UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
***
OFFICE OF THE SECRETARY
***
BRIEFING ON PROPOSED REACTOR
OVERSIGHT PROCESS IMPROVEMENTS
AND ENFORCEMENT
***
PUBLIC MEETING
One White Flint North
Room 1F-16
11555 Rockville Pike
Rockville, Maryland
Friday, March 26, 1999

The Commission met, pursuant to notice, at 9:07 a.m., the Honorable SHIRLEY A. JACKSON, Chairman of the Commission, presiding.

COMMISSIONERS PRESENT:

SHIRLEY A. JACKSON, Chairperson
EDWARD MCGAFFIGAN, JR., Commissioner
JEFFREY S. MERRIFIELD, Commissioner
GRETA J. DICUS, Commissioner
NILS T. DIAZ, Commissioner

STAFF AND PRESENTERS SEATED AT THE COMMISSION TABLE:

STEPHEN BURNS, DEPUTY GENERAL COUNSEL
KENNETH HART, TECHNICAL COORDINATOR
RALPH BEEDLE, NEI
STEVE FLOYD, NEI
BOB BISHOP, GENERAL COUNSEL, NEI
DAVID LOCHBAUM, UCS
FRANK MIRAGLIA, NRC STAFF
SAMUEL COLLINS, NRC STAFF

P R O C E E D I N G S

[9:07 a.m.]

CHAIRMAN JACKSON: Good morning. The Commission is very pleased to welcome members of the NRC staff and representatives of the Nuclear Energy Institute and the Union of Concern Scientists here today.

In this meeting, the NRC staff will discuss progress in developing a revised power reactor oversight

program that has taken place since our January 20 meeting on this topic.

As many of you know, the changes we will discuss today are intended to resolve a number of weaknesses in the NRC reactor inspection assessment and enforcement processes. These weaknesses were identified by a number of sources, including the NRC Commission and staff, the nuclear power industry public interest groups, and the Congress.

As early as 1996, opportunities to improve the NRC senior management meeting process were identified, which prompted us to enlist the aid of Arthur Andersen & Associates for assistance in developing recommendations for a more scrutable and objective process.

Incremental improvements marked the intervening period, with the development and use of plant information matrices, improved inspection report preparation guidance, and Commission direction to develop an integrated reactor

assessment program.

Throughout, my colleagues and I have actively encouraged the staff to risk-inform the reactor inspection assessment and enforcement processes. To that end, I provided my thoughts on the subject to NRC senior managers at a senior management meeting in July of last year and at that time, we discussed elements of an assessment process that might be based on the cornerstones of safety and a risk-informed baseline inspection program.

Since that time, the staff has built on these concepts admirably, I think, and with a lot of seminal input from the nuclear industry and also the public and governmental sources to create a fundamentally different oversight program from that which currently is in place.

The staff recently forwarded to the Commission SECY 99-007A, recommendations for reactor oversight process improvements. Is there going to be a B? This paper augments the information in the predecessor paper, 99-007, and provides greater detail, as the Commission had asked, on proposed enforcement program changes and assessment methodologies, addresses public and Commission comments on the original proposal, and reports on the results of benchmarking that has taken place for the inspection finding assessment process.

This represents the results, all of this, of a

synergistic approach. It includes input, as I've said repeatedly, from our power reactor licensees, industry advocacy groups, public interest groups, individual states, and last, but certainly not least, the NRC staff, including an in-depth and substantive involvement from all the regions.

And the staff now requests that the Commission approve the concepts and scope of the changes presented. This meeting is intended to facilitate Commission deliberation on this request and we're encouraged by feedback from our stakeholders indicating that the program appears to meet the goals the staff detailed in the paper before us today.

Specifically, the new program is intended, first, to ensure that plants to continue to operate safely; second, enhance public confidence in our regulatory oversight; third, improve efficiency and effectiveness; and, fourth, reduce unnecessary regulatory burden.

We look forward to the presentations. I believe that the Commission will benefit from a thorough discussion of at least three topics in our meeting today; one, what degree of assessment burden should we assign to our capable inspectors; second, how enforcement should be integrated with the assessment process; and, third, how do we ensure that we do not minimize inappropriately the significance of

inspection findings.

I understand that copies of the viewgraphs and SECY 99-007A are available at the entrances to the meeting. We are now ready to hear from our eight closest friends and we've all made a treaty, the Commissioners, that we will do our level best not to ask any questions until you have gone through your presentation. If we make it, it will be unprecedented, but I believe we are going to work at that.

Now, on the other hand, Mr. Beedle, when you arrive, we may ask questions from the beginning.

COMMISSIONER MERRIFIELD: Madam Chairman, if I may --

CHAIRMAN JACKSON: See? No, no, no, no, no.

COMMISSIONER MERRIFIELD: I think a measure of success of this meeting would be our not using up the entirety of the three and a half hours allotted to it.

CHAIRMAN JACKSON: We will see.

COMMISSIONER MERRIFIELD: Summary and quick comments of the staff would also probably be appreciated.

CHAIRMAN JACKSON: I see. So this is direction to the staff. Begin.

MR. MIRAGLIA: Good morning, Madam Chairman, Commissioners. I intend to be brief. The staff is here today to discuss recommendations in the improvements of the reactor oversight process. As indicated, this briefing

follows the activities and status since the meeting of the Commission in January.

Since that last meeting, we've been working with our stakeholders in public fora to develop a mutually acceptable reactor oversight process.

In the context, I think we want to pay particular note to the efforts of the regional office to support this activity. It's been significant and invaluable, as well.

One point that I would like to stress is that as always, the performance assessment process does not change the agency's ability to act on any significant safety issue that arises. We don't have to wait for the outcome of the licensee performance assessment process.

As indicated, the staff is seeking the Commission's approval regarding the scope and the concepts. With me today, on my left, is Sam Collins, the Director of the Office of Nuclear Reactor Regulation; Frank Gillespie, Deputy Director, Division of Inspection Program Management, NRR; William Dean, Chief of the Inspection Program Branch, NRR; Morris Branch, Reactor Operations Engineer, NRR.

To my right, Jim Wiggins, Deputy Regional Administrator, Region I; Jim Lieberman, Director, Office of Enforcement; and, Alan Madison, Transition Task Force Leader, NRR. With that, I will turn to Frank Gillespie, who will open the staff's presentation.

MR. GILLESPIE: Good morning, Chairman Jackson, Commissioners. The staff is here, as you said, today to complete the discussion of the development efforts started in our January briefing of the Commission and to mark an important transition to the implementation phase of this program.

In SECY 99-007, this documents the change and serves as the basis, as you said, for today's briefing. We believe that the topics listed to be discussed will address the open questions from the last meeting and provide more detail than the presenters.

In addition, we'd like to acknowledge up front that we did get a large number of comments and many of the comments will be dealt with in implementing documentation in the detailed comments. So that when you see that the comments are not necessarily dealt with in this paper, we basically have a catalogue of comments which we're going to need to deal with as we're writing the specific inspection manual chapters and the implementing documentation themselves. So these comments have been saved.

As part of the transition process, the staff is requesting, as the paper said, approval to proceed to full implementation in January of 2000. As we proceed into the next months, there is a significant investment in writing procedural documents, training a broad crossection of the

staff, industry commitments to training their staffs, developing processes and infrastructure for delivering performance indicator information and digesting and displaying information for the public.

Commission comment and approval, we feel, therefore, at this point, is extremely important at this time in order to continue on this very aggressive schedule.

While Bill Dean will cover the transition task force organization and address any questions on staffing the current effort, let me address the establishment of what we call the executive forum, which consists of the deputy regional administrators and is the reason Jim Wiggins from Region I has joined us at the table.

Jim is serving as the chairman of the forum, which was intended to give critical, very critical review, advice and comment on focused areas of principal concern to the regions as we move forward into this phase of implementation. I would note that on the forum, there are no NRR members. This really is intended to be the regional critical review of what we're doing and we felt this was extremely important for that independent look at what we're doing.

