UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

***

PUBLIC MEETING ON PART 70 AND A STAKEHOLDERS

MEETING ON THE REVISION OF INSPECTION PROGRAMS

Link to Part 70 rulemaking web site

Link to SRP and ISA Guidance Document Web Site

ASLBP Hearing Room

II White Flint North

Rockville, Maryland

Wednesday, September 14, 1999

The above-entitled meeting commenced, pursuant to notice, at 9:07 a.m.

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P R O C E E D I N G S

[9:07 a.m.]

SHERR: We'd like to start the meeting now, please. Good morning and welcome. In case somebody might be confused, this is a meeting on the Part 70 rulemaking activities.

I am Ted Sherr and I'm Chief of the Licensing and International Safeguards Branch. There's two parts of today's meeting. The first part is intended to provide an overview of the proposed rule and the areas where the Commission has specifically identified areas of particular interest in public comments.

The objective of this part of the meeting is to facilitate the public comment process. Member of the public are encouraged to seek clarifications, as needed, on any matters relating to the rulemaking effort.

The second part of the meeting will be discussing public comments that have been received so far in relationship to the rulemaking effort, and these comments have been limited to the standard review plan. If there is anybody here who is not intimately involved in this process, the rule established the requirements that would be applicable to certain facilities for the handling of nuclear materials and the standard review plan is the guidance to the license reviewer in reviewing the application and making judgments whether the application satisfies the intent

of the rule and the specific requirements.

So the focus of the first part of the meeting is going to be on the rule and the focus on the second part of the meeting will be on the standard review plan.

In the second part, the NRC has received extensive comments so far on the standard review plan and this will provide an opportunity to perhaps better understand the rationale in relationship to some of those comments. This will be accomplished by having the authors of the comments give a presentation and then with subsequent opportunities for asking questions and providing additional information.

As a matter of background, this rulemaking effort started way back in 1991, in some sense, when there was a near criticality incident at a low enriched fuel fabrication facility and that incident prompted NRC to review the regulations for the licensees that possess large quantities of special nuclear material.

Several changes were initiated, including the bulletin requesting reporting of nuclear criticality related information, commencement of rulemaking activities, and the inclusion as license conditions of the performance of integrated safety analyses by licensees.

NRC had, in that timeframe, 1995, developed a proposed rule and during the course of discussions on that draft proposed

rule, NRC received a petition for rulemaking in 1996 to amend Part 70.

The staff provided the Commission a proposed resolution of that petition in June of 1997, and, in response, the Commission instructed the staff to proceed with the rulemaking along those lines, and a draft rule was provided to the Commission in July of '98.

In response to that, the Commission directed staff to not publish that proposed rule, but instead directed the staff to obtain stakeholder input and revise the draft proposed rule based on the results of those interactions.

The response to that, a website was established and a number of public meetings were held in September and December of 1998, and in January and March of 1999. In June of 1999, the proposed rule was forwarded to the Commission for their consideration, which took into consideration the results of the stakeholder interactions, and, in July of 1999, the Commission approved publishing the revised Part 70 as a proposed rule for public comment. (Link to Staff Requirements Memorandum)

That proposed rule was published in the Federal Register on July 30 and, also, made publicly available was the associated standard review plan, which is the discussion of the second part of the meeting today. And the relationship between the standard review plan and this rulemaking is that the standard

review plan, although it's primarily designed as a guidance document for license reviewers, it also serves the purpose of communicating in more detail the implications and staff's intentions with the proposed rule language, which facilitates the comment process on the proposed rule.

This is particularly important when you have performance-oriented rules.

The public comment period closes about a month from now, October 13, and the final rulemaking package is due to the Commission in May of 2000.

There's a number of people, a number of NRC staff involved in the rulemaking effort at this time. At this time, I would like to introduce the lead staff in this effort.

Drew Persinko -- Drew, you might want to raise your hand -- is providing the overall lead for the effort. Heather Astwood is leading the review of rule issues. Tom Cox is continuing in his role in the development of the standard review plan.

Many other staff are supporting Drew, Heather and Tom in this important work and some of them will be introduced in the course of the discussions during this meeting today and tomorrow.

Of course, Liz Ten Eyck is here and she has been involved in this effort, she is the Director of FCSS. Mike Weber is hiding in the back there, the Deputy of FCSS, and they are, of

course, heavily involved, as well.

Before we begin, there are a few administrative announcements. Upon entering, hopefully, you've all signed the attendee list and provided your e-mail address. If there are any of you who aren't currently on our e-mail list, you will be added to that for e-mail notifications of postings on the Part 70 website.

Also, when you came in, you should have received a blue packet which includes an agenda for the meeting, copies of briefing charts that will be used by NRC and NEI in their presentations of this meeting, and a compilation of the individual reviewer questions that have been identified to date in relationship to the NEI comments on the SRP.

I would like to emphasize that the discussions of this meeting will not be viewed as formal comments under the proposed rulemaking. Any comments that you would like to be formally considered need to be provided in writing.

(Link to web page for commenting on proposed rule.)

We will take a short break, depending on how things are going, around 10:15 and plan to break for lunch around noon today, and close the meeting around 4:00. We will begin tomorrow, again, at 9:00.

The usual restrictions; no eating, no smoking, no drinking and other terrible things aren't permitted either.

I would remind you that the meeting is being

transcribed and you are encouraged, when you speak, to speak in the microphone and identify yourself before you make your statement.

Also, for clarity of the written record, it would be useful, when you make a statement, as appropriate, to provide background that might be pertinent to your question or comment.

We now can begin with the -- I guess, before we begin the first part of the meeting, are there any questions that you want to ask?

[No response.]

SHERR: We have an agenda in your folder. As I indicated earlier, the purpose of the first part of the meeting is to facilitate the public comments on the proposed rule and to facilitate this, Drew Persinko will be providing an overview of the proposed rule. The attendees are encouraged to seek clarifications as needed during the course of Drew's presentation.

Drew, if you'd like to begin.

PERSINKO: I'm going to walk through the major portions of the proposed rule, refresh everybody's memory, also, as well, to facilitate any comments, any questions people may have.

The major parts of the rule are, first of all, the applicability, performance requirements, 70.62 is the safety

program and the integrated safety analysis, 70.64 addresses baseline design criteria for new facilities and new processes, and there's the additional content of the application, 70.65, 70.72 is the change process, and 70.74 is the reporting requirements.

Slide 2 Characteristics of the proposed rule are that some of the parts address pre-licensing and some address post-licensing. We believe it's a risk-informed rule and it's a performance-based rule. I want to emphasize that it covers accidents only. It is not to address operating conditions, such as Part 20. Part 20 addresses normal operating conditions and it still applies.

The rule requires an integrated look at accident safety. It's consistent with our MOU with OSHA and we believe it's consistent with EPA process safety rules, and it includes explicit accident standards for workers, the public, as well as environmental safety.

Slide 3 As far as applicability, types of licensees that are affected by the rule are those that possess more than a critical mass of special nuclear material, which we've defined in the rule, and that are engaged in one of the following; enriched uranium processing, fabrication of uranium fuel or fuel assemblies, uranium enrichment, enriched uranium hexafluoride conversion, plutonium processing, fabrication of mixed oxide fuel or fuel assemblies, scrap recovery of SNM, and any other

activities specified by the Commission.

You will note that it excludes such items as only pure storage of SNM. It excludes SNM that are in sealed form for research and education.

It also does not include decommissioning. That is still addressed by 70.38 in the rule.

Slide 4 Part of the rule is the performance requirements. Performance requirements address two aspects; likelihood and consequences. So it addresses risk, because it's addressing those two individual parts.

First, we talk about the rule speaks to sequences that must be highly unlikely. The consequences that are associated with that likelihood are for the worker, 100 rems or more or a chemical caused fatality, and for the public, 25 rems or more or greater than 30 milligrams uranium intake or irreversible chemical injuries.

The likelihood category of unlikely, the consequences associated with that are worker, more than 25 rem, but less than 100 rems, or irreversible chemical injury, and for the public, greater than five rems, but less than 25 rems, chemical-induced transient illnesses, and environmental effluent standards.

For criticality, we've largely adopted the ANS standard stating that all processes must be subcritical for normal and credible abnormal conditions.

Note that the rule does not include a quantitative definition of probability. That's because the staff felt that a single definition might not be appropriate for all facilities. Also, the number and the types of sequences, potential accident sequences would vary from facility to facility. We will be addressing that in the standard review plan, though.

