBAUM: But the comment period will end and all the comments will be in before the enforcement process becomes available for comment, so people won't be commenting on information that's not available.
CHAIRMAN JACKSON: No, that doesn't mean that they won't in the period between March and June.
MR. LOCHBAUM: A smaller subset of the public, like myself and other public interest groups, will probably remain engaged, but the larger public will only get one shot at it, and they're only going to get a shot at two of the three elements.
CHAIRMAN JACKSON: Well, maybe they should get two shots at it, get a shot at the enforcement process when it's developed?
MR. LOCHBAUM: That's true. There's a number of ways of doing that, but right now, the enforcement process comes --

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CHAIRMAN JACKSON: Because we can't put out what's not developed yet.
MR. LOCHBAUM: I agree with that, also.
CHAIRMAN JACKSON: Okay.
MR. LOCHBAUM: Slide 4.
The NRC sample inspections provided a very small slice of the overall picture of nuclear plants. We felt that it was important that the NRC properly characterize its findings.
Based on my experience prior to joining UCS, it appeared to me that inspection findings were graded on a curve because the threshold for a non-conforming condition seemed lower at a plant which the staff believed to have performance problems than it was at a plant which the staff believed was doing okay. The staff's feelings towards licensee performance must not direct or influence inspection findings. Otherwise, you will have a self-fulfilling prophecy situation.
The reason that's important is that the proposed baseline inspections will concentrate on areas not covered by performance indicators.
CHAIRMAN JACKSON: But not exclusively.
MR. LOCHBAUM: Not exclusively. There will be some overlap, but the focus will be on non-PI areas. So there will be little chance to confirm or refute inspection

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findings. You won't be able to check it against the performance indicator to see if it seems to be right or too high or too low. Therefore, inspection findings are likely to pass through the assessment process basically unchallenged; therefore, it's imperative that inspection findings be just right.
I've looked at the NRC's inspection manual, which tells inspectors what to examine and how often, but it doesn't provide much guidance in the form of objective acceptance criteria.
I looked at it from the standpoint if I was asked to go out and look at that area, how would I know what was right or wrong, what was acceptable or unacceptable, and it really doesn't provide much in the way of an answer key; it would pretty much be left up to my own judgment, and depending on -- based on my consulting experience, sometimes

the licensee is pleased with that judgment, sometimes they're not pleased with that judgment.

So whenever possible, you need to eliminate judgment and at least have the objective criteria out there, whenever possible. It's not going to be possible in every case.

We also felt -- right now, the NRC posts the inspection reports for some nuclear power plants on its web site. We felt that it would be useful to post all of the

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inspection reports issued for the operating plants within the last year.

Slide 5.

The assessment process -- the biggest concern we have with the assessment process is the staff's indication of the success for executive overrides being 5 percent. That seemed way to high to us. We felt it should be zero. The system should allow or tolerate overrides, but 5 percent should not be a success criteria; that's more an indication of a failure.

The reason we say that is basically there's about 25 plants in each region. That success criteria would allow one plant in each region to have an executive override for the results, or five plants across the country to have the assessment results overridden by subjective judgment.

Again, that provision should be there when the staff needs it, but that shouldn't be a success criteria for it. That would indicate there is something wrong with the assessment process that needs to be fixed.

CHAIRMAN JACKSON: How would you limit overrides? Is it a matter of management oversight, programmatic discipline guidance, or just edict, or something else?

MR. LOCHBAUM: Well, I think the success criteria would be no overrides, and then when one of these occurred and when the staff was justified in bumping up or bumping

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down the results, then that should also trigger a review of the assessment process -- do we need to adjust it somehow, or is it one of those cases that's the exception where we don't need to adjust it, it was good. But that's who we felt that should be handled.

COMMISSIONER McGAFFIGAN: Madam Chairman, one of the things I thought -- points I thought Mr. Lochbaum was going to make is executive overrides, whether the goal is zero or 5 percent, presumably should be well documented. I mean, the fact that an override occurred presumably should be documented, and the case for why the override occurred presumably should be in the record somewhere. If I were a licensee, I guess I'd demand that through whatever due process we have.

MR. LOCHBAUM: I was indeed going to make that point a more general observation, but not specifically tied to overrides.