Their effort is just starting and Jim can address those questions later at his point in the presentation, and any suggestions on the role that you would see this type of

executive forum serving that you might have.

With that, I'm not going to duplicate future discussion. I'm going to turn it directly over to Bill Dean, so we can get into the substance.

MR. DEAN: Good morning, Chairman, Commissioners. If I could have the next slide, please. This slide indicates the members of the transition task force. I myself am the task manager; Alan Madison, at the other end of the table, is the task force leader.

This indicates the major segments or programs that

are incorporated under the transition task force. All of the members of that task force are here.

I would like to point out, in particular, Augie Spector, who is helping us out in the communications area. That is, with the rapid pace at which this program is moving, the vast number of internal and external stakeholders, the communications aspect of this process is extremely important and Augie is providing us great support in this area, as well as the other members of the task force.

The next slide, please. This slide describes basically the major transition milestones. You'll note the first two items there, the original Commission presentation in January and the public comment period in February have been completed and we're at the point now with 99-07 Alpha

and this Commission briefing, at the point that we're seeking Commission approval for proceeding with full implementation.

This outlines the fairly substantial milestones that remain, leading toward full implementation beginning in January of 2000 and completion of the project review 2001. So this is still a long way to go, but we're making good progress.

Next slide, please. What I would like to spend a few minutes talking about right now is, as Frank alluded to, our approach in dealing with the public comments. Following the Commission briefing and the issuance of SECY 99-007, we issued a Federal Register notice that included a questionnaire to help focus the public on areas that we are looking for comments on. As you know, that paper was fairly massive, and so we felt that the questionnaire would help achieve comments in particular areas.

We received comments from 28 respondents. Most of these respondents were industry respondents, but we did receive several comments from public advocacy groups, like UCS and Public Citizen, as well as two state regulatory agencies from Pennsylvania and Illinois, and one public citizen.

As Frank noted, a lot of these comments dealt with implementation and developmental work, and so a lot of these

comments will be addressed as we develop the process, and we've established a database to collect the comments and to track basically our resolution of these comments. But a number of them will not get resolved until we finish development of a lot of the implementation guidance, as well as going through the pilot program.

Next slide, please. Basically, the high level comments can be grouped into four areas. The first is that there is not adequate time or opportunity for the NRC to seek or much less incorporate comments it received on changes to the process. Secondly, that there were still major developmental efforts to be accomplished that would not receive public scrutiny; in particular, enforcement policy and the significance determination process, which are the main elements of 99-07 Alpha.

Third, that the feasibility of the process needed to be demonstrated, especially for those plants that had numerous problems with low significance that did not necessarily trip a PI threshold. There was concern

expressed in that area. And, fourth, how would the NRC prevent deterministic methods and, thus, subjectivity from creeping back into the program through inspection findings.

I'd like to deal with the first issue or, actually, the first two issues are fairly related, which is about concerns for public comment. We are making every

effort to keep the public apprised of our developments through public observations of our frequent meetings with NEI as we develop the processes; making publicly available many of our working documents and conducting public workshops next month, April, and as well as in May, there will be public workshops.

We also will be seeking specific public comment on SECY 99-07 Alpha by issuing a Federal Register notice and as Jim Lieberman will discuss during his part of the presentation, a separate Federal Register notice on the enforcement policy itself associated with the pilot program.

With respect to the feasibility of the process, the feasibility review that we conducted several weeks ago, that Morris Branch will discuss in just a few minutes, has given the confidence to proceed with the pilot program. Developmental work still remains and we expect to refine the process as we move through the pilot program and gain further experience.

But we are comfortable that we are heading down the right track, although at a very rapid pace.

Regarding the issue of how do we deal with a plant that has numerous low level issues, we are currently working with the Office of Research to determine if a process to assess the risk significance of a collection of low safety significant issues is feasible. A basic tenet of this

program is that as long as a licensee remains within the licensee response band of performance, that we will allow the licensee to resolve issues with a minimal amount of NRC intervention.

However, this issue is a concern to many of our external and internal stakeholders, so we are pursuing development of a tool for a process to determine that some risk significance or risk characterization of such a situation is feasible.

Finally, with respect to the concern raised about the subjectivity of our inspection process, we are not going to totally remove the subjective element from our oversight program. But what we have done with this process is infuse a greater degree of objectivity through the inclusion of performance indicators, a greater focus on risk significance of our inspection findings, and a more predictable, consistent and scrutable process through our agency action matrix.

We also plan, as part of our annual assessment process, to provide not only assessment of licensee performance, but also the oversight process itself, including the inspection program.

Basically, that concludes my remarks this morning and if there are no questions, I would like to introduce Morris Branch, a member of the transition task force, who

led the feasibility review effort and development of the significance determination process. And Gareth Perry is

going to take my seat for a few minutes. He's a representative from the Division of Systems Safety and Analysis, who was a key member of that transition task force.

Thank you.

MR. BRANCH: Good morning. I am here today to briefly describe the two tasks that were key elements in the development of the new reactor oversight process. The first task was the development of a process for determining the risk significance of inspection findings and the second task was to conduct the feasibility review of the above process in other elements of the reactor oversight program to determine if they are feasible to pilot in June.

Before I begin, I would first like to say that this effort involved a wide variety of agency assets. Our task group included members from Research, NRR, the Office of Enforcement, Federal Training Center, and all four regional offices. Mr. Gareth Perry, of the Division of Systems Safety and Analysis of NRR, along with many others, provided valuable PRA insight for the process development. Mr. Perry is here today to answer any questions you may have in the PRA area.

My background is inspection. I was a field

inspector for 16 years, resident inspector, senior resident inspector, and since I've been in headquarters, I've led several of the AE design reviews. I bring the end user perspective to this project.

I would then like to briefly describe our efforts to date in developing the processes to assign a risk characterization, which we refer to as a significance determination process, the STP, to an inspection finding. This process is needed for the alignment of an inspection finding for a cornerstone so it can be dovetailed with plant performance indicators, PIs, during the plant assessment process.

Slide, please. From this slide, you can see that an inspection finding can take several routes. This slide points out the areas where we have essentially completed development of the STP work, as well as areas where additional effort is needed. The slide also demonstrates that the output of all the STP processes will be an input to the plant assessment and, if necessary, enforcement process that Mr. Jim Lieberman will describe later.

The to-be-determined on the slides represent areas where more work is needed. For example, we still need to make further progress in the areas of emergency preparedness, radiation safety, safeguards, and shutdown activities. We continue to work with industry

representatives in a publicly observed arena to further develop this process.

We have made considerably more progress in the development of a process to deal with items that may impact an initiating event or mitigation of system cornerstones associated with power situations, and I would like to describe that process logic now, if there are no questions.

Next slide, please. Please note that this process was developed using inputs derived from other agency products, including Reg Guide 1.174; NUREG-5499, which provides the likelihood probability of initiating events;

NUREG-4674, which describes the ASP screening rules; and, we use typical equipment and human performance reliability values generally consistent with those obtained from PRA models.

Because this process is evolving, also, the likelihood of initiating events currently in the SECY are different from the values used in the feasibility study and when Research provides more refined information as part of their efforts, the values may change again.

We're just trying to describe our process and concept here, not the final product.

From the diagram, you can see that the first step in the process is to clearly identify the concern. During process development and during the feasibility review, which

I will discuss later, it became clear that the inspector's concern in any assumption has to be formulated prior to using the tool. This part of the process is similar to performing an engineering calculation. You first have to state the problem, the assumption you are making, and then you can use the process and expect repeatable results. This is an assumption-driven process.

The next step, phase one, involves a screening of issues for risk significance. This screening will be accomplished by field inspectors. We believe that many items will be screened as non-risk-significant in this step and will be passed to the licensees for resolution through their corrective action program.