Slide 5 Performance requirements, continued. Chemical standards that are included in the rule are for licensed material, chemicals produced from licensed material, which is defined in the rule, such as uranium hexafluoride. We defer to OSHA on the general worker chemical safety issues and we also defer to EPA on general public chemical safety issues.

The rule establishes a definition of a term, item relied on for safety, which is a key point in the rule. Items relied on for safety are engineering or administrative controls or control sets that are needed in order to meet a performance requirement previously specified.

Slide 6 70.62 in the rule discusses the safety program and the ISA. It's a three-element program, consisting of process safety information, which needs to be obtained and developed in order to perform the integrated safety analysis. The third element of the rule, of the safety program are management measures. Management measures are defined in the rule and they're defined as functions performed generally on a continuing basis that are applicable to

the items relied on for safety to ensure that the items are available and reliable to perform their functions when needed.

Records that demonstrate compliance must be retained. The rule also contains a requirement to establish and maintain a log documenting failures of items relied on for safety or of management measures.

The first element of the safety program, the process safety information, consists of material hazards, process technology, process equipment description, and it's documented on-site.

Slide 7 The second element of the safety program is the integrated safety analysis. There are four basic steps to the ISA. The first one is to identify -- it's a hazards analysis, to identify the hazards that exist at your site, the radiological and the chemical hazards.

From that, the next major step is to identify the accident sequences; identify the consequences and likelihoods associated with those accident sequences; and, then, to identify any controls, items relied on for safety, if you will, that are needed in order to meet the performance requirements.

The rule also discusses team qualifications, what the ISA team should possess, and it also speaks about timing for completion of the ISA for existing licensees. It specifies that within six months, a plan on how the ISA will be conducted needs

to be submitted and, also, it states that the ISA needs to be completed within four years after the effective date of the rule.

Slide 8 The management measures, the rule does state that management measures must be established, as I said earlier, to provide a continuing assurance of compliance with the performance requirements. They should be commensurate with the reduction of risks that are attributable to them and within the rule are two key definitions. One is the management measures, which I've stated earlier. There is also a definition in the rule about available and reliable.

The definition on available and reliable recognizes that there may be particular controls that may not be needed continuously, such things as maybe modes of operation, addressing different circumstances during maintenance, et cetera. However, the performance requirements must be met.

Slide 9 70.64 discusses the baseline design criteria. The baseline design criteria parallels the GDCs in Part 50. They are to be applied before the ISA risk information is obtained and they should be consistent with the risk-informed regulation.

They consist of ten items, as a start. They can be more, but the rule specifies ten; quality standards, natural phenomena, fire protection, environmental and dynamic effects, chemical protection, emergency capability, utility systems, inspection, testing and maintenance, criticality controls, and

instrumentation and control.

New facilities and new processes must start with this as a minimum.

The rule does not abandon the concept of defense-in-depth. After all, this is a risk-informed rule, not a risk-based rule. So the concept of defense-in-depth is retained.

Slide 10 The application. 70.65 specifies additional contents of the application. It should be emphasized that this section is in addition to other parts of the rule where contents of the application are described; namely, 70.22.

The additional contents include an ISA summary and a description of the safety program, which consists of the process safety information, the ISA, and the management measures. The ISA summary is on the docket, but it's not in the license.

Slide 11 Contents of the ISA summary. Description of the site, description of the facility, description of each process analyzed by the ISA, demonstrated compliance with the performance requirements, requirements for criticality monitoring alarms and baseline design criteria, if applicable. Also, description of the ISA methodology used and the team qualifications. Also, a descriptive list of the items relied on for safety.

Slide 12 It also includes the proposed quantitative standards to address chemical safety, list of items that are sole items relied on for safety to prevent accident sequences, and

description of the applicant's definition of likely, unlikely, and highly unlikely.

One point to be made here is that the ISA summary contains three key items; a description of each process in sufficient detail to understand the theory of operation and for each process, the hazards identified in the ISA, and a description of the types of accident sequences. It also requires a list of items relied on for safety in sufficient detail to understand their function in relation to the performance requirements. It also requires information that demonstrates compliance with the performance requirements.

These three items are key in that they need to be sufficient to allow the staff to reach a safety conclusion. Staff needs to be able to conclude that the performance requirements are met from the information.

Slide 13 70.72 addresses the facility changes that are permitted to be made without staff approval and those that do require staff approval. It has a requirement for configuration management system. Any changes that are made for the ISA summary must be submitted within 90 days of the change and every six months a brief summary of all changes covered by 70.72.

Slide 14 Facility changes. Changes can be made without prior NRC approval if the change does not create new types of accident sequences that exceed the performance requirements or use

processes, technologies that the licensee is unfamiliar with. It does not remove, without equivalent replacement, the safety function of an item relied on for safety; does not alter an item relied on for safety if it's a sole item mitigating or preventing an accident, and, also, others that are not otherwise prohibited discussed in the rule.

Slide 15 70.74 and Appendix A in the rule discuss reporting requirements. The reporting requirements are consistent with the performance requirements. There is a one-hour reporting requirement for high consequences and criticalities and near criticalities. It also discusses acute chemical exposure, the high values associated with the acute chemical exposures.

The other reporting requirement is a 24-hour reporting requirement for incidents that are considered less significant than the one-hour report. These consist of acute chemical exposures that meet the intermediate requirement and such things as loss of items relied on for safety.

The reporting requirements are intended to supersede the 91-01 reporting requirements for criticality. They also require reporting loss of environmental controls and the radiation doses reporting requirements are still contained in Part 20. They're not here, but they still apply.

Slide 16 The Commission requested specific areas of comment. One area was backfit. The request for comment included comments

on the intent to defer the backfit provision, any suggestions for backfit that addresses fuel cycle and associated information. It also talks about recommended fine before implementation.

The rule asks for comments on options overlooked dealing with the OSHA preemption issue. Let me say a bit about that. NRC has an MOU with OSHA. The MOU consists of four parts, basically; rad risk from radiation materials, chemical risk from radiation materials, plant conditions that affect radiation materials, and, also, plant conditions that could result in an occupational risk, but not the safety of radiation materials.

The NRC has jurisdiction over the first three items that I mentioned. OSHA still retains authority over the occupational risk. The problem that has arisen is that OSHA may be preempted from enforcing its standards due to case law under the OSHA Act, which, in a nutshell, states that no two regulatory agencies may occupy the same field, even though we've parsed out responsibilities.

The only resolution appears to be a legislation modification to the OSHA Act, and we're requesting comments, if there are any other options that we've overlooked.

The Commission has also requested comment on the flexibility of the ISA to accommodate a wide range of technologies. We believe that it does, but we would accept -- we would welcome comments on that. Also, the Commission has

requested comments on the 90-day requirement to update the ISA summary pages. (Link to web page for commenting on proposed rule.)

That concludes the presentation of the rule. Are there any questions?

[No response.]

SHERR: As I indicated in the beginning, the purpose of this part of the meeting was to provide an opportunity to ask questions, anybody who is not familiar with the rulemaking effort. We have a fairly narrow group here and maybe there aren't any questions on that, which will make it easier to continue our meeting and proceed to the second half.

As indicated earlier, the purpose of this part of the meeting is to gain a better understanding of the rationale behind some comments that have already been provided.

The purpose is this meeting is not to try to resolve comments. Thus far, the only comments that have been received have been on the standard review plan, from the Nuclear Energy Institute.

The question is, are there any other attendees here who have comments that they would like to present at this meeting? So we'd welcome that.

The NEI comments, NEI has submitted numerous detailed written comments on all the SRP chapters, except for Chapter 11, unless that came in.

These comments have been posted on the Part 70 website, as they were received. I think they started coming in the middle of July or some timeframe similar to that.

These comments are extensive and at this point, staff is only at the preliminary stages of their review. We will continue to review them, in addition to other comments that are received, of course, from the public comment period.

Staff has completed review of the -- at least a preliminary review of the comments that were received by the end of August, which is introductory matters and Chapters 1 through 7, and have identified a number of questions that we'll hopefully be able to address today.

As I indicated earlier, a copy of those questions are included in the packet that you received today and at least the broader questions were also posted on the website.

No questions have yet been identified in relationship to Chapters 8, 9 and 10, but we anticipate those chapters, as well, in the meeting today.