Slide 6.

The proposed assessment process relies heavily on performance indicators. We looked at the performance indicators and have concern about some but not all of the performance indicators.

The first one that we're concerned about is the reactor coolant system specific activity performance indicator. This PI is intended to monitor the integrity of

the fuel cladding barrier.

In April of 1998, UCS provided a technical report to the NRC following months of research on our part that indicated -- upon which we concluded that it is illegal and potentially unsafe for any nuclear power plant in the country to operate with any known fuel leakers.

We have since submitted two 2.206 petitions against individual plants that we know are operating with fuel leakers. Those two plants are now in a raise to see who has the most leakers, and they're both up to three.

In our report, in those petitions, we have challenged the bases for the RCS specific activities, technical specification. We respectfully request that the NRC staff answer these concerns before adopting this PI.

In April, this technical report was turned in for an allegation, which went off to wherever allegations go, so we haven't yet heard an answer.

The second PI we have a concern with is containment leakage, which Commissioner Dicus mentioned earlier. Currently, there's no way to operate a plant with leakage greater than 100 percent of L-sub-A; therefore, it tends to be a virtually meaningless indicator.

As I understand it, the intent of the indicator is to report the as-found condition, so you could have greater than 100 percent. You would then fix it before you were

allowed to restart.

It still is a meaningless indicator because it doesn't represent the current conditions of the plant. It also would not indicate the problems that DC Cooke and other plants have had where containment barrier integrity is a much better indicator.

I understand the concern and I share the concern that there is not a readily available indicator; I guess we would prefer to say "to be determined" rather than use a simple but useless indicator as a surrogate. It's okay to wait in this case rather than use something that provides no useful information.

The safety system performance indicator suffers from the same problem we talked about last week on probabilistic risk assessments. They don't account for system degradation caused by passive design problems, or blunders, to use Mr. Thadani's term.

For example, the emergency power performance indicator has a green to white threshold of greater than 0.025. The NRC inspection report 50.213 96-201 dated July 31st, 1996 on Haddam Neck -- this is also called the Vergilio report -- indicated that that system's station batteries would not have worked in the case of an accident.

COMMISSIONER DIAZ: Excuse me. Before you go, let me zero in on something. Specifically, let me zero in on

the word zero, because I do have a problem with that. You seem to be saying zero leakers or zero executive actions, and there's no such thing as zero defects. I mean, the word plain-English is obviously a small error, but it's there. And it is impossible, absolutely impossible to have any industrial activity that doesn't have some defects. That's why we put three barriers, you know. I mean, we have the primary coolant and then we have the -- so, you know, I

think that some leeway to operate within a safety envelope is necessary. If we start using the word zero, nothing will work in this country.

MR. LOCHBAUM: I agree with that fully. In our petition and in the technical report, we suggested the NRC staff make the licensees do a safety evaluation that defines what is the acceptable limit. It's not zero, but what is, backed by analysis, not by Ouija Board stuff.

COMMISSIONER DIAZ: But isn't that what the specific activity under coolant tries to infer, that --

MR. LOCHBAUM: We have not found that.

CHAIRMAN JACKSON: Are you saying the analysis that supports the specific --

MR. LOCHBAUM: We haven't found any analysis.

CHAIRMAN JACKSON: -- activity PI, you don't see it? Is that the point you're making?

MR. LOCHBAUM: The only thing we can find is that

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that one percent fuel failure, which is basically the justification for the specific activity, is used in off-site dose calculations. We haven't seen the analysis that says if you're operating at close to one percent fuel failure and the accident starts, that you'll stay below the 10 CFR 100 limits. Not like in containment temperature limits, you have an operating temperature, you also have an accident.

The analysis shows that if you start at this point and you throw in the consequences of the accident, you arrive at the second point. On specific activity, you only have one number, and it appears to be the accident number, not the normal operation number. So that's the disconnect we observed and we figure needs to be resolved. There is clearly a number that can be justified. We feel just that the analysis needs to be done.

COMMISSIONER DIAZ: So it's not no fuel leakers, but some analysis that specifies what the activity is, is what you're saying.