Since we have used the screening criterion similar to that used in the ASP program, we expect some results. For example, during a given year, approximately 1,500 LERs are issued. Of those, 50 to 100 are given a detailed review and approximately ten to 15 are determined to be of risk significance. Our process forces an inspector to make reasonable, but conservative assumptions; therefore, inspectors will most likely pass more items than necessary into the phase two review.

That's okay. We would rather have false positives at the inspector level that can be refined later during the phase two process.

After the screening and you have determined that an item requires a phase two review, the inspector has to ask what initiating events are impacted by the findings. There may be more than one scenario that has to be reviewed. We have attempted to provide guidance to allow a field inspector to conduct his phase two review. However, until the inspector becomes more familiar with the process, we anticipate additional risk analyst help will be needed.

The next step in the phase two review involves determining the frequency of the initiating event and the duration of the degraded condition. You then determine the likelihood of occurrence of initiating event while the degraded condition exists and then consider the availability of mitigation equipment.

Mitigation of the risk significance of an issue is based on the equipment available to perform the high level safety functions, reactor heat removal, inventory control, et cetera. The general rule of thumb is that each line of mitigation available represents an order of ten change for the better in delta core damage frequency. After you have finished the phase two review, you will have determined the

final worst case significance of an issue.

This determination is represented by a color scheme similar to that used in the PI threshold values. We have built into the process a phase three review, if needed.

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This review will be performed by risk analysts and will allow refinement of the risk characterization of the significance of an issue prior to final actions associated with the plant assessment or enforcement processes.

Using this process, industry worked through several examples of issues that we evaluated in the feasibility review and they got similar results. The process appears to be repeatable as long as the assumptions are the same. To ensure consistency between regions and inspectors, we're considering, at least for the pilot, to also perform a sample review of items that go through the phase two review and are determined to be green by the inspector.

Are there any questions before I continue with discussion of the feasibility review?

CHAIRMAN JACKSON: Keep going.

MR. BRANCH: Next slide, please. Section 4 of SECY 99-007 describes the staff's plans to test the workability of the new reactor oversight process in early 1999. This test was advertised as a limited review of a few plants using available data to demonstrate the ability to assign a risk characterization to items typically contained in a plant's issue matrix, the PIMs. The staff also plans to conduct and exercise a new plant assessment matrix on the limited data and to reach conclusions related to actions to

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be taken using the new process.

Because of schedule constraints, the feasibility review was performed at a time when many elements of the new reactor oversight process were still under development. That was okay because this review was intended to identify improvement standards to support the pilot and the pilot is intended to identify and correct any additional program problems prior to full implementation in January 2000.

Before I describe the process and the results of the review, I would like to discuss some of the limitations associated with this effort.

Data review was from a non-risk-informed inspection program and in some cases, the PIMs represented a level of effort more than that in either the old core or the new baseline programs. Only six of the proposed 20 PIs were available and this restricted the team's plant assessment efforts to only the initiating event and mitigation system cornerstones.

The team did not have the luxury of looking backwards, reviewing more data in order to determine what additional considerations may have influenced the plant's performance review outcome. However, insights from reasonable personnel were solicited.

With that, I would like to discuss the process and the SALP code.

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Next slide, please. The plants reviewed were D.C. Cook Units 1 and 2 for 1996-97 time period; Millstone's Units 2 and 3 for the '94-'95 time period; St. Lucie 1 and 2

for 1997-98 time period; Waterford 3 for 1997-1998 time period.

The participants for this one-week feasibility review consisted of several inspectors or first-line supervisors from the four regions, several risk analysts from headquarters, a member from OE, and a member from the training center. The first day we spent training and providing an overview of the new process to the team.

We broke into two groups during the second and third day and processed as many PIMs entries as we could through the risk characterization process. We could only effectively review about 20 to 30 issues per group in the two days allotted. However, we did process items that we suspected to be of risk significance. That was hardware items from LERs that challenge the risk assessment tool.

The fourth day, we assigned the limited PI data to a cornerstone and colored some of the assessment inputs. On the last day, we simulated a plant assessment based on the data available and provided reasonable recommendations based on the action matrix. The regional representatives provided insight as to what actions were actually taken at the time and attempted to explain the differences between what we

would recommend with the new process versus what was done under the old.

Next slide, please. The results of the new process was determined feasible to pilot. The exercise did challenge the risk characterization process and many feedback items were incorporated, but more work is needed. The review determined that most of the risk important items were design or hardware related and this insight was passed to the task group developing the inspection procedures.

Based on the limited data reviewed, actions proposed by the new process were similar to those actions actually taken, with the exception of a few plants, but even then the actions taken by the region were well explained when put in the context of previous year's performance, which affects how the action matrix is utilized.

While it is clear that inspector training is needed and there would be more involvement of risk analysts in executing the process, the review team came away from this effort with a good appreciation of the process and its capabilities.

Are there any questions?

CHAIRMAN JACKSON: I think what we may need to do, so that we don't lose the thread, is to pause and see if there are a few questions, because I believe the next stage is talking about enforcement.

MR. BRANCH: Enforcement, yes, ma'am.

CHAIRMAN JACKSON: Is that correct? So let me just ask a few questions and then we'll just go in order down the line. That way, we can try to keep it fairly disciplined.

You talked about the need for more risk analysts. Is that to say that the intent would be to increase the number and then have it go back down again as the inspectors become more comfortable with going through? I mean, how, in fact, would this work?

MR. COLLINS: Madam Chairman, I think the statement that Morris indicated as a result of the feasibility studies would tell us that SRA involvement is

necessary to supplement.

CHAIRMAN JACKSON: On a continuing basis.

MR. COLLINS: On a continuing basis.

CHAIRMAN JACKSON: As a supplement.

MR. COLLINS: To supplement those decisions and processes that are now focused towards the resident and the senior staff. This is somewhat in response to your first concern, an assessment of the burden on our inspectors as a result of the process, particularly the assessment process itself.

We have talked internally and we're trying to be very circumspect about where this program is driving our

overall resources, but we are actively discussing the need for not only more involvement by SRAs, which might redefine what their current tasks are and focus in more towards ongoing processes rather than right now they're focused, more or less, towards the results of our traditional process, but also for the next class of SRAs, which is typically a two-year training cycle.

It's time to think about that not only in support of this program, but in support of overall agency succession planning.

CHAIRMAN JACKSON: Have you dealt with the issue of regional managers, particularly at the branch chief level, finding themselves having to manage some plants under the old process and some under the new, at least in the pilot phase?

MR. COLLINS: Yes. This topic was brought to our attention, quite appropriately, by Region III this week, when myself, Bill Dean and other members of the team rolled out some aspects of these processes.

There were branch chiefs there from DRP and other members of the Region III staff. I thought we had a very good meeting and it was very interactive.

One of the issues that was brought forth was the balance between branch chiefs, which typically now are assigned two to three, sometimes four, depending on plant

performance, individual plants. We took that issue away.

One of the areas that we are exploring, however, is the need to supplement regional staffing, particularly in the interim, but perhaps for longer periods, with an individual who would serve as an oversight process coordinator, who would essentially look at the process in a wide view and who would support the individuals who are actually implementing the process as far as feedback, refinement, and, also, to some extent, to look at the processes to be sure that they're being applied equitably, consistently amongst all plants, and those coordinators would communicate to be sure that that's being done on an overall national basis.

So it is an issue that's only one sensitivity that we have as far as being able to provide for some relief, but we committed to Jim Dyer yesterday to take that issue away.

There were two solutions which were proposed. I think we have to work through those. One was grouping the pilot plants under one branch chief. Initial discussions determined that might not be the right thing to do for a lot of reasons. So obviously we have to provide for some additional support.

CHAIRMAN JACKSON: Is our public outreach effective in engaging the public living around the plants?