Felix, we can maybe convene up front here now. The agenda for this part of the meeting will begin with a presentation by the NEI representatives on their comments, and the plan is to do this on a chapter by chapter basis, and after each presentation is made, questions will be entertained, first, from the NRC staff and then by others attending the meeting.

NEI Slide 1 KILLAR: I'm going to do a little different than what Ted has suggested here. NEI Slide 2 What I would like to do is, first, give a little observation on the rule itself before we move into the SRP. And I say these are observations, because we've just started looking at the rule, because we've focused primarily on the SRP in the last several weeks.

We spent the first half of the year trying to get the rule straight and we think that we've done a lot of work in that and we certainly appreciate the efforts of the NRC. I think that they did an excellent job, as well. But, of course, nothing is ever perfect. I'm sure that even after we get done and they incorporate all our comments, we'll find something we'll miss and we'll have to go back and make some other modifications as time goes on.

But I would like to point out just a few things that we see in the rule that we'll probably be putting into detailed comments as we go on. And these are in the handout that is in your package of stuff.

NEI Slide 3 Just to go down these fairly quickly. One of the things we want to make sure of is when we talk about assurance, we talk about reasonable assurance. Nothing in this world is guaranteed, other than taxes and death. So we want to make sure that we have reasonable assurance, not 100 percent assurance. So when we talk about that, that is one of our main focuses here.

And when we talk about our equipment, our personnel, our training and what have you, things happen. Things fail. Nothing will operate infinitum. So we want to have reasonable assurance that things will operate, but we can't guarantee 100 percent assurance. So that's one of our first comments. We want to talk about reasonable assurance, not necessarily assurance.

In Drew's presentation, he talked about the implementation period being four years. We prefer five years and the reason we prefer five years, if you look at the facilities who have agreed to incorporate an integrated safety assessment as a license condition or what have you, typically, the time schedule has been five years for doing that.

We do have some facilities, some Part 70 facilities who have been monitoring the situation and have not gone forward with putting an ISA together, because they're wanting to make sure that all the planks stop falling or whatever you want to say before they go forward, so they don't get into a start and restart basis. So we think a five-year implementation period is more reasonable and is consistent with the practice that the NRC has done in other facilities.

On the change process, we understood the change process fine, until we read the footnote, and now the footnote gives us real confusion. I think the way that Drew presented it in the discussion, in his overview, was very good and I think if

we drop the footnote, it will certainly take care of a lot of our confusion and concerns about how the change process would work.

But I think just to capture it, as we see it, and I think it is consistent with Drew's presentation, is that the change process allows the licensee to make changes at his facility, provided it's not a new process or is not outside the current safety evaluation. So I think that's consistent with what Drew has presented.

NEI Slide 4 One of the things that was new to us when we got to the rule at the end of June, July, when it came out and stuff, was this log for the safety items and stuff that have problems. We already have a system which we use for usual occurrence, usual incidence reports, what have you, and we'd rather see that this be incorporated in our system rather than have a separate log. So we're going to suggest that you change the wording along those lines to include this as a system.

We are concerned that the inspectors or whatever who come out and look for this log and it's incorporated in our total system, and so they'd be confused. So we'd rather make it clear that it is part of our system, and so we'd like to talk about a system rather than a log.

And the last thing is, this is an old one that kind of hangs around, it's sort of like Mike Weber, he keeps going and comes back, going, comes back, and finally he sticks. We hope

this will stick. The backfit rule should be immediately effective.

So that's our observations on the rule itself. We wanted to go and talk a little bit about the ISA, and, I guess, Charlie, are you going to provide that, the overall relationship?

SANDERS: Yes. If you have the chart.

KILLAR: I have the chart.

SANDERS: I apologize. I thought we were going to do this in the question and answer. We've talked several times about some kind of a process map and in one of the questions or a couple of the questions on the list that we got, there still seems to be some lack of clarity about how the NRC gets their job done and, in total, what the safety program is.

It's probably reasonable for where we are in this, because we've been spending a tremendous amount of time thinking about some of the new concepts and how do you implement those concepts through the regulation and then implement them through the licensing program.

I think as we go, though, we have to begin to look at this and see how various components of the NRC activities really affect safety and how they, in total, exercise their charge.

What we've put up here as the industry group is a look at the two distinct activities that we see out of the NRC. One is the licensing activity and that's on the left, and one is the

inspection activity, where the licensing establishes the safety basis for the plant and the safety or the implementation and operation of that system on the left is then verified on an ongoing basis through the inspection program.

This may not be totally all inclusive, but in the licensing activity, there are a number of things that are covered beginning right with the simple item of a description of what are the authorized activities. So it's very clear to the facility operator, as well as the NRC what the set of activities are that have been accepted for that particular facility.

The next one is the management organization, not a lot of detail in that, but basically there has to be some degree of commitment to a management organization, with the functions identified that are necessary to support the overall safety and operation of the facility.

Then there is a good bit of information required which defines how a facility conducts their operation. This is getting down more into the commitments at the operating level, the features that they have in there. Some of the key ones -- configuration management, training, audits, incident investigation, records, procedures. Those are pretty much the key kind of things that need to be understood.

Then the new one on the block is the integrated safety analysis. That's what we've been spending a lot of time with,

and, of course, the integrated safety analysis covers all the dimensions of safety, the radiation criticality, fire, human factors, systems, structures and components for assurance, and the maintenance of those systems.

The way that is factored in has to be included in the license.

Radiation safety is a particular safety discipline that is unique to nuclear facilities and so that has a place to look at that. Criticality safety is another one that is unique to our kinds of industry. Emergency management, environmental protection are a couple of cross-cutting issues that are important from a number of people's standpoint when they look at our facility. And decommissioning, of course, is a requirement that has to be addressed.

So in the licensing phase, it seems that the most -- the cleanest way to put what's going on in the licensing phase is the NRC is developing reasonable assurance that if the operator operates his plant in accordance with the commitments and performance requirements that are set forth in the license and regulation, they have a high probability of being able to do that safely.

And then if we switch -- bring down the inspection piece. So that gets the license approved, but then the plant has to operate and, again, at the site, there's a tremendous amount

of information. Once ISAs are done, that are available for review, and in support of operations. Obviously, not just an ISA summary, but the ISA results can verify conformance to the commitments that have been made in the license and the requirements of the regulation.

You've got all the operational history at the site, including the kinds of events that you all are interested in and have suggested need to be documented. You've got all of the management assurance routines and you've got the configuration management report.

So you really, through the inspection program, have a good, clean shot at what the plant's ongoing performance is, which also kind of closes your loop.

If the licensed program for the licensee is judged to give you reasonable assurance that if he operates to it, he's safe, and the performance on the other side is monitored in those general areas tells you it's safe, then you've pretty well closed the circle and said the plant is doing reasonably well.

It's still not clear that when we're looking at this rule or the SRP that we are always focusing on the whole big circle as opposed to still focusing on some of the new pieces that we're adding.

SHERR: The last statement you made, can you expand on that? The reason why I ask that, I think there are certain parts

of the SRP that deal with just our requirements that are independent of ISA requirements, as well as, of course, the parts of the SRP that deal with the requirements that are subject to the proposed rule.

I'm not sure I fully understand if that's considered a problem or not.

SANDERS: Let me try one example with you, but I don't know whether it's the best one or not. It's just the one that comes to mind right this minute.

Several places and particularly in questions and comments that we have seen, the NRC has taken the position that they need to assure or ensure the safety of the facilities and they have indicated that, for example, an ISA summary is not enough.

Well, I happen to agree that an ISA is not enough to assure the safety of the facilities, but there's a number of those kinds of phrases that show up in answers to questions that indicates that the NRC in this matter may not be stepping back and looking at all of the tools and all of the elements and trying to optimize the way they use their resource or their authorized approaches, however you want to define that.

KILLAR: Ted, maybe to help out, one of the things we saw there is confusion on is the Part 20 requirements, and that we're clear we have to meet Part 20 and we will have a radiation

protection program to meet Part 20 and the ALARA practicality of it.

But at the same time, we also see radiation protection as part of the integrated safety assessment and determining maybe what we have to do in order to meet Part 20 in some areas. Ventilation would be a good indication of that. If you look in the Chapter 4, there are some requirements for ventilation, but if we find, from doing the integrated safety assessment, that there is a minimal or very small likelihood of any radiation being released through that ventilation system, we don't necessarily have to go through the detailed type review that you would normally have done maybe prior to the integrated safety assessment.