MR. LOCHBAUM: Right. Right now, there needs to be a design and licensing basis established, that they don't have it, so they're not legally allowed to do that.

COMMISSIONER DIAZ: Okay. Thank you.

MR. LOCHBAUM: In our view.

Getting back to the Vergilio report, that report indicated that the station batteries would not have provided

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the motor voltage necessary or the output voltage necessary in case they were in an accident. It was tested every month or however often batteries are tested for years, and it always passed the test, but in case of an accident, which is really the only reason that they're there, they wouldn't have worked. So the system performance indicator would have indicated very high reliability or very high availability, but the things wouldn't work, and those kinds of issues need to be captured.

CHAIRMAN JACKSON: So how do you capture them?

MR. LOCHBAUM: Well, I think instead of just something being removed from service, if it's degraded, that also gives you information about safety performance, and that needs to be captured in your process somehow, not only the number of hours that it's removed from service, but also the number of hours that it's not available or it's not functional. That would give you insights into where you steer your resources, both on a licensee side and the

regulator's side.

CHAIRMAN JACKSON: So are you saying the issue has to do with not making a binary judgment that it works or it doesn't, but in certain cases, there has to be some consideration of degradation?

MR. LOCHBAUM: I think it's related to that. I think it's larger from the standpoint of what defines

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something working or not working in terms of risk-informed regulation and these indicators is, right now, just whether it's in service or not in service. It needs to be, if it's functional -- it needs to be a broader definition because that's reality.

In this Vergilio report, the voltage wasn't there. So that kind of information needs to be captured if you're going to really have a meaningful indicator. Because in that case of the station batteries at Haddam Neck, if that had been discovered today, under this new process, it would not have triggered a green to white or any of those regulator response bands, and yet that was a severe problem, so that something needs to reflect that.

Slide 7, please.

One last remark. We've looked at the benchmarking that was done in the SECY paper, and we noticed that for DC Cooke and Millstone, none of the performance indicators showed in the red or the unacceptable performance category. So the question that we can't answer but we can ask is, does this mean that the staff would not have shut down these plants, or does it mean that these thresholds are too lenient? And I don't know what the answer is. I think the staff needs to answer that question before rolling out the new process.

Under the assessment process, it says in the

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enforcement policy that it's non-punitive. The staff can impose a multi-million-dollar penalty, and has, on a licensee after a process, administrative process that allows for the violation to be contested and the fine to be appealed. In a dictionary, punitive is defined as "inflicting, involving or aiming at punishment." Punishment is defined as "a penalty inflicted on an offender through judicial procedure." It seems reasonable to us that the NRC's process is indeed a punitive process. That's the good news. It's supposed to be punitive, in our eyes. The bad news is that the enforcement actions are so randomly applied that this policy is totally ineffective. There are plenty of examples to illustrate arbitrary and capricious enforcement actions. To us, the classic cases are those associated with the duration of the non-conforming condition.

The statute permits the NRC to assess a penalty up to $110,000 per violation, per day that the violation existed. The staff very rarely invokes this provision.

In 1996, the NRC staff fined LaSalle for 20 days that a problem existed at that facility. In 1998, the NRC did not fine the DC Cooke licensee for a problem that lasted about the same duration, in fact almost -- I think it was also 20 days.

The staff must develop the means to consistently

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and meaningfully apply the per-day provision. The reason we think that's important is not just to collect a lot of money or anything; is that time is also a risk factor. The longer something stays in a non-confirming or a violating condition, it's more significant than if it only lasted in that condition for an hour. Yet, the enforcement policy doesn't reflect that reality. So if you're going to risk-informed regulation which includes some form of risk-informed enforcement, then the time factor has to be properly considered. Right now, it's really not being considered.

We were encouraged throughout this process that the staff did identify a number of areas where the outcome is going to be communicated to stakeholders. We think that's -- with some of the exceptions we noted earlier, we think that's very good.

In responding to Commissioner McGaffigan's point, we also think it's very important to document staff decisions that produce that outcome, whether they're overrides or decisions not to take enforcement action. Whatever the decision is throughout these processes, it's very important that there be a paper trail.