MR. COLLINS: Now, you're referring to currently,

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as we receive comments, or in the future with our communications plan, or both?

CHAIRMAN JACKSON: Right, all of the above.

MR. COLLINS: All right. Let me ask the staff to address the comments and perhaps for the communications people to address it.

MR. MADISON: Actually, I'd like to address that. We haven't, to date, gone out to each of the pilot plants, but it is, in our thinking, jointly with NEI, to attempt to reach the public surrounding each pilot facility and offer ourselves for questions and answers.

MR. COLLINS: I think to some extent, Chairman, as far as we've gone with the rollout of the process and the communication with our stakeholders, at the regulatory information conference, of course, we had a very detailed breakout session.

There were members of the public on limited accessibility, certainly, since the meeting was held in downtown Washington, but probably on a little higher level, we're sensitive to the transition issues which were brought to us as a result of terminating the SALP with the state partners.

We did provide for a fairly detailed discussion for the states in that forum and a number of the states did attend the regulatory information conference, and Paul

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Lohaus has coordinated that for us. That's only one aspect of the wider spectrum of the public.

CHAIRMAN JACKSON: If you go to your significance determination process, and you talked about assumptions, I guess the question becomes how many individual judgments and assumptions are involved in the process.

MR. BRANCH: The assumptions have to be clearly stated. It depends on the issue. One of the examples we put in the Commission paper was dealing with an MOV that may have hardened grease. Your assumption, in order to run it through the process and actually use the risk assessment tool, you have to say what that means; that that means the valve is inoperable and, therefore, the train of equipment is not available to do its function, and then that's the assumptions you would have to make.

CHAIRMAN JACKSON: So you basically have to make a binary judgment in terms of applying the risk methodology, because, in fact, I mean, I know people are talking about it in terms of so-called dynamic PRAs, but people are not really dealing with degraded performance; something works, but it's degraded. They think you have to make an assumption that it's either going to perform its intended function or it doesn't. Is that correct?

MR. BRANCH: Yes. It's just like 91-18, the generic letter, allows a licensee to declare the equipment

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operable, but degraded, but then that degraded condition goes into a corrective action program for correction.

CHAIRMAN JACKSON: Well, it has a slightly different meaning when you're talking about doing an analysis in risk space in terms of decision trees.

MR. GILLESPIE: And we have designed the process, and I'm going to reiterate what Morris said, to allow false positives to come through and, hopefully, in making that binary decision, there is a conservatism built into the initial phase one questioning.

It does lead, in much of the procedures manual, the inspector through; if this train is out, is another train of the same system -- is another system performing the same function. So it has a process in it that leads the inspector's thought process through it. So it's not ad hoc.

The other thing is, and this is going to be, I think, a significant improvement, Research, in the shorter term, is going to be supplying us with -- we had asked for system and they said they were going to try to give us plant-specific table one and table two, if you look at that enclosure, so that the inspector won't have to try to interpolate, at a boiling water reactor, how it relates to a steam generator tube rupture.

The first process was using some generic insights with a mixture of initiating and mitigating effects from the

two different designs and Research is supporting us so that the inspector at a particular facility will be able to see his facility in those tables, and that's going to take a lot of --

CHAIRMAN JACKSON: So the tables are generic or they are plant-specific?

MR. GILLESPIE: These tables are generic in the test process, but our intention is now to go to plant-specific tables for the individual inspectors, again, to bring more consistency for the individual plant decisions to bear.

MR. PERRY: Maybe I can add to that. I think those tables are intended to remain as they are. What Frank is referring to is that we would like to have tables that will help the licensees determine -- or the NRC staff to determine which column of the table two that they're in.

So that those tables will tell you which systems you have available to respond to different mitigating systems for the different reactor types.

CHAIRMAN JACKSON: We're also interested in this issue of guidance on assumptions. You could have hardened grease with an MOV. The question is, is the default assumption that it's inoperable or is the default assumption that it is operable. And if you're going to be able to have consistency in approach plant-to-plant or region-to-region,

you're going to have to deal with issues like that. You agree?

MR. PERRY: Yes.

MR. GILLESPIE: Yes.

MR. BRANCH: Yes.

MR. PERRY: I think one of the important things about the way the system has been set up, though, is that it begs for a clear definition of those assumptions. Therefore, it opens up a pathway for discussion, basically. So it will be very clear what people are assuming and I'm not sure that -- I mean, it may be that -- it's true that in one plant, this does lead to an inoperability, and in another plant, maybe --

CHAIRMAN JACKSON: All I'm trying to say is that

there needs to be something that bounds that discussion.
MR. PERRY: That's right.
CHAIRMAN JACKSON: Because it can't be all over the map.
MR. PERRY: No, no.
CHAIRMAN JACKSON: Otherwise, how you go about doing a risk determination is affected very strongly by that kind of thing.
MR. PERRY: Yes.
CHAIRMAN JACKSON: And let me ask you this question. How are you going to deal with

non-hardware-related issues? Like corrective action program deficiencies or sleeping operators in the control room or programmatic breakdowns. How does that play in here?
MR. MADISON: The process, as it stands, does not address programmatic issues. We are working with, as was mentioned earlier, Research in looking at the -- these generally fall into the lower level or lower risk significant types.
CHAIRMAN JACKSON: But what about the operator sleeping in the control room?
MR. MADISON: That would actually fall outside the process. I think Jim could probably address that question better.
CHAIRMAN JACKSON: All right. Well, you can address it when your turn comes, so we won't get out of sequence here.
Also, I was looking at the particular feasibility review plants and if you look at those plants, especially for D.C. Cook and Waterford, a fair number of the findings that were assessed actually couldn't be screened with your risk model.
So how are you going to -- how are you proposing to treat those?
MR. BRANCH: There are still holes that we have to work on. Some of the issues we're dealing with, shutdown

risk, we currently do not have a screening tool for that yet. We're working on that. We've put in place, though, I think as you read through the SECY, that the inspectors are going to have to call risk analysts or talk to someone else to get that insight right now, until we can develop that.
Fire issues were -- several of the issues were fire issues. We're working currently to develop a process in the fire area, where they will feed into this process. Once they determine the likelihood of events and the equipment that you can use to mitigate, then it fees right into this process, and we're going to change the tables here somewhat to allow it to dovetail right into this process.
CHAIRMAN JACKSON: So going back to -- you mentioned shutdown risk. If a plant is in a state of forced shutdown, it seems that you revert back to the manual chapter 0350 process. Is that right?
MR. BRANCH: I was referring mostly to just shutdown activities during refuelings.
CHAIRMAN JACKSON: But let me pursue this line. You're basically saying that because you don't have the performance indicators, you can't use this process. You don't believe that the inspection findings --
MR. BRANCH: No, no.
MR. MADISON: No, no, no. What Morris is saying

is that the tool that he has developed, at its current

design, does not directly address shutdown issues. It doesn't properly characterize the risk significance of shutdown issues.

What we're working with others and NRR and Research to develop is a front-end device that would help properly characterize the risk significance of the shutdown issues that feed into this process and decide what aspects of the process are applicable during shutdown.

There were some draft concepts in the radiation protection emergency preparedness and the safeguards area attached. We have similar concepts in fire protection, shutdown risk. They weren't as well along as the ones that we attached to it, so we didn't put it with the paper.

MR. GILLESPIE: I will say, also, this afternoon, there is a tabletop exercise of feasibility study for the emergency planning process, participating with all the regions, and it's going on. Tom Essig, from our Emergency Planning Group, is heading that this afternoon. So we do have an ongoing process that is actually stepping forward.

And in the next week, I think it's scheduled for April 8, there is a similar tabletop for the refinement of the radiation protection process. Then we'll work forward for safeguards and shutdown, also.

It's just that they can't use this tool, but a similar parallel tool which is specific to the topic area is

going to be necessary.