So we need to make sure that we understand these relationships as we go forward and the way that the various other parts of the regulations impact Part 20 and Part 70 and vice versa.

PERSINKO: But in that case, would you still be -- I see what you're saying as far as ventilation system, directing you toward the accident type situations. But in your example, would you still be meeting Part 20?

KILLAR: Yes. We still have to meet Part 20. There is no question we have to meet Part 20.

PERSINKO: So I'm not sure of the difficulty here.

We're saying that the ISA would still direct you toward accidents, but you would meet Part 20.

KILLAR: Right. But one of the examples, like I say, in Chapter 4 was indicating that you needed to do this evaluation on the ventilation system without respect to a risk or hazard or things along that line, and I'd have to pull it out and see specifically.

But that's the time things that --

ASTWOOD: What kind of evaluation, do you remember?

KILLAR: I don't recall. I'd have to look and see.

ASTWOOD: We would have to look at whether or not that was addressed in the ISA and how you addressed it. Is that what you're talking about, our evaluation of how you met Part 20 for that ventilation stack?

KILLAR: We'd have to meet Part 20, there is no question about it.

ASTWOOD: Right. I'm not sure what evaluation you're talking about.

KILLAR: There is a relationship, though, between the integrated safety assessment and radiation protection, in addition to Part 20, and sometimes I think there is a loss there between those various relationships, between what we have to do and what's done as a result of the ISA.

COX: Let me see if I can -- this is Tom Cox. Let me

see if I can define the relationship and then we can discuss whether you think that's right or not.

The radiation safety or protection chapter of the SRP says what we believe is necessary to meet Part 20 requirements. If, in the conduct of the ISA, you determine that more had to be done to meet the accident performance requirements, then more would have to be done to a ventilation system.

If you felt that, as a result of the ISA, less would have to be done to, say, a ventilation system because it didn't seem to be of a high risk importance as a result -- or in the accident context, then you probably could not do less than what Chapter 4 says, because Chapter 4 is intended to describe the requirements or the acceptance criteria necessary to meet Part 20, which is a threshold we can't go below.

KILLAR: I agree with you 100 percent, Tom, except for one thing. In doing the ISA analysis, granted, we're looking at accidents, but we also are looking at sometimes normal operations and if we find in normal operations that, for instance, there is greater velocity across a hood than what we'd actually need, we can certainly come back and justify why we could use a lower velocity than what typically would be required.

COX: I would agree with that, provided you still met the Part 20 requirements.

KILLAR: And within the intent of Part 20, as well,

and also within the intent of ALARA.

COX: And that being the case, I don't think we have a problem. That's the kind of relationship we would have between the ISA work, which deals with accidents or acute consequences as opposed to the Part 20 requirements, which we cannot diminish at all.

PERSINKO: Let me read in the standard review plan on ventilation systems. It states that the staff will review the applicant's requirements and operation of the ventilation system, including minimum flow velocity at hood openings, types of filters, maximum differential pressure across filters, and frequency and types of tests required to measure ventilation system performance.

All that is necessary to meet Part 20. So I am confused about where you're going with this.

KILLAR: I'd have to go back and look and see the specific comment. I don't recall the detail.

SANDERS: I think part of it is probably a confusion between the way we organize and see things and do on an operational basis versus the way we read them in some of this guidance, because you all are now making a distinction between normal and accident conditions, and there obviously are a lot of distinctions between those kinds of situations.

However, from an operational standpoint, your rad

safety program, for example, has to handle normal operations, has to handle accident situations, and is, in fact, an integrated part of the safety analysis program at the facility.

So the cut that you're putting on it is a slightly different view than what we have at the facility and when you add that up with several different disciplines, particularly those that are unique to our industry, it's just coming across a little bit tilt with our people.

Now, it may be fine like it is, but it's creating some problems in terms of understanding exactly what's intended.

PERSINKO: Can you describe more specifically what the problems are?

SANDERS: This one was the one that bubbled up to the top of the list. It just -- and it may be nothing in the world but confusion. That's the best -- I would say that since that one kind of uniformly bubbled up with the whole group, that's probably the best example there is.

KILLAR: Maybe we ought to spend a few more minutes also talking about the ISA, the ISA summary, and the commitments to do the ISA. I think that there is some confusion here and we want to see if we can clarify that.

SHERR: For clarification, are we now into your SRP review?

KILLAR: Yes.

SHERR: As contrasted to the rule?

NEI Slide 5 KILLAR: We're moving on to discuss Chapter 3 now.

SHERR: Our suggestion was that the first part of the presentation be on the broader issues, the overarching issues that seem to cut across a number of chapters. I think Charlie had alluded maybe to some of them maybe in his -- are you prepared to address those?

For example, the basis for -- Charlie referred to the notion of that the license review should be focused on commitments and performance indicators. We'd very much be interested in exactly what you have in mind in that arena.

KILLAR: Certainly we can address that, that's very simple. For one thing, we misspoke when we called them performance indicators. We want to call them performance requirements, not performance indicators.

Basically, what we're saying there is that we make certain commitments in our license of things that we will do in order to carry out the programs, but in addition to those commitments, there are requirements already in the regulations that we have to meet. So our programs talk about how we will meet those requirements. So that's the two things we're alluding to; that the requirements and the regulations that we have to meet, and then the commitments we make in order to demonstrate compliance with those requirements.

So I think there is some confusion there when we use the term performance indicators rather than performance requirements. If you look at your question, maybe you can -- that was what our -- when we read that, we thought, well, maybe that's where the problem is. Maybe if you could look at that, maybe you could help us understand your question better.

SHERR: We're talking about the performance requirements of the rule.

KILLAR: Right.

SHERR: I think it's clear from -- hopefully it's clear from the SRP language that staff is looking at reviewing the application to essentially be -- have assurance that, in fact, the safety program that the licensee has identified and the analysis on which that is based does, in fact, meet the intent of the rule and satisfies the performance requirements of the rule.

Now, is your view in terms of what the conclusions that the license reviewer is to reach different from that? Does your proposal that, in fact, the license application include commitments to accomplish certain things consistent with the performance requirements of the rule, but that, in fact, the application doesn't have to demonstrate to staff that the program that's described in the application would, in fact, satisfy the performance requirements?

KILLAR: I agree with you. I think what we're running

into is the degree of information that has to be provided in order to provide that demonstration.

If you look at the existing practice, we provide the commitments, the radiation protection commitments for fire protection and chemical safety, nuclear criticality safety, and a general outline of what our program will be, and then at our facility itself, we have the detailed program, how it's carried out.

And when we look at this revision in the rule, we're thinking along those same lines; that when you talk about the integrated safety assessment, we'll provide the commitments for what we will do in the integrated safety assessment, as well as an outline of how we will go forward to meet the performance requirements through the integrated safety assessment, through the summary report, and the details will be in the integrated safety assessment itself that's kept at the site and certainly available for your review and considerations.

And so we don't see much difference changing there. However, in reading the standard review plan, we don't get that same philosophy coming through from the NRC when we start looking at the integrated safety assessment.

SHERR: What do you perceive?

SANDERS: Let me just add a comment, because it's embedded in the one chart I'll put up again. I hate to go back

and talk about that, but there are words, and if I had my questions here, I had some examples out of the questions that I had marked.

But the NRC seems to be using phrases like ensure, verify that the ISA was performed correctly. Can you think of any others? There are several of those in there. And to be honest, it's placing burdens on the reviewer that they can't do.

There are a lot of things a reviewer can do with regard to the ISA, but they can't verify that it was done totally correctly. They can verify pretty easily that it was done in accordance with the commitments and the regulatory requirements and some of those, but there is only one way to really verify the correctness of an ISA, and that's to be there with a team and do it.

You can do more at the site than you can do out of a book. So somewhere there has to be a level.

The other thing is to be able to ensure that something is there, it's just almost impossible to give an insurance policy from the reviewer's position. So therefore, it seems like that the instructions that need to be going out is that the license reviewer does enough work to provide reasonable assurance, as opposed to total assurance.

And the way it comes across when I read it, you're asking for absolute assurance, and you just can't always do that.

COX: Tom Cox again. I don't know what I can do to assure you that we really are looking only for reasonable assurance and if that needs to be added in more places in the SRP, we can certainly do that. That is the intent.