As a licensee, you can't make a change to your plant or decide not to make a change to your plant on some safety equipment without providing some documentation and

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accountability as to why you did or did not take that action. We figure the staff ought to live up to that same standard for the same reasons.

Thank you.

CHAIRMAN JACKSON: Thank you.

Commissioner Diaz, or Commissioner McGaffigan?

COMMISSIONER McGAFFIGAN: I think we asked all of his questions of the previous panel.

MR. LOCHBAUM: I appreciate that too, by the way.

CHAIRMAN JACKSON: Commissioner Merrifield.

COMMISSIONER MERRIFIELD: Thank you very much.

CHAIRMAN JACKSON: Thank you.

We now will hear from NEI. Thank you.

CHAIRMAN JACKSON: I may have to leave after about seven minutes.

MR. BEEDLE: Good afternoon.

CHAIRMAN JACKSON: Good afternoon.

MR. BEEDLE: Could we have the first slide, please, then? We'll try and cover this in eight minutes.

First of all, I would also like to acknowledge the fact that the Staff has done an awful lot of hard work on this project.

In addition to that, the comment that was made by Frank Gillespie about the need for some indication from the Commission about where they feel the Staff is headed with

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this in order to conduct a program for some change management within the agency, because we are also involved in the same kind of a process with the industry.

We have got maybe in some sense a bigger problem of trying to get the industry to understand what is happening in this case. We have planned two workshops here in the near term, February 2nd and 3rd, and we have got some significant turnout interest and I would add while there are a lot of questions, there's also support for it.

A question concerning data collection -- the

industry has agreed to produce that data and I don't know that we have got any plant that has been reluctant to do that. I think they are very interested in trying to accomplish that process, and at the heart of that support is a belief that this process is going to give us a very objective and clearly understandable way of determining performance in the industry, one that the regulator and the licensee both understand that we'll be able to see and understand what the Staff is looking at.

It will place things in perspective. That will give us the ability to correct situations in a timely manner to avoid every getting into these conditions that we spend so much time talking about.

One more observation, and that is the fact that many of the comments and questions that have been asked

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today of the Staff as well as Mr. Lochbaum are questions that I think are equally applicable to the present and on the record assessment process that we have, so I think we have made a lot of changes in the thinking and the way that assessment is proposed and I think it offers an awful lot of opportunity for both the NRC and the utilities to control allocation of resources of this process, so with that, I would to Steve and let him talk about some specific details.

MR. FLOYD: Okay, thank you. Good morning -- or I guess it is afternoon now. What I would like to do before I get into my comments, is respond to a few of the questions that were raised earlier this morning with some of the other speakers.

First of all, starting with performance indicators, on the scram indicator as an example, I just wanted to point out that the 20 scrams per year for risk significant scrams, that is over a three year period, so it is sort of an average of about seven per year as compared to 25 what I would call the vanilla scrams as a threshold for unacceptable on an annual basis for the other scrams.

While the thresholds may appear to be perhaps too lenient, and how could we possibly allow that many scrams, if you go back to the early to mid-'80s the average plant was actually having about eight scrams per year during that time period, which would have put the average plant in the

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yellow band so to speak, and we actually had a number of facilities that were in the 25 to 30 range per year on scrams. It would have put them actually in the red zone.

So I think really what it does is it begs the issue of what is the purpose of the performance indicator? If it is just to allocate NRC resources and indicate an area for a declining trend that warrants different, additional attention, then it might be appropriate to question the performance indicator, but if it is also to portray to the public what is the safety significance of the performance of the plant, which we believe is the purpose of the overall assessment process, then to us it makes sense to put an indicator in the system that is important from a risk perspective irrespective of what the performance level is. If it happens to be good, that's great; if the performance happens to be poor, then the chips fall where they are and you deal with it at that level.

COMMISSIONER MERRIFIELD: Yes -- I just don't want to spend too much time on this.

The Chairman has got to go. I mean I brought up the question about the 20 scrams over a three year period and I think we have been working with NEI to try to come up with a way of appropriately regulating a mature industry and we have gone a long way and we will continue to go towards rationalizing our regulations into a risk-informed,

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performance-based matrix.