MR. COLLINS: Chairman, not to lose, I believe, the statement you made, which is also important, there are other policy decisions and programs which need to be consistent and commensurate with this process as it is proposed.

One of those is the agency's approach to plants that are on extended shutdowns. As you appropriately referenced, we currently use the 0350, manual chapter 0350 process as guidance on how to interact with our stakeholders, particularly licensees, in regards to long-term shutdown.

That policy, the senior management meeting concept, the Commission meeting that now typically follows the senior management meeting concept, all of those would have to be and are being looked at to be consistent with our ongoing process.

As you know, we have a SECY paper, 99-86, which very recently was provided to the Commission that touches on some of those areas.

CHAIRMAN JACKSON: Commissioner Dicus.

COMMISSIONER DICUS: The paper does not describe how positive inspection findings have been factored into the process, which leads me to believe that positive inspection findings will not be part of the process. Is that true?

MR. MIRAGLIA: That is true.

COMMISSIONER DICUS: Only negative findings and then the risk characterization of them.

MR. MIRAGLIA: That's true.

COMMISSIONER DICUS: And I had a similar question to the Chairman's on where we were with emergency

preparedness in radiation safety, et cetera, but I think you've addressed that with the process that you have ongoing.

My question really concerned whether or not you will be far enough along that these things can be included in the training sessions in April.

MR. MADISON: That is our goal, is to get those to at least where we can train, in draft form. They may not actually be signed off, but we'll train on those processes. We'll decide if they're ready go to.

COMMISSIONER DICUS: Then finally, I understand that the inspection report will document the phase one screening and the phase two risk characterization, but have you determined what the standard inspection report will look like or is this to come later?

MR. MADISON: We're still working in that direction.

COMMISSIONER DICUS: Thank you. That's it.

CHAIRMAN JACKSON: Thank you. Commissioner Diaz.

COMMISSIONER DIAZ: First, let me make a statement of a simple kind that I think I need to do. It's kind of a my pet theory that the probability of successful closure of any process of endeavor is inversely proportional to the numbers of degrees of freedom in the process. The more things you deal with, the more problems you have.

But that's okay, everybody knows that. But the problem is there is a second part to that, which is that the additional degrees of freedom that have less importance proliferate and add to the N factorial much more faster than the larger issues. So you can actually start going down a path and keep going.

And the reason that I bring that up is because in the paper, and it refers to the significance determination process on slide eight, there is a statement that we're now going to look at the sign-in assistant to analyze the risk significance of numerous small problems of low safety significance, which, in the aggregate, could be significant.

This is what I call adding degrees of freedom to a process that is still looking at the major components and trying to determine how they interact, and then looking at something that really is very difficult to look at. It's undetermined. It might not add, in the front end, to the process.

And there's two ways that people normally deal

with small issues and one is very easy. People take them and score them. So they'll be higher. Then they put whatever signs --

CHAIRMAN JACKSON: If it's less than one, it becomes smaller.

COMMISSIONER DIAZ: Yes, but then you can put whatever sign you want on it. But since they're always positive, they're always above the line.

However, Mother Nature has something that I really want to the staff to understand, which is when you take noise or small things in any kind of signal analysis data and so forth and you croscorrelate it with itself, the noise drops out, and the reason is that they have different signs and positive things, tend to compensate negative things.

And if we look at the negative things and start to

aggregate them without really putting them in the context of all the things, we can always get an aggregate that keeps increasing and, of course, you can always start looking at lower and lower and lower levels.

So I would caution, when we look at the things, that it would be balanced and that at the front end of the process, we do not emphasize the very small safety significant things, because we really don't know how to deal with them. They will complicate the process and they will

eventually lead to a stalemate in how do you deal with those things.

MR. COLLINS: I'm going to take some liberty, Commissioner Diaz, and assume there is a question in there.

COMMISSIONER DIAZ: Good. It was hidden.

MR. COLLINS: The staff acknowledges and agrees with your intent. Right now, what we are trying to understand is would we lose any valuable information by not considering, in the aggregate, these types of issues.

Examples would be corrective action programs that licensees implement are trending information. Licensees have the ability, and it's a very sophisticated system, some more than others, to link low level items to get most likely to programmatic issues rather than safety significant issues. And we want to ensure that, as an agency, before we raise the threshold for consideration of these types of issues, that we don't lose value information.

This gets a little bit into a statement that was made earlier about how do you handle the subjectivity in the process. There is a general feeling amongst the staff and, anecdotally, I think, at least some industry agrees, although they would agree that it's their role to do it, with the preponderance of evidence or the gut feeling, if you will, based on information that doesn't tie neatly together, but you can draw lines through that have a

tendency to support the performance of overall programs and should that reach us to an auction or to a mandated threshold by which we go and periodically review the status of a program, even though the indicators wouldn't lead you in that direction.

That's still under assessment. These lower level issues could potentially be an input to that decision-making process.

COMMISSIONER DIAZ: You do understand that by following many, many, many, many, many small things, you could do precisely what you do not want to do, which is to focus on the big, big, big, big, things. You could start more, more, more, more time doing that, with less, less, less returns.

CHAIRMAN JACKSON: It's a question of the balance and where you place the weight.

MR. COLLINS: Yes.

CHAIRMAN JACKSON: Commissioner McGaffigan.

COMMISSIONER McGAFFIGAN: I'm afraid I'm going to take a little bit more time. I asked a lot of the questions of the staff privately. I'd first give an impression. I have some real misgivings, not about the pilot, the industry is willing to have the pilot, but about this thing being ready by January 2000 for implementation and I think somebody said at the outset the goal was to get our sign-off

on that and, in theory, and I'm very far from that.

But let me give you some questions that will tell you why. On the positive, since we've been talking about positive inspection findings, I'm looking at the last paper and I'm surprised that Mr. Gillespie's answer because the attachment to the last paper, the 99-007, in response to the direction that the Commission had given I previous SRMs, that the staff should continue to include positive findings in inspection reports, you said, yes, we are, positive inspection findings will remain in the inspection reports.

I guess maybe we didn't ask the right question, which is you don't intend to use them in the assessment process, is that right?

MR. GILLESPIE: That's true. Right now, in the assessment process, there is no folding in of positive findings. There is no risk measure on how much safer a certain finding gets a plant to fold it in.

COMMISSIONER McGAFFIGAN: I think there is a huge hole here that is still not filled. You've given us this process for taking an individual inspection finding and coming up with a core damage frequency number or some sort of judgment of risk, but you are not telling us how you take the sum of inspection findings, the sum of performance indicators, and assign a color to and properly balance them all and assign a color to a cornerstone, unless a single

inspection finding that's yellow or white puts them in the cornerstone into white.

In which case, in the process, you get a random event where you get a white inspection finding, you're otherwise a pretty darn good plant and you're suddenly white or yellow in the cornerstone. I'm just trying to understand that.

MR. GILLESPIE: And if that happens, going by a threshold is a step from turning us to being into more diagnostic and more included and engaging more. So if there is a clear understanding why a threshold is broken, then we have a decision point at that point.

It's not -- things do happen and we recognize that, and so these are thresholds where we go from -- into -- I would say into a diagnostic mode. We depart from our baseline and get more involved and want to understand what the problem is.

Once you get the specifics of the problem and understand it, then you have a decision on further action.

So someone going past a threshold, an individual threshold, may not, in fact, be a long-term major issue.

COMMISSIONER McGAFFIGAN: But I think it's a disadvantage for the client. If it's a random event and somebody happens to -- and it's a bad event, you guys calculate delta CDF and it's five-timeten-to-the-minusix

or something, and you guys, whatever the threshold is and it's way above it, you say, my gosh, this is a bad event.

But it's because a piece of equipment randomly failed or whatever. I don't know what it is.

CHAIRMAN JACKSON: Excuse me. I think the real question one has to understand is whether a threshold is tripped by virtue of a given failure of a piece of equipment, propagating into a certain core damage frequency

region.