I know it says it in a number of places already. If it doesn't say it in the right way or in enough places, we can do more of that. But that certainly is the intent, beginning with the very introduction to the SRP, which I think covers that.

It has to be noted that I think we are talking about to what degree a reviewer has to see information in the ISA summary in order to arrive at this reasonable assurance standard, and I think we probably have to have some work to arrive at a middle ground on that. I think our ISA reviewer, Dennis Damon, will probably address that at some point as the day goes along.

But I can assure you we are looking for that content in the ISA summary that will give the reviewer only reasonable assurance, not absolute certainty, of what is out there. But we will probably have to discuss at some length what that material is going to be, because we think that as the SRP states it today, it's closer than what we see NEI telling us it ought to be.

PERSINKO: You mentioned about the ISA being performed correctly. I don't think we would ever do a 100 percent review of your ISA. But there are ways of looking at different cuts of it and then inferring that the ISA was performed correctly.

So when we say it's -- we do have to -- I believe that we have to reach that conclusion, since the ISA is the foundation of all of your conclusions. But to do that, we have to obtain certain information to do so, and unless we're using a different definition of commitment, I don't know that we can get that information from a commitment.

SANDERS: Well, I think it's a combination of the commitments and the summary and I think you probably have to make some site visits to just verify that the paper you're getting actually does represent what's going on.

So on a lot of that, we're not in disagreement, but we still feel like the bar is awfully low in terms of what the reviewer is being instructed to have to sign up to when they do your license review.

I think if we could get that cleared up, in our minds, then some of the other issues might not be as difficult to deal with.

PERSINKO: That may be true, but I think it may be tied to how you're going to define commitment. If you merely say we commit to perform an ISA per the regulations and stop there, I don't think that's sufficient for a license reviewer to reach his or her conclusion.

SANDERS: I don't either.

PERSINKO: Okay. At least we agree.

SHERR: Let me try to summarize what I hear. We seem to be in agreement that the license reviewer has to make some substantive conclusions about the adequacy of the safety program and the analyses that support that program and the vision that part of the basis for those conclusions will be information that's submitted to NRC and part of the basis will be on information that's otherwise available on the docket or at the site.

And best as I can tell from our discussion here, there doesn't seem to be any concern with that type of thing.

The nature of the concern is more of gathering, Charlie, as you put it, the bar is too high, that you're concerned that the amount of review that it's going to take for the reviewer to conclude that the ISA is acceptable is more than is needed. There are things that are stated in the SRP that give you that feeling.

Is that a fair statement?

SANDERS: Yes. We believe that the demand in terms of assurance on the reviewer is possibly higher than he can achieve and that because of that, it is driving the requirements and statements in the SRP in a direction that requires much, much more information than might be necessary for that particular phase.

I really would challenge you all to sit down and make

a process map. I'm not talking about a big study. Just a very simple process map to look at all of the tools that the NRC uses to oversee the safety at our facilities and just see how those building blocks fit together. I really wish we had one to talk about, because I'm sure we could find a lot of places that look pretty good and there aren't any problems and it would help us focus in on some other issues.

But sometimes those can get to be real projects. I would suggest to keep that one simple.

ASTWOOD: I have an additional question. This is Heather Astwood. We've been talking for the last few minutes specifically about the ISA and the information for the ISA, but it was my general impression that you felt that way about the entire SRP. Is that correct? That it was requiring too much detail and too much information to be submitted and reviewed by the reviewer.

SANDERS: That's generally, yes, even though we're not really talking about the SRP right this minute. But we have felt that way.

ASTWOOD: That was my impression at the beginning of your statements, that -- with the ventilation, that that carried through the entire SRP. That then leads to my next question, which is, it's my feeling and the feeling of the other reviewers who put together this SRP that it represents the type of

information that we are currently asking for in license applications and the amount of information that we currently review in license applications.

Do you not feel that that is true?

SANDERS: I don't think we have -- my perception is that we're not necessarily suggesting that there is a wide gap between the information you request now and the information that you want in the future. There is some difference because of the ISA.

ASTWOOD: Right. I understand that part.

SANDERS: That has been an adder. But some of the rest of it, again, I think, is, in part, a language, and I don't have any examples right sitting here with me, there's a number of places in language that makes us sensitive to the point that we feel like maybe there is more there than meets the eye. And that's the reason we have submitted as many comments as we have on the SRP and, quite frankly, it's a little confusing on our side, because we've submitted all these comments and we really haven't heard where they've gone.

So we're a little bit hamstrung in terms of being able to understand what to say next, so to speak.

ASTWOOD: I think we're just trying to get an understanding of why you made the original comments. So I understand that if we work on the wording, which is your

suggestion, but stay at the same level of detail of current applications, that that would be acceptable.

SANDERS: I think that's true. I can't speak for everybody.

ASTWOOD: Thank you.

KILLAR: And I certainly can't speak for everybody, because we certainly have a poll to question, but I do get the impression that you are asking for a little bit more detail than what you have been asking in prior license renewals.

The one thing that bothers us a little bit about that is because of the experience we've had in the industry and the number of renewals that we've gone through, that we would think that you'd need the same level of detail today that you needed back in, say, 1965 when these plants were started, because you were just starting to learn the process, learning how these things work.

Now, I would hope that the NRC has a better appreciation for where the risks are and how facilities operate, so that they can identify the areas that need more attention and not have the same level of detail throughout.

But that's something I think we have to work on.

COX: I'd just like to address what Charlie just said, because it has to do with this whole meeting and how we're going to go about it.

Charlie mentioned that we're kind of at a loss to know what to say next because these comments have come in from NEI and they haven't heard anything on them and they're kind of wondering where this all stands.

Well, the purpose of this meeting, as Ted described, is for us to hear more about why -- and maybe I should not use the word why, but rather what some of these comments that you have made in such large volume really mean, because we have had some difficulty in determining what the comments are driving at in some ways.

The questions that we have posed in return and given to you, I think it was last Friday, are intended to elicit some further comment on your part as to what the particular comments meant, and so that we have a good understanding of what your comments are and what you are asking to be done, so that we can go back and then revise this SRP over the next two or three months with some better and as good a knowledge as we can obtain as to what NEI is really driving at.

So it's not that we're resolving these issues today, but we're trying, through our questions on your comments, to elicit some more explanation, elaboration, expansion of what your comments were driving at. That's really the kind of response we're asking for from you at this meeting.

KILLAR: And, unfortunately, we only got the first

couple questions Friday and the balance of the questions didn't come in till late yesterday afternoon. So we haven't had the chance to go through all your questions to see where you're coming from, where your issues are with what we have supplied.

So this is -- I haven't even read all the way through them, because I haven't had the opportunity to read through them this morning. So we are getting hit kind of cold with the questions. So we're trying to sort it -- almost shooting from the hip here, trying to give you answers, because we're not sure what your questions are.

I might go back to some of the points we talked about a minute ago. One of the concerns with the SRP is that we're concerned with the way it's drafted in that it's leading the reviewer to go down and ask these more detailed questions, and it's not so much because the concern for the safety of the facility or what have you, but it seems to be more of a concern that you have to have this thing documented down to the final detail so you can put in the public record that, yes, we've reviewed every detail and, therefore, we know this facility is safe.

And while we're moving to a risk-informed performance-based regulation, this type of detail has a tendency for us or at least appears to us to be going back to more the prescriptive paper-type safety evaluation, safety philosophy,

compliance philosophy, rather than the performance philosophy. And maybe you didn't intend it. Unfortunately, when we read it, that's the way it came across to us.

PERSINKO: I don't know if I'd agree. I don't think we're trying to say it's -- I mean, you have to comply with the regulations, but I don't think we were trying to intend it to be a compliance philosophy.

But on the other hand, I think that the reviewers do need to get into some depth of review to reach the kind of conclusions we want. That's where we saw the dichotomy. Some depth of review to reach certain safety conclusions versus looking at commitments to try and reach the same safety conclusions.

So we're trying to wrestle with what level of detail should a license reviewer be looking at to reach those conclusions.

SANDERS: Well, commitments are probably satisfactory, in some cases. Again, it's a question of using the tool that is most efficient for what the task is, and so you've really got to use all your tools and use the right tool for the right thing. And where things are not quite so important, then verifying commitments might very well be enough to meet that objective.

On the other hand, as things get a little bit more important in their overall role in the safety program, then you

get into more and more verification and there's probably some critical ones that really require a great deal of attention. They're probably different for different facilities, but in all cases, you've got some places that need some real special attention.