That is the direction you want us to go. I think you would agree we are going in the right direction on that. The hazard is because you are a mature industry we are treating you that way, and to say, well, in the '80s our average plant had eight a year and so, you know, don't be so worried about 20, if we are going to regulate you as a mature industry the way it ought to be, we are going to be basing that to a certain extent on where you are now, not where you were in the '80s.

MR. FLOYD: I totally agree with that, and that is why the threshold between the green and the white zone is set at three and not some lower number where it could be set if you really wanted to make it truly risk-informed.

For example, the break point between the white and the yellow threshold, which is six in the table, as was pointed out by the Staff is really kind of a bounding value that is actually conservative for a good number, perhaps a majority of the plants.

From the reviews that were done, probably a number around 10 to 12 is a more typical value for what would be an appropriate threshold using the rough risk values that Mr. Baranowsky went over and yet we chose the bounding value of six to bracket all the plants, so I think there is a built-in acknowledgement that we are not trying to go all

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the way back to where performance was in the '80s but we are trying to reflect what today's reality is.

COMMISSIONER DIAZ: But isn't the real issue that scrams by themself, you know, we used to have scrams in plants because they saw the state power supplies were not able to supply enough current and boom! -- they went -- and there was nothing else involved, period.

But what we are really talking, we are talking risk-informed is something that relates actually to let's call it one of my favorite words, risk configuration of the plant and the performance, and I think the question is if we are really risk-informed in the scrams, is 20 a good number? I think is a good question.

I think non-consequential scrams you could have, but if it is a risk-informed scram we should determine that the plant configuration has changed because of the scram, not just the number of scrams.

MR. FLOYD: I totally agree.

COMMISSIONER MERRIFIELD: Thank you.

MR. FLOYD: On the containment leakage indicator, I do want to point out that that is not just the integrated leak rate test for one class of plants we perform three times in 10 years and for the Appendix J, Option B plants would be performed once in 10 years, but it also adds to it each time you find an as-found condition as a result of a

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LOCA leak rate test, you would add that to your baseline value for your integrated leak rate test value as last

performed to show what the cumulative impact was of having whatever the condition might be that was causing an increase in the containment leakage rate.

So in our view it is a somewhat useful indicator in that it is going to reflect how many times a plant might be dropping from, say, the green zone down into the white zone as a result of having as-found leakage, which would indicate if that happens repetitively a problem in maintaining containment leakage boundary integrity through valves, and so we think it is important from that perspective.

On a safety system performance indicator we totally agree with Mr. Lochbaum that it will not pick up design issues and that is why in the risk-informed baseline inspection program we certainly support the need to go back and look at as-built configuration aspects of the plant to make sure that when you are measuring a certain parameter that you are measuring it in the right way and that it is valid to be paying attention to what that indicator is telling you, but that is why it is a two-part process and not just based on the performance indicators.

If I could have Slide 3 -- thank you.

There are a couple of significant open issues that

I did want to raise. They are significant not in the fact that I don't think they can all be resolves. In fact, I think they all can be resolved. They are significant because it is difficult to go much further than what we have gone today without resolving and getting an answer on these issues.

The first one really goes to the heart of what I think was a lot of the discussion today, and that is how do you assess the significance of inspection findings consistent with the philosophy which is embedded in the performance indicator threshold approach, so that you don't wind up with a lot of subjective insight from an individual inspector at one plant that thinks that this is a significant finding and therefore colors that cornerstone, if you will, in terms of its performance, and another inspector has a different view.

It is not in the SECY and I know the Staff was somewhat reluctant to discuss some of their thoughts on this, but I don't feel that reluctance. They have actually shared in a public meeting a very early-on draft concept as to how that would be done.

We have some comments on it, but we think overall it is headed in the right track and what it does it is looks at what is the duration of the condition that was found, what is the event and the frequency for the events for which

that piece of equipment is there to respond to, and what degree of redundancy or other backup capability for the function that is provided by that component exists at that facility, and through a matrix type of approach which now allows you a very structured and very predictable way of binning, if you will, what is the significance of that finding, you can make it very consistent, we think, with the same concepts that are embedded --

CHAIRMAN JACKSON: But you are saying that is where they are going?