I think the real issue is how do you relate the given inspection finding to whether or not a plant crosses a threshold vi -vis a cornerstone.

MR. MADISON: Frank, maybe I can address some of that. First of all, in the significance determination process, the object of the process is to fully characterize the finding, including all mitigation capability, which may be an operator with a procedure in hand, and the positive findings that you may have in that process.

Also, the assessment process does not take any one issue and color cornerstone or the overall process. There is no intent to color the cornerstones any color and if you look in -- when you look in the action matrix, you saw that there were no colors for cornerstones or colors for strategic performance areas.

The colors were associated with inputs, either

performance indicator or inspection inputs, and the actions that we would take out of that matrix would be in response to those.

COMMISSIONER McGAFFIGAN: I misunderstood at the time. I didn't think it was a single input. I thought it was a composite input that you were -- but I'll just -- rather than belabor it, I'll -- another thing that I am very worried about, and I guess we'll hear from Mr. Lochbaum later, the pencil-whipping, the significance process -- you know, maybe it's good enough to pilot, but I am quite concerned that it's becoming darn close to risk-based.

Also, there is pencil-whipping that goes on in both directions. I have been the -- I won't go through the case, but I have seen it where headquarters staff looking at what was done in region, and basically said that that -- something that was allegedly risk significant really wasn't and that the assumptions -- I mean, it's these assumptions that were used that were extraordinary in order to drive up and make an inspection finding.

I know you're going to work on that, but it's -- I have my doubts that this is going to be a straightforward process. Then you've got the other hole the Chairman mentioned earlier, which is how do you deal with all the programmatic issues, which were dismissed quickly as, well, maybe a lot of them are non-risk-significant, maybe, except

for the sleeping operators.

I fear that, for better or for worse, we may be abandoning all sorts of rules that are on the books that -- you know, some sort of delta CDF calculations that are insignificant, in which case we should have a massive rule-making pretty darn quick to get rid of all that stuff, or I don't know what.

But I have grave misgivings about a lot of this, now that I see the flesh being put on the bones, and I'll just leave it at that.

MR. MIRAGLIA: May I make a comment, Commissioner, with regard to that? I think it's clear from the staff's paper and the briefing today that there's still lots of work to be done. We do not have all of the answers. The staff is here to say that we know enough to pilot it, and the pilot is going to inform us as we go along.

I think we have to make sure that we are not

losing useful information in terms of some of the low significance things that we talked about and we really have to understand the process. I think the pilots are going to inform the process.

The idea of the significance matrix and process is to give scrutability and an understanding. Is there mutual understanding on both sides of the table that a threshold has been crossed? Is that objective inscrutable and

reproducible, that there is agreement that a threshold has been crossed? And then the degree of engagement will change, depending on which threshold it is and then that has a focused kind of discussion then on what those issues and what the significance is.

I think it's to add a discipline to meet the Commission's objectives of having this process to be objective, scrutable and reproducible.

Are there still lots of questions? I think the staff would definitely agree with you, there is still lots of work to be done. I think we'll learn a lot by the pilots in terms of where we can go and when this process can be fully implemented.

CHAIRMAN JACKSON: I think a question may be more is a six-month pilot, in the end, going to be enough, depending upon the degree of completeness of the answers to various questions.

But if the fundamental intent is that the pilot is going to flesh out those answers, then it may be that the six-month and immediately going January of 2000 may not be feasible.

So I think that that is the question.

COMMISSIONER McGAFFIGAN: I'm just putting everybody on notice that I don't think it is.

CHAIRMAN JACKSON: Well, that's fine and the

Commission can say that the pilot should go on and with the particular objective of fleshing out a whole series of questions and if it's premature to say it will happen in January of 2000, it's premature to say it will happen in January of 2000.

But that's why you do the pilots, in point of fact.

MR. COLLINS: I'd like to just acknowledge that I believe, at this point in time, we're working to the Commission's schedule.

CHAIRMAN JACKSON: That's right. It's the Commission's schedule.

MR. COLLINS: And if the Commission believes that that schedule is inappropriate or the depth and breadth of the --

CHAIRMAN JACKSON: Right. And the Commission, as a whole, will make that determination.

MR. COLLINS: Yes, ma'am.

MR. GILLESPIE: What I'd like to say, later, on the last slide, we're working with the Office of Research, as Bill said, and if it's worthwhile, although it may not be at this time, we are working on this concept of a number of program failures and, in fact, we did a small pilot effort as part of the corrective action program only two weeks ago at Clinton and we had previously done something similar in

this vein at Beaver Valley.

So we are actively pursuing it and maybe at the end, if there is time and there is still question on that, we can just give a little bit more insight into what we're trying there as a new concept.

CHAIRMAN JACKSON: Commissioner Merrifield.

COMMISSIONER MERRIFIELD: Thank you, Chairman. An up-front comment. First off, I want to compliment the staff for a lot of hard work. This is an excruciating process to get where we are. Obviously, we've commented, as Commissioner McGaffigan has, that it's a work in progress and I think we recognize that.

In terms of timeliness, I think we should adhere to the time line and do the reassessment and perhaps it may or may not be in January, that we need to give you more time. But I think it's important for us to keep the pace going.

That goes to my first question. Between November 1999 and January of the year 2000, what interaction do you plan with the Commission, the industry and the public to share the lessons learned from the pilots and how will stakeholders be able to weigh in on the changes that you deem are appropriate to the pilots and the recommendations you'll be giving to the Commission?

MR. COLLINS: Commissioner Merrifield, we can

answer some of that now and perhaps defer a little bit of that to the communications plans.

COMMISSIONER MERRIFIELD: That's fine. Given our time limits, briefing us -- that's fine.

MR. COLLINS: As well as the Chairman's question on public involvement, I believe we'll elaborate on that at the communications plan time.

MR. MADISON: There's a lot of that work that has to happen. We're developing some of the concepts, some of our thinking in this area. But we had originally intended all along to have a meeting in the October-November time-frame with the public to describe our lessons learned at that point from the pilot program. We feel that there's also, following that, a definite need for interaction with the Commission to describe our progress and lessons that we've learned and decide where we go from there.

CHAIRMAN JACKSON: May I just make a comment? Fundamentally, it is always a prerogative of the Commission to say when it wants to be engaged and how and give the staff that guidance.

COMMISSIONER MERRIFIELD: I recognize that. When I looked at slide five, which showed a number of milestones, none of those indicated any either stakeholder meetings or meetings with the Commission in the time line.

MR. MADISON: I think when we get to the

communications plan, we'll go over pages and pages of it.

COMMISSIONER MERRIFIELD: Let's keep going. You received several comments regarding the issue of manual scrams. Now, in the backup paper, you've indicated that manual scrams should be treated as the same as automatic scrams from a risk perspective and you believe that there is no difference between them.

I remain somewhat concerned about the potential of sending the wrong message with respect to conservative

decision-making by operators. Having read the paper, I know the position.

What I'd like is a brief description of the analysis you have that supports your conclusion.

MR. PERRY: Could I ask a clarification of what's the conclusion you want?

COMMISSIONER MERRIFIELD: You conclude that there is no difference between manual and automatic scrams from a risk perspective and what I'm attempting to assert is that we may be sending the wrong signal to operators not to worry about -- making them too conservative about using manual scrams when they feel that they're necessary.

MR. PERRY: I think we discussed that in Region III yesterday, in fact, because they raised the same issue. We have opposing views, but one of the views is that the necessity to perform a manual scram usually means there is

something wrong. The fact that there is something wrong is related to the risk.

So I think it's in that sense. The manual scrams here are those that are done in response to conditions that would have led to a scram in any case.

MR. COLLINS: Unplanned.

MR. PERRY: Unplanned scram, if you will. This doesn't relate to those manual scrams that occur when the plant is being brought down for an outage, where the plant may be scrammed manually.