So that's kind of what we're saying, I think.

PERSINKO: I agree. There may be cases where commitments are appropriate. But, also, keep in mind, I mean, we're trying to reach a safety conclusion at a given point in time and a commitment is a future IOU, if you will.

So we're trying to reach the conclusion now.

SANDERS: When I use the term commitment, that means a specific commitment written in the approved license that is available now or at some previously acceptable implementation date between the licensee and the NRC. So it's not a future IOU.

COX: Let me try to deal a little bit more with what our issue is.

We need to understand what we're talking about when we say commitments and you say commitments. I think what we have seen in the comments that you've given us is that the commitments you would make are at a more general level of detail, a higher level, if you will, or less detail than the commitments we would like to see.

When we talk about commitments, we mean commitments to

the acceptance criteria in the SRP. Essentially, your comments back to us in writing have said we want to make commitments at a much higher level of detail, if I'm getting this right, higher level of detail.

We all understand, I mean, less detail, more, as you would say, at a performance level. But those kind of commitments, while made now, can't be verified in any detail except by inspection later. If the commitment is to just do well or to meet some performance requirement -- that is, I will not have an accident sequence that exceeds more than 100 rem to a worker, but we have no description of how you're going to go about assuring that, then that's the kind of commitment that we say is at too high a level of detail, not enough detail, not enough programmatic information so that we can understand how that will be accomplished.

So the reviewer, we feel, then cannot make a reasonable assurance finding that reaches out ten years and says this design is -- we find reasonable assurance that the design is okay and that the applicant will operate the plant within some parameters that will assure this won't happen.

If we don't have any detail below we won't do it, then that's not enough detail and that's -- I think that's our issue, is what level of detail are the commitments going to be at.

SANDERS: I know you made the response and this in no

way relates to you personally, but I think that's just another opinion expressed by the NRC that drives right at the question that I alluded to much earlier about what piece of the NRC activity is the one that gives you whatever kind of assurance that you have to reach.

And, A, it's got to be reasonable, so you've got to ask yourself, at the licensing phase, what is it that's reasonable, and in the licensing phase, you're not going to be able to do everything that you can do once you're able to use some other tools.

That's to make a decision as to whether the facility can start operating. There's lots of controls in place, there's lots of feedback mechanisms in place, and those have to all be right and functioning.

The inspection or verification activity at the sites is what you look at when the site starts running. I mean, the factory talks to you every day and that's what you need to be looking at to find out if all of this other is working.

So, again, it's go back and apply the right tool to the right task and you can get it done better.

KILLAR: Tom, maybe go back to one of the points you raised and it's one of the things that actually, when you said it, I cringed, because I felt it went right to one of the concerns that we have.

When we make commitments, we make commitments because there are things that we want to do or there are things we have to do as a result of the regulations. What you said is we make commitments to the standard review plan and the standard review plan is just guidance, and we don't make commitments to guidance. So that bothered me.

I think this is part of where we're coming from, is that in discussing commitments and things along that line, is that commitments are the things that we will have a nuclear safety program, we will have a radiation protection program, we will do an ISA, and then part of those commitments, we will do that in this -- with these attributes; we will have the right people, qualified people to do the nuclear safety, qualified people to do the radiation protection, qualified people to do the ISA. We will carry it out with established practices, criticality safety, we'll use ANSI and 8.1, radiation protection, the ANSI standards we use there, ISA, we'll carry it out according to the chemical safety, the NUREG and things along that line.

So it will be the chief attributes and then what we will do, we'll make these commitments to do these, but then we will supply you the basics of how we're going to carry these out. We'll provide you with an overview of our chemical safety program, overview of our nuclear safety program, and the

integrated safety assessment summary, and those tell you how we're going to carry those programs out.

And these are designed to tell you, okay, these are commitments, these are things we're locked into, come over, beat us over the head, fine us, close us down if we're not meeting these commitments.

These programs below this, how we carry them out is the way we're demonstrating we're doing this, and then that is what gives you your basis for saying, yes, we can carry -- we have put together a safety program and we are carrying it out to assure the safety of our workers, the public and the environment.

Then you have your inspection program to make sure that we are doing what we said we're going to do. Those are sort of, from my perspective, the three levels that we're looking at and the problem is that what we're seeing is that rather than just this overview of how we're going to carry these out, what you're looking into is more the details of the specific program that's going to be in procedures, policies and what have you at the site that you're asking the license reviewer to make that determination from that type of information.

COX: What you said was rather than looking into the details of how we're going to carry this out, you have the reviewer looking at something deeper than that.

KILLAR: What I'm saying is that the reviewer has to

look at the commitments we made. He has to look at how we indicate we're going to carry those details out, how we're going to carry those commitments out, how we're going to meet those commitments and stuff, and that's to the extent that he has a comfort level that we are going to carry out the programs to meet those commitments to assure the safety of the public.

And I don't think there is a disagreement. Where we have the disagreement is that the way the SRP or the way we read the SRP is that you're asking the reviewer to take it one level deeper and look at more detail of how things are done at the plant to assure himself that that's being carried out.

PERSINKO: Based on what you just said, I don't think I heard in there that the reviewer is to look at the outcome of the ISA or the outcome of the commitments. He or she is just to look at the commitment to do it within a certain method and reach the safety conclusion based on that.

Are you suggesting that a license reviewer does not look at the outcome of those commitments, such as the ISA?

KILLAR: Well, he has to look at the ISA summary to see that we have done the ISA summary in accordance with what we committed to do and that summary makes sense as far as meeting the safety requirements.

If we do an ISA summary that isn't worth the paper it's written on, the reviewer certainly has the ability to send

it back to the licensee and said, hey, go back to page one, you haven't told me what I need to know based on -- in order to demonstrate that you're going to carry this program out the way you've committed to carry it out.

SHERR: The question of level of detail. We were talking earlier about the level of detail of the commitments that are in the license application, and then we also talk about the level of detail of information that the license reviewer will focus on.

I think the statement was made that, you know, a certain level of detail shouldn't be looked at or something like this. Earlier on, Drew had identified the notion that the review would, in some cases, take a vertical slice, a sample of what's been done, to gain confidence that, in fact, when one gets the detail, it does match with the overall commitment.

And I gathered, in response to that statement, that that was -- there wasn't any discomfort with that notion. It seems to me the problem would be is if the impression is that we would go to the lowest level of detail across the board for all aspects of the ISA, for example. But if we're taking a vertical slice to, in fact, gain assurance that when one gets to that level of detail, yes, the details are, in fact, there and we're doing it on a sampling basis, which is our intent.

KILLAR: Ted, I hear what you're saying and I agree

with you. However, the way we read your SRP, it doesn't read that way. It doesn't indicate to the reviewer that is what he is supposed to do as far as to make his determinations.

If I was a reviewer reading that SRP, I would be looking for a vertical slice. I'd be looking for every piece of information I can get. So if somebody came and asked me the question did you review this, I could say damn right I did and here is the paperwork to document that I did. I think that's where we have our fundamental difference.

COX: Maybe we could go to a particular NEI comment and that bears on what we're talking about here. In section 3, you pointed out, and this is a quote, "The review should focus on an assessment of an applicant's commitments and proposed performance indicators and not on specific details outlining how a particular performance goal will be met."

And I heard you earlier say you'd rather use the word performance requirements than performance indicators. Could you give me an example of what kind of proposed performance requirement would be an adequate thing to focus on as opposed to specific details outlining how that goal would be met or that requirement would be met?

KILLAR: Certainly, if you're talking about performance requirements in the ISA, it's meeting the 100 rem for the level three or whatever the numbers are, I don't recall, off

the top of my head, and as part of the ISA summary, we would demonstrate, for each of the high risk systems, the accident scenarios that we've looked through and the mitigating equipment and things we have to assure that that 100 rem isn't exceeded. So that would be what the performance requirement is and then what the process for carrying that out is.

COX: You would describe how that performance requirement was met, by some set of accident sequences?

KILLAR: Yes. That's part of what the ISA does.

SANDERS: You all are getting me confused. We really intended to use performance requirements. So we need to put that behind us. And the performance requirements are those that are established in the regulation and any particular aspects of details of the license that is most easily represented by a simple statement, like you will limit your exposures to those in part such and such, you'll have free release of material for the plant, will utilize these kinds of limits and these kinds of surveys.