MR. FLOYD: I think that is where they are headed

and we think they are on the right track there.
We think that is a reasonable approach and looks as good as any.
CHAIRMAN JACKSON: Can you --
MR. FLOYD: Yes. Consistency of enforcement action with the assessment process -- as you noticed, there's only two pages out of the roughly 500 pages that do address that.
I think Mr. Lieberman responded to that.
There has been a lot of good interaction, we believe, between the industry and the Office of Enforcement on that and we do appreciate that.
I guess our bottom line is we think enforcement should be based on significance of findings equivalent to

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the threshold concepts -- same philosophy that -- same issue that we have to resolve with the inspection findings and it needs to be very consistent.
I would just point out that when we look at the various options in the paper in our view not all of those options are consistent with the principles that are embodied in the balance of the assessment paper, particularly the aggregation of findings.
I guess the analogy that someone on the Staff mentioned at one meeting is 1,000 BBs don't equal a cannon ball, and we think that holds true.
That is the whole philosophy behind measuring performance and allowing an expected deviation in the norm and this recognition that we are not running a zero defect --
CHAIRMAN JACKSON: I understand the point you are making but it also is true that 1000 BBs shot at the same time can equal --
COMMISSIONER DIAZ: It's the same kinetic energy.
CHAIRMAN JACKSON: It's the same kinetic energy.
MR. FLOYD: Well, I think the real danger here is when you look at a typical plant's corrective action program. A typical licensee captures around 800 to 1000 items in its corrective action program, and I am not sure just because the licensee found them and put them in their

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corrective action program versus an inspector finding them --
CHAIRMAN JACKSON: But, see, I think we have already addressed that actually in the changes that have already been made to the inspection policy and guidance having to do with an explicit statement not to be mining the corrective action programs --
MR. FLOYD: Oh, I understand that -- my only point was trying to put in balance 12 inspection findings when the licensee has already identified and is dealing with 800 or 900 items and why there is more significance placed on the 12 --
CHAIRMAN JACKSON: The point being the following, Mr. Floyd. If it is risk-informed, okay, then that is the point I was making earlier in the assessment process, you by definition have narrowed the focus when you say risk-informed and therefore if in fact, going to your earlier point, that the things are lined up in the inspection program, around the cornerstones, have thresholds associated with them, that by definition is the trigger, but I would agree with your concern relative to assuring that

this translates into criteria that the inspectors use as they are documenting.

MR. FLOYD: I agree that risk-significance is the test.

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CHAIRMAN JACKSON: Right, and so if the things are aligned, then that -- and that is the check we have to make, that in point of fact that addresses itself.

MR. FLOYD: Yes, it does.

Eliminating the baseline inspection activity adequately covered by PIs -- I don't think this is a major driving concern of ours across the board, but in one particular area, the reactor protection area, radiation protection area for occupational exposure, that was the one area that we believe the performance indicators came about as close as any of the other areas to being a fairly comprehensive set that does cover what is important in that occupational exposure area.

CHAIRMAN JACKSON: You all work on that one.

MR. FLOYD: And that one we will have to work on.

CHAIRMAN JACKSON: Because I think the issue seems to come down to what does adequate coverage mean?

MR. FLOYD: Exactly.

CHAIRMAN JACKSON: Okay? That is number one.

MR. FLOYD: We are hard-pressed to come up with a significant finding, inspection finding, that wouldn't already be captured by the PI.

CHAIRMAN JACKSON: Captured by it, right -- and baseline is meant to be just that. It is a baseline and so as such you are not looking to go below it, but it does

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relate to what does adequate coverage by the PI mean.

MR. FLOYD: Pilot plants we totally agree with the pilot plant schedule. We think that is reasonable and we would like to see that go off on schedule.

There is a lot of industry support for the pilot project. We now have more than enough volunteers to meet the two plant per region target that the Staff has to conduct this pilot and we also think that there will be a lot of good useful information coming out of the pilot.

CHAIRMAN JACKSON: What do you mean when you say ground-rules? Tell me what your concern is there?

MR. FLOYD: Well, only that it is not defined exactly how the pilot program will be run yet. We have a number of plants that have agreed to be a candidate pilot plant with what they think is the understanding as to how the pilots will be run and what the program would look like, but if that were to change drastically they would reevaluate, but assuming it doesn't, I think we are in pretty good shape.