MR. GILLESPIE: Let me suggest, because this -- your point was actually a point of much discussion in one of our in-plant meetings. The industry people, plant manager level kind of people really came up and said that there is no way that our operators, as well trained as they are, if they see the plant in trouble, are not going to do it, because of this.

And so what I'd suggest is -- I mean, this is not in-depth analysis. This is a judgment. And that was their reaction. You're balancing the insight you're getting from a safety condition which would either cause an automatic scram or you're doing a manual scram just right before the automatic scram is going to come into play anyway and the information that that gives you of the operation of the facility, against a very subjective judgment, is that the

operator would fight his entire training not to do it.

And I'd say this, Ralph Beedle and Steve Floyd, on the industry side, maybe should address this when it's their turn, also, because it was a point of discussion, exactly your point about is this going the wrong way or sending the wrong message, and this is a balance and it was a judgment. It's not a calculation here.

MR. COLLINS: Commissioner Merrifield, let me have a take-away for the staff here, but I want to be sure and I want to be sure that we understand your issue, for our sake.

Clearly, it's not the intent for the staff to send any message that manually scramming the plant in a dynamic situation to preclude automatic scram or challenge to safety systems, the safety actuation systems, is the wrong thing to do.

What the staff, I believe, needs to provide to the Commission is a basis that we will gain information as a result of this particular indicator that is not available any other way, and, therefore, we're not compromising, by

using this as an indicator, our message to the operators.
We will endeavor to do that and we will get back with the Commission.
COMMISSIONER MERRIFIELD: It raises the question, it obviously has in the regions, about the potential for a mixed message there.

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MR. COLLINS: Yes, and Region III brought that up yesterday and it's a valid issue.
COMMISSIONER MERRIFIELD: Right. Going to slide nine, you indicate that licensee identified issues, and this is sort of a general take-away I get from this slide. When reviewed by NRC inspectors or candidates for the inspection finding risk characterization process, do you have any concerns that will serve as a disincentive for licensees who aggressively identify their own problems or inhibit licensees from disclosing these problems to the NRC?
MR. BRANCH: No. What we are trying to do with the characterization process is to come up with an indication of what the issue represents as far as how it would compare to a PI. That's what we're doing here.
So when licensees identify issues and write LERs, if there are risk-significant issues, we want to know about them and we want to run through the process and actually use that data for the assessment process.
COMMISSIONER MERRIFIELD: My last question for this section is a follow-up to a question that was asked by the Chairman related to the 0350 process. I guess I was somewhat left unclear how the interaction for plants that are in extended outage -- what your planning is -- right now, we're going to a process that would be relatively disciplined as it relates to operating plants.

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Yet, if we have a plant in an extended outage, we're going to a 0350 process, which is, arguably, relatively undisciplined.
So I'm interested in the interaction.
CHAIRMAN JACKSON: I would disagree that 0350 is undisciplined. It may not be referenced in the tight way to cornerstones of safety and so on. That's the difficulty, which is why I raised the question, but it has its discipline built into it. It's a very disciplined process.
COMMISSIONER MERRIFIELD: All right. Chairman, I misspoke. I would argue -- that's fine. I would argue it has less discipline, perhaps, and one could argue the degree of less discipline.
MR. MIRAGLIA: From an overall perspective, Commissioner, I think that the comment that the staff was giving is that the Commission has clearly indicated to the staff to look at our assessment processes and then have an alignment and an integration of those kinds of things.
In terms of the plants in extended shutdown, we have lots of work to do and as we have that process better defined, it's going to impact and influence the processes and procedures for 0350.
You are going to hear today how we're aligning the enforcement process. So as these tools are developed and we get those thresholds defined and more predictability and

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discipline in the process, the intent would be to go back

and inform those processes, as well.

We're just not that far along. We've looked at 350 to the extent that deficiencies and concerns have been raised, to try to look at those issues there, and this is going to further inform those kinds of processes in the future.

COMMISSIONER MERRIFIELD: So you would foresee greater alignment between the two processes down the road.

MR. MIRAGLIA: Absolutely. I just don't think we're there yet.

MR. GILLESPIE: If I could, let me see if I could inject what I will call a scale here on risk significant events, because our screening process basically took the precursor screening process and tried to delve into what was the thought process behind it and simplify it, so that the risk analyst wasn't needing an inspector who could use it.

But when you look at the -- as Morris said, when you look at the precursor data, our own reports, we're looking at a number of -- the number of greater than like ten-to-the-minusix, although the precursor program deals in a different calculation. It's an instantaneous risk.

But we're only looking at less than ten events a year. So in a scale -- and this, I think, addresses Commissioner McGaffigan's point just a little bit -- there

is an expectation and history tells us that about one percent of all the LERs and everything reported will probably result in a broken threshold, including things found by the licensee and put into his own corrective action program.

So we should have an expectation that there's at least ten occasions per year when we should be getting more diagnostic and saying what's going on here, just based on our own information and past history.

But that's not thousands and so the greater use of the SRA in those events is very doable in a scale sort of sense. It's more the exception than the rule.

So I would just like to interject that, because that dealt with a lot of our thinking about if you let twice as many things through the screening process as really should get through, what does that mean? It means 20 items instead of ten, in a whole year, for a whole industry. So that puts in a slightly different perspective, I think.

That's part of our thinking in developing the idea of allowing false positives through and trying to come up with a conservative approach, but handleable.

COMMISSIONER McGAFFIGAN: Madam Chairman, I was first going to agree with you on the manual chapter 0350 process. It isn't clear to me that it's undisciplined. I think what it does --

COMMISSIONER MERRIFIELD: But I want to make a clarification. It was not my intent to say undisciplined. I meant to say less disciplined.

COMMISSIONER McGAFFIGAN: And just so it's clear to me, it's less disciplined because I think that the heart of many manual chapter 0350 processes are in the hole that the Chairman identified at the outset, which is programmatic deficiencies, which this process doesn't lend itself to, this calculating whether it's ten-to-the-minusix CDF or not.

I also am a little concerned with the answer about

there being ten risk significant events a year. I know the industry is good, but if we're down to having sort of an expectation at the outset that we have ten findings a year that we have to worry about, then I think we're also saying unless performance indicators are bad, everybody is going to be in green and we're not going to have much to do.

So maybe it's that these programmatic issues are the things that are going to again drive things -- drive us into having to do something, but it's -- I don't know.

CHAIRMAN JACKSON: Commissioner Diaz.

COMMISSIONER DIAZ: I just wanted to point out that Commissioner McGaffigan has elicited a kind of a question or comment which I think you all are doing it, but maybe the Commission is not hearing well.

That is that these processes are not risk-based processes and that's -- and no matter how much PRA you put into them, and hopefully there will be more, there is a technical basis which is fundamental to the PRA or to whatever we do.

I mean, do you have one pump functional that was capable of providing the required function? Do you have the amount of water? Regardless of what the PRA results said you could have done, if, during mode five, you had, quote, an event and the temperature in the core went up by two degrees and it went up to the very high temperature of 110 degrees, how do you assess that.

And the other thing is the regulatory basis. So you have three things that are playing in here and I think, from my viewpoint, what Commissioner McGaffigan's comment has elicited is that in some case, we need to understand a little better how the interplay of the technical basis, the regulatory basis, and the risk-informed processes are convergent to provide us with the right information, and they are not independent of each other.

MR. COLLINS: Right. That's a legitimate issue. I think when we get to Jim Lieberman's presentation, perhaps slide 19 has a tendency to integrate where we are with our license requirements as far as compliance with rules and regulations and acknowledging that those issues exist within

the industry and they will not be ignored by the agency as opposed to the dispositioning of those issues on the approach commensurate with risk and safety and a process that's defined to ensure that's done consistently.

I believe we'll touch upon some of those areas in Jim's presentation and certainly if we don't satisfy the Commission --

CHAIRMAN JACKSON: Then we'll now go to Jim's presentation. So we can get to that. Thank you.