There are very specific kinds of statements that you can put in the license and the cleanest way to do it is to just say how it's going to be.

On the other hand, in parallel with that, and those examples are radiological, there is a whole chapter that talks about the radiological program, which, A, has to handle routine

operations; B, has to handle accident conditions; and, C, has to be integrated into the overall safety program.

So when you get into the chapter on radiological protection, then you have to deal with some of those things that you can't say with just one sentence and actually do require a little more detail and explanation.

So, again, we're looking at it that there is a combination of tools to use to be able to put together this license in an efficient manner.

One of the reasons we like the simple statements is because it's very simple to implement them. If you write these kinds of statements, it's very easy for everybody to understand what they mean, and when that's the case, we believe we get better conformance than we do when it's a little bit more complex kind of instruction that you have to comply with.

So we like to use the simplest tool we can and work our way up, recognizing that the simple tool doesn't always work.

COX: But the simple statements you mentioned to describe or to commit to meeting the performance requirements are those things that you mentioned. And you also said that you would have in there some description of how those things are accomplished. Didn't you just say that?

And I'm just not clear how that is different from what we are asking for in Chapter 4, where we ask, in the acceptance

criteria, that you describe the ways in which these things will be accomplished. And that's just what you said you would do.

SANDERS: Well, it may be because of the organization of the chapters and where the type of information is mentioned.

ASTWOOD: Can I ask one clarifying question? Because I'm still not sure I particularly understand. In a lot of the chapters, you have said that we should look at the commitments and specifically in Chapter 4, we should examine the applicant's proposed performance indicators, and you even put those in bold.

I'm still not sure what a performance indicator is. You said that's actually a performance requirement, but then you say that that's part of the rule.

So could you explain what an applicant's proposed performance indicator is?

SANDERS: I'm not sure that those are completely described. There are some of the in the rule. We had a charge from Dr. Paperiello some time back to look at performance indicators and we've been working on that. In fact, I think later this week, there is a session on Thursday, I think, that talks a little bit about some of that.

ASTWOOD: For inspection, right? Inspection performance indicators, on Thursday, that's your meeting?

SANDERS: Right. But I think it's kind of important that we look at what comes out of that when we think about this

piece, too. This piece really kind of should be leading the way, but it has to be integrated with the inspection effort.

So I think we get some insight out of that. So to say that all performance indicators right this minute for our facilities are defined, I don't think we could say that, because we've got some in the rule. There are some more that probably fall out, and then I think we've got another chapter with --

ASTWOOD: I think that's where a lot of the confusion from the staff comes from when reading your comments, because you are very strong in a lot of these chapters to say we should only focus on the commitments and the applicant's proposed performance indicators, and not on any detail about how those are met.

And without our understanding of what you mean by that, what level of detail that is without encompass, it's very difficult for us to understand then how your comment applies to what we should do with this SRP chapter.

SANDERS: Just one other comment, from what you just said then. We do react in a lot of those cases and when you see that kind of comment, that you're not sure what that means, probably 95 percent of the time, it means that we're still seeing a lot of evidence that what's being discussed is too prescriptive and that it's our plea to move from so much of a prescriptive set of requirements to one that is more performance-oriented.

We may not communicate that real well, but I would say

at least 95 percent of the time, that's the root cause for the comment, just a suggestion to help you read those sometimes.

KILLAR: I think that's also part of where we had the perception that's driving the reviewer to look into more and more detail than what we have been providing in the past.

TEN EYCK: Can I make a comment here? You just said something that keyed something, in my mind. That is, rewriting our rule to make it performance-oriented allows you to meet that performance by various ways, and not necessarily the way that we would specifically prescribe.

But in meeting that performance, it doesn't mean that you don't give us prescriptive details on how you're going to meet that performance criteria. We still need the detail to know how you're going to do it before we grant you a license to operate with special nuclear material.

What I think I'm hearing from you is that you want to have a performance license that says take my word for it, we will implement this commitment, and I think what that does, from our perspective, and maybe I'm wrong and I need to have a better understanding of what you're saying, it then puts the onus on the inspectors to have to inspect safety in the facility, and we're trying to get away from that, because we want the commitments that are necessary to ensure safety to be made in the license.

KILLAR: I don't think you're correct, Liz, because

we're not saying that. We're saying that we're going to make commitments, we're going to abide by those commitments, and we're going to provide you information to demonstrate how we're going to abide by those commitments.

What our concern is is that your -- from what we read in the standard review plan, you're asking for more detail than what we would normally or have been providing in the past in demonstrating how we're going to meet those commitments.

So, no, we're not trying to not tell you how we're going to do these programs. We have to tell you how to do these programs, because you have to be able to be comfortable before you'll let us handle the material, that we're going to handle it safely, because you'll have -- if you're a new facility, you have no track record with this, and so you have to have a level of comfort that we are going to go out and carry these programs out safely and effectively, to assure the safety of the public.

Therefore, we have to give you enough information to where you're comfortable to give us a license and allow us to do that.

But where our concern is that you're asking for more detail than what you've asked for in the past, or from our perception, and this is strictly perception, and so you're saying that, well, we want to know how you're going to do it and we want to see your actual how you're going to do it and your procedure

and things along that line.

Now, granted, I know it doesn't say procedures in there, but it's coming close to it. I know just looking at the ISA, every time we've talked about the ISA and what you've asked for in the ISA and the way the ISA has turned around, we've got to the position, we say, well, gee, you know, they've asked for so much, why don't we just give them the whole ISA on a floppy or a CD-ROM and then they can read all they want to on it.

But that doesn't do us any benefit, it doesn't do you any benefit, because then you've got tons of information and without a summary to try to help break that down, it doesn't indicate where you need to look on that floppy and stuff.

So these are the problems we're having. I don't think we have disagreement as far as providing you information. We certainly intend to provide you information, provide you information here in Washington so that you can sit down there, as a license reviewer, and have a level of comfort that our facilities are operated safely, and, at the same time, if you send your inspectors out to see that we're carrying out those programs and we're carrying it out in the manner that we said in the information we supplied at the plant.

And we're not looking for safety to be inspected, and safety can't be inspected.

PERSINKO: I would counter that. The comments you

provided I don't think agree with what you just said. In total, they give the perception to us that you're looking for commitments, without the implementing details.

KILLAR: Details is a nebulous situation. I look at something and I say it's too detailed, someone else looks at it and says it's not detailed enough. So I think when you start looking at the definition of detail, you will find that there is certainly a difference between what I consider an acceptable level of detail versus what someone else considers an acceptable level of detail.

And so maybe it's an overreaction on our behalf and that the -- and maybe you guys are all right after all, who knows.

SHERR: Point of clarification. Earlier on, Felix, you had mentioned that on this notion of performance indicators, that we should basically read that as performance requirements. Then in the course of Charlie's discussion, I started getting the impression, no, in that particular context, you really meant performance indicators.

I guess my question is, in terms of us interpreting the comments that you provided, how do you want us to read it?

KILLAR: Right now, I'm probably as confused as you are.

SANDERS: That particular statement read as

performance requirements.

KILLAR: We are looking for a performance-type rule and as a performance-type rule, you have established performance requirements. Certainly when you get into the inspection program, you need to look at performance indicators, and I think when you start looking at things like radiation protection or what have you, you have performance requirements.

The performance requirements are, you know, don't dose your workers, don't dose the public, things like that, but those aren't very meaningful things. You have to have a specific way of demonstrating to do that, and so you get a performance indicator.

So they are related and so I think you have to be careful when you use those terms that you understand what you're specifically looking at.

A performance indicator, to me, would be something that is measurable versus a performance requirement.

SANDERS: One example might be of a performance requirement is you operate your plant ALARA and then there's a -- you describe how you do that and then there is an annual review or some periodic review that you're required to do to look at indicators to make a determination as to whether your plant was operated ALARA for the previous period, and then to consider things that need to do for future operation.

So that is initially a performance requirement that deals with operating your plant ALARA, coupled with indicators that get looked at to determine whether that requirement has been met. That's the kind of model that we're talking about.

So it's sometimes easy to get confused between requirements and indicators, but when we say requirements, we really mean that, except in this one case, we used the wrong term for it.

SHERR: I was just going to suggest that it's now ten to 11:00. Maybe there are some people that really urgently need a break. So I suggest that we have a break now and continue our discussion in about 15 minutes, five after 11:00.