CHAIRMAN JACKSON: Okay.

MR. FLOYD: Next slide, please. On transition issues, we see a number of them -- technical issues, we are in the process of developing a performance indicator manual to put more definition and firm criteria as to what goes into the performance indicator, how you calculate it, what

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doesn't count in the performance indicator, so that we get as consistent a response on the PI data as possible.

We do acknowledge as the Staff has mentioned the

need for some additional benchmarking once we get those definitions nailed down and we also recognize that this first set of PIs that are in the assessment program are the near-term set I think was the words the Staff used and that there is an opportunity for additional PIs down the road.

In fact, we had proposed some in the shutdown area as an example. Quite frankly there just wasn't enough time to evaluate all of the potential performance indicators.

CHAIRMAN JACKSON: So you are amenable to PI additions and changes over time?

MR. FLOYD: Yes. We think that is appropriate to do that as we get more experience with it.

CHAIRMAN JACKSON: And then with regard to benchmarking, I mean I note that both NEI and NRC benchmarking employed surrogate data for data that is not readily available at this time.

MR. FLOYD: That's correct.

CHAIRMAN JACKSON: And so I would assume then additional benchmarking means to be able to do that with data that is not just surrogate data --

MR. FLOYD: That's correct.

CHAIRMAN JACKSON: -- so you can have more

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confidence.

MR. FLOYD: You can have the actual performance indicator data that would be in the program.

CHAIRMAN JACKSON: Right, so that you would have more confidence in the actual benchmarking.

MR. FLOYD: Absolutely, and that would be done in conjunction with the pilot activity.

CHAIRMAN JACKSON: Okay.

MR. FLOYD: In the administrative area, reporting mechanisms, as Mr. Beedle mentioned, we don't see any reluctance on the part of any licensee to voluntarily report this data. The mechanism that we are looking at and have discussed with the Staff is perhaps an appendage to the third quarter monthly operating report as a way to get that data in in a reasonable fashion.

We are also looking at trying to make that both as easy for the licensees and the Staff as possible by putting enough electronic medium and having the data just have to be entered on a quarterly basis and the software would automatically update the algorithm for the appropriate interval and compute the trend curves to make it as easy as possible on everybody.

CHAIRMAN JACKSON: Everybody has that capability?

MR. FLOYD: We believe so now, yes. We don't think it is very difficult to do if it's done with a normal

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data disk.

Revisions to the inspection manual -- we know there is a lot of work to be done there and I won't say any more about that.

CHAIRMAN JACKSON: I mean all of this has to go along with a bunch of other things having to do with the changed management. There's that.

MR. FLOYD: That's correct.

CHAIRMAN JACKSON: A lot of other process changes, training, et cetera, et cetera.

MR. FLOYD: My next two slides really focus on just that issue, the transition issues. We see this as a major change for both the NRC and the industry.

For the NRC we do endorse and support the need and the recognition that they have expressed for strong change management within the NRC to ensure I think, again going to what Commissioner Diaz's point was, recognition that all industrial processes have random error. A zero defect cannot be the goal because it cannot be achieved.

What really I think needs to be reinforced is that performance within the expected norms is fully acceptable performance and what we are really looking for in this process is when does the performance start to deviate from expected norms such that additional attention can be brought to bear as appropriate.

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CHAIRMAN JACKSON: Let me just say something because I am sure you all are going to be testifying at this hearing next week. I mean I am assuming that this is reinforcing what to this point the Staff has been working with you and others to build into the process.

MR. FLOYD: Exactly.

CHAIRMAN JACKSON: Not that this is something that --

MR. FLOYD: It's not a new issue.

CHAIRMAN JACKSON: Right. It is not a new issue. It is not that the process as developed doesn't have this recognition. You just want to ensure that on a go-forward basis -- not that it is not focused on the safety. I mean that is the whole point of the cornerstones and the risk-informed approach built around that and it would be helpful if you would recognize that as such and reinforce it and say that it is something that needs reinforcement, as opposed to the way it is listed. It makes it sound as if it is a missing element.

MR. FLOYD: I hope I captured that with "ensure" but that's -- I will readjust that.