MR. LIEBERMAN: Good morning, Chairman Jackson and Commissioners. Slide 13. We've developed a new approach to enforcement and integrate in the new overall reactor oversight process.

Our plan is to apply it during the pilot process. It should make the enforcement process simpler, clearer, and, most importantly, more risk-informed and performance-based.

The approach is described in SECY 99-007A. Following Commission approval of the paper, we plan to submit to the Commission an interim revision to the

enforcement policy to address the pilot program for publication in the Federal Register. This is providing notice to the pilot plants and serve as a basis to obtain public comments on the enforcement approach.

The current escalated enforcement process has been

successful in focusing attention on compliance issues to improve safety. We've used enforcement to provide regulatory messages, to improve performance. Sometimes, however, mixed messages were provided because the staff did not always integrate the SALP and enforcement processes.

In reconsidering our enforcement approach, in light of the new assessment process, we wanted to integrate enforcement into the overall reactor oversight process. We've discussed various approaches to achieve this integration in public stakeholders' meetings.

If I could have the next slide. As a first step, informally, in the enforcement approach, we considered the purposes of enforcement and assessment. They're similar. Each process evaluates the safety significance of individual compliance issues. Both serve as a basis to formulate agency responses to violations of performance issues. The enforcement process uses sanctions, such as citations and penalties. It also uses processes similar to those described in the action matrix of the assessment process, such as regulatory conferences to discuss declining performance, 50.54(f) letters as a means of information, and orders.

Both provide incentives to improve compliance and performance, as you provide a measure of deterrence, since presumably licensees strive to avoid negative performance

labels and the associated regulatory attention, similar to licensees today when they try to avoid enforcement sanctions.

Finally, both provide the public with NRC's views on the status of performance and compliance.

If I could have the next slide. Given the similarity and the purposes of both enforcement and assessment, our goal is not to have two separate processes. Rather, we want an enforcement program that compliments the assessment process, not drives it.

The assessment process will be considering compliance issues, as well as findings that might not be violations. Enforcements, on the other hand, only focuses on violations. It should be used in a manner that maintains an emphasis on compliance and serves as a basis to document compliance issues and obtain corrective action.

Enforcement also has a focus on safety, consistent with the philosophy of the new assessment process. We want enforcement to be more risk-informed and performance-based. We want to maximize the likelihood that what's considered significant from an assessment view will be considered significant from an enforcement view and vice versa.

To achieve this, we should evaluating individual enforcement findings once, using the same process for both assessment and enforcement. As with our other programs, we

want to design any new enforcement process in a manner that would not create unnecessary regulatory burdens. We want to simplify the process and make it more predictable, creating

a more effective and efficient process.

Making the enforcement process more consistent and more predictable should add to public confidence.

If I could have the next slide.

We've come up with an approach that meets our objectives. Essentially, it provides violations under two groups. The first groups are those violations which would be evaluated under the significance determination process and considered by the HC action matrix. The second group includes three types of violations; first, violations outside the assessment process, such as willful violations and those that impede or may impact the regulatory process; second, violations that involve actual consequences, such as over-exposures and substantial releases of material; and, third, particularly significant violations.

If I could have the next slide. As to the first group, we will be building on the interim enforcement policy for severity level four violations. That went in effect March 11. Violations will be considered for either formal or informal enforcement action based on the assessment process.

Severity levels are not needed to be used.

Violations which are evaluated by the assessment processes inputs to the regulatory response band, white, yellow or red, will be considered for formal enforcement. These violations, being risk or safety significant, would result in notices of violations, requiring formal responses, unless NRC already has the required information on the docket.

Violations evaluated by the assessment process as inputs to the licensee response band, green, will be considered for informal enforcement and treated as non-cited violations. These violations are not considered risk or safety significant.

We plan to continue exceptions one, two and four of the interim enforcement policy. These three exceptions address failing to restore compliance, failing to place the violation in a corrective action program, and certain willful violations.

The third exception, which addresses repetitive level four violations identified by the NRC would no longer be needed, as the issue of repetition is more of an assessment issue and, therefore, should be addressed in the assessment process.

To maintain consistency in regulatory messages, the assessment action matrix and not the enforcement process will be utilized to formulate the agency response to root causes and emphasize the need to improve performance for

safety significant violations. We would not be using civil penalties for most group one violations.

The assessment process will provide for conferences to discuss declining performance and compliance issues. Licensees will have incentives to avoid being labeled white, yellow or red band performance so that further negative impacts and civil penalties normally would not be needed to deter violations covered by the assessment process.

A question was raised earlier about programmatic issues relating to problems with corrective action programs and how would that be treated in the process.

From an enforcement perspective, in the absence of a risk significance, those items would be considered a non-cited, as they would be treated as green. They'd be included in inspection reports and they'd be placed into the PIM.

If the licensee crosses into a white area, such that it now is in the regulated response band, now we go into a more diagnostic mode. That information would be utilized in helping us plan our approach. But if the failures to take corrective action, a repetitive violation, are not in and of themselves risk significant or safety significant, then they would still be considered as non-cited violations.

If I could have the next slide. The traditional enforcement process with a potential for civil penalties would be retained for the second group of violations. These are violations where a more deterrent approach may be warranted.

We reserve the traditional approach with the four existing severity levels for violations which are not evaluated by the significance determination process, and, therefore, are outside the assessment process for deterrents. These would be violations involving willfulness and discrimination, sleeping operator issue, such as Peach Bottom, would be included there, because that was an integrity issue.

Also, violations which impede or impact the process, the NRC process of oversight would also be subject to the current enforcement process. These violations would include violations associated with reporting issues, by completing inaccurate information to the agency, failures to obtain NRC approval such as for 50.59 changes to QA plans, and other issues that impact our ability to oversee licensees.

In addition, the traditional enforcement process, given the importance to avoid actual consequences, would be retained for violations involving over-exposures and substantial releases of material, because there the barriers

failed.

Finally, we reserve the authority of the Commission to utilize traditional enforcement approach with civil penalties for particularly significant violations, such as exceeding safety limits or involving accidental criticality.

If I could have the next slide. The approach that I have been discussing is a clear shift from our past approaches to enforcement, which we've been using for almost 30 years. It would take regulatory functions which, in the past, have been separate activities and integrate them. Enforcement will compliment assessment as part of the overall reactor oversight process.

We will be escalating our regulatory responses based on safety significance. The new approach will retain a compliance focus as we move to a more risk-informed and performance-based regulatory process.

The new process should deter violations and result in improved performance as the licensees strive to avoid regulatory costs, such as increased inspection costs and regulatory attention given by compliance and performance issues with safety impacts as evaluated by the assessment

process in the action matrix.

There will be a reduced need for civil penalties and its associated burdens. An enforcement process that is

consistent with the assessment process provides for more consistent and more predictable regulatory responses should further public confidence. Once the assessment process has evaluated the violations, enforcement will be relatively straightforward, making the process more -- easier to implement and thus more efficient than the current process.

I'd be happy to answer any questions you might have.

CHAIRMAN JACKSON: Let me ask a few questions here. You talk about a two-track approach and you talk about violations involving something with actual consequences.

But some of the violations that actual consequences that were identified in the paper seem to have this SDP-like evaluation process. For instance, if you talk about worker radiation protection.

And I guess I don't understand why those kinds of processes cannot be folded into an SDP type evaluation.

MR. LIEBERMAN: Those types of violations will be evaluated under the SDP process and will be assigned colors for the action matrix. But when a worker is over-exposed or a member of the public is exposed, in our view, that raises to a level of unacceptability that should not happen.

Over-exposure is extremely rare at reactors and we want to keep it that way. So that's why we feel that is

appropriate to have a civil penalty if that happens.

CHAIRMAN JACKSON: Okay. Then you mentioned that the assessment action matrix formulates