Likewise the industry has issues to deal with as well --

CHAIRMAN JACKSON: Thank you.

MR. FLOYD: -- and I think this goes to a question

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perhaps Commissioner McGaffigan asked the Staff, and that is what if you go out, inspect, and you come up with a finding which you determine has extremely low or perhaps negligible risk or safety significance and yet it still is a little noncompliance with the regulation. How do you handle that and treat that?

I think we are going to have to be careful as an industry to make sure that we don't inadvertently de-emphasize the need to be in compliance with all of today's regulations until such time as we change them --

CHAIRMAN JACKSON: That's right.

MR. FLOYD: -- if we decide to change them because we find one that if you can violate it regularly and it doesn't have any impact maybe it ought not be a regulation, but that is another effort in another time to deal with that, and you don't have latitude to decide that --

CHAIRMAN JACKSON: That's right. That's an important point. I mean that the disposition of them according to the risk significance is where the relief valve can come --

MR. FLOYD: That's correct.

CHAIRMAN JACKSON: -- but not that it is something

that people can willy-nilly ignore.
MR. FLOYD: Exactly. The other things that are very important and bear out the real need for licensees to

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have is a good strong self-assessment capability and a very effective corrective action program.
That is going to be the key to licensee's success under this assessment process and Ralph already mentioned the information forms.
MR. BEEDLE: May we have the last slide, please?
Only one note I would make on this one. That is the enhanced public confidence and I think this gives us the ability to put the events and conditions at the plant in proper perspective.
I think with that we will gain better public perception of the operation of these nuclear plants and the operation of the NRC.
CHAIRMAN JACKSON: Okay. Commissioner Dicus -- Diaz?
COMMISSIONER DIAZ: That's okay. No, I don't have any more questions.
CHAIRMAN JACKSON: Commissioner McGaffigan?
COMMISSIONER McGAFFIGAN: Nope.
CHAIRMAN JACKSON: Okay. Well, on behalf of my Commission colleagues, I would like to thank --
COMMISSIONER DIAZ: Especially Commissioner Dicus --
[Laughter.]
CHAIRMAN JACKSON: -- thank the NRC Staff, NEI,

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and the Union of Concerned Scientists for a very informative meeting and a number of very important and insightful comments.
In addition, I would like to congratulate the Staff and our stakeholders, both those who are here and those who are not, for why I do consider to be, and I hope you all continue to feel this way, to be an outstanding cooperative effort in coming this far this fast.
While I cannot prejudge the outcome of the Commission review of this matter, although we give lots of advertisements, I can posit that any weaknesses identified in the proposed programs cannot be the result of any insufficient levels of the diverse input that we have had.
Again, I want to reemphasize that I actually believe that the level of NRC stakeholder and NRC interaction on this issue represents to this point the best of what we have ever been able to achieve in terms of openness, which I remind everyone is in fact one of our principles of good regulation.
It is clear that the Staff has organized its program logically and has provided much-improved clarity notwithstanding Commissioner Merrifield's comments about plain English, with which I agree in terms of the need for some kind of summary statement, but clarity of purpose over the existing NRC programs for assessment and inspection, and

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enforcement, but with more work clearly understood that has to be done in the inspection area.
The use of the cornerstones of safety to tie operational concerns to the NRC fundamental mission of protecting public health and safety is a feature which in my

estimation significantly aids in focusing our attention, and if one takes that in conjunction with the risk-informed inspection performance indicators and the assessment guidance, my initial impression is that we actually gain a much stronger footing as we attempt to do our jobs but at the same time to maximize the efficient use of our resources, albeit with a clear understanding that there is an upfront cost for us and for our licensees.

The Commission will be providing its feedback to the process in the very near future. Nonetheless, I would encourage all of you to press on with addressing the issues you can at this time. I understand both the comments the Staff has made as well as those you have made, Mr. Beedle, that the Commission has to signal its clear support for this because it does require changed management here and among the nuclear power industry licensees.

We are due a final product in March and the Staff should continue to move toward that product, and so unless any of my colleagues have any closing comments, we are adjourned. Thank you.

[Whereupon, at 1:15 p.m., the briefing was concluded.]