[Recess.]

SHERR: To review where we are, I guess. We're still addressing kind of the overarching issues and maybe slightly into the NEI presentation on the ISA summary.

I suggest that we continue with the overarching issues. I think we've covered -- there were -- in the overall generic NRC comments and questions, some of them related to commitments and performance indicators, and I think we've talked about it as much as we can usefully talk about it at this time.

We talked about the ISA versus the ISA summary, in terms of the general terms at least, the information that is in the review process.

One area that we only touched on briefly, and I think we want to talk about some more, is the role of the acceptance criteria and concerns, generic concerns that are expressed in NEI's comments in that area.

In the area of radiation protection, I think we've talked about the general comments in that area. And the other issue that we need to talk about a little more is the issue related to qualitative versus quantitative considerations.

Drew, do you want to pick up on the SRP acceptance criteria issue?

PERSINKO: Our overarching comment number three on acceptance criteria, we've looked at your comments and some places in the comments you stated that -- you seemed to be suggesting that the acceptance criteria be limited to regulations, regulatory guidance documents and industry code and standards, and that's all.

We thought, we felt that the acceptance criteria should be our way of conveying to the reader, be it the license reviewer or anyone else, in as much detail as we felt necessary, to describe what we felt it was, what the acceptance criteria should be, rather than just listing codes and standards.

Also, within -- then a separate question, a separate discussion would be within a code and standard, you stated several times that adherence to every provision in the standard

should not be expected.

If you're not going to meet that, then we'd like to discuss that a bit, because standards, as you know, have a number of shoulds and a number of shalls and oftentimes even the shalls are not absolutely necessary in a standard. So we'd like to discuss that a bit.

So I guess with that, have you thought about our question number three, our overarching question number three?

KILLAR: Yes. We have looked at your question number three and we agree with you. Shoulds are shoulds, shalls are shalls, they shall be addressed accordingly.

The only thing is that the -- and I think you recognize, if we have a blanket endorsement of a standard or something along that line, a NUREG or what have you, that we certainly have provisions to say that, well, we will agree with this standard, with these exceptions or things like that, they should be permitted, and I don't think there is a difference there.

So I don't think we have a problem with what you're saying.

PERSINKO: If you commit to a standard, then, do you interpret the should as well as -- the same as a shall, unless otherwise identified?

KILLAR: A should is a should and a shall is a shall.

PERSINKO: So you don't say that you're going to commit to all the shoulds, then. You won't specifically identify which shoulds you're not following.

KILLAR: Certainly, we will identify the shalls we're not following. The shoulds I think will probably be --

SHERR: Sounds like who's on first.

KILLAR: A should is something you should do, but it's not required to do. And so, therefore, we're not as concerned with the shoulds as we are with the shall. Certainly, if we get a question, specific question that says, well, you should do this, are you planning to do that, we will certainly respond.

But I don't know if we would go through and identify every should that we will or will not accept. Certainly, we will on the shalls, but we will view it as the standard recommends, a should is a should and a shall is a shall.

PERSINKO: So what we said in our question here, where we said if an applicant makes an unqualified commitment to meet a standard, then the staff must assume that all criteria in the standard, both shall and should, are committed to without exception, you don't agree with.

KILLAR: Back to the point I made earlier, that if we have exceptions, we will note the exceptions, and the exceptions would be specifically to the shalls and they may be to the shoulds, but the shoulds are not requirements. So, therefore, we

don't necessarily have to say whether we're going to abide by the shoulds or not.

SCHILTHELM: Drew, this is a -- you can't generically answer this question. This is a case by case situation. You know through the development of your regulatory guides that when you're endorsing an ANSI standard, you have to make certain interpretations. Some of your reg guides expand on the ANSI standard. Some of them accept portions of the ANSI standard.

The same situation would exist with the licensee, I would imagine. On the other hand, when you have a regulatory guide, I think, as an industry, we wouldn't see that the standard review plan should deviate from the regulatory guide that has gone through the appropriate process to be developed.

And in some cases, we do see some additional expectations above regulatory guidance in the standard review plan.

So I think ANSI standards and reg guides, our view on those two is different.

Was that clear?

COX: I think your answer is fairly clear, that you view regulatory guides and ANSI standards differently. I think we probably would, too.

But I think that our understanding here is -- or what we're trying to get at is not whether you view them differently,

but how you would respond in describing to us how you comply or not comply with a referenced standard. When I say referenced, I mean the applicant has referenced this. You have said, you know, we're going to do, in accordance with some standard or some guide.

And our understanding is we think that an applicant should tell us in what way they are complying with this or not. If the applicant is not complying in total with this thing, then all we're asking is how do you not comply with it, so that we can understand the level of compliance with a referenced standard or regulatory guide.

SCHILTHELM: I think we agree, and we would have to do that, because your inspection branch would demand that.

KILLAR: I think we have experience right now, if you look at ANSI 8.1, on the criticality, typically, the industry endorses that. But if you look at each of our licenses, you will see that we have exceptions, different ones have taken exceptions to different parts of that, and we would use the same practice here.

We don't see that the practice will change any different than it has in the past. I think the point that we are trying to make in our question is that just because you blanketly endorse this acceptable way, we're not obligated to blanketly say we're going to abide by it 100 percent.

COX: That's true, and all we were trying to gain an understanding of is that you would respond and tell us in the application what those differences are, how you did not intend to adhere completely to the standard. Just tell us what ways that you're taking a different path.

And by something we read there, it didn't seem that you wanted to be that descriptive of how you were dealing with the standard, but rather you wanted to make a commitment to the general principles and the general approaches of the standard, sort of implying that you were not going to follow the standard completely, but still not telling us exactly how you were not going to follow it.

So that's why we asked this question, was to determine that you thought it was right and just to be forthright about how you're not complying with the standard, if that's the case.

KILLAR: I think -- and it goes back to maybe a point we made earlier today, is that for a lot of this, we don't see any change. We're going to continue doing business the same way we've been doing business, and when we commit to an ANSI standard or a reg guide and we take exceptions, we'll tell you the exceptions we take and whether it's exception to a shall or a should. We'll be consistent with what we're doing now.

We don't see anything different, anything changing as a result of this.

COX: And as you mentioned a few minutes ago, if we asked a question, of course, you would respond to it anyhow. We have no problem with that.

FROM THE FLOOR: It would seem to me to add a large amount of paperwork if, over the course of the license application, they reference dozens of standards or reg guides, and if we had to go through each one of them, we could create quite a book, suggesting how we -- comply is not the right word -- but how we deal with shoulds versus the shalls.

Now, with regard to our criticality safety chapter, which I think is a good example, we describe our criticality safety program, which gives you, I think, some clue as to what shoulds we follow and what we don't, and then we also commit to generally following the applicable ANSI standard.

So it seems to me that doing a standard by standard review is a large amount of work that wouldn't really serve a useful purpose up front.

COX: Okay. I understand that answer, too.

ROTHLEDER: My name is Burt Rothleder. I'm with DOE and I'm responsible for criticality safety for regulation and technology in general. I'd like to make a comment about the way DOE handles criticality safety in the ANSI standards.

We require, of course, that the shalls be followed and if you don't follow the shalls, you need an exemption. With the

shoulds, we require that all the shoulds in ANS-8 be addressed in a manner that the contractor decides; in a way in which the contractor decides in the implementation plan.

In other words, the contractor has the ability to state how they're going to address these shoulds, but the shoulds must be addressed. The recommendations must be addressed and they cannot be simply bypassed.

And I think for criticality safety, that's necessary because of the sensitivity of the technology. In other technologies, it may not be necessary and it can be an onerous task, I think. So you've really got to look at what you're dealing with specifically.

But I think in the -- I can speak only for criticality safety. When the shoulds were put in the ANSI standards, they were put in for a very, very definite reason, very strong reasons, and they need to be addressed in some way. You can't say I didn't look at it. You've got to read it and say whether or not it applies and if it doesn't apply, you've got to give a reason, be rational about it.

You can do it one sentence, two sentences, three sentences, it can be done very simply, but it's got to be looked at. A regulator can't regulate without that. It's just not possible. And it may be necessary to do that for all ANSI standards, I don't know.

PERSINKO: On the same question, though, the first part of the question, where we -- there were a number of cases where you had a suggested striking out much of our written acceptance criteria and replacing it with words, requirements, regulatory guidance, and industry codes and standards.

As I said, we were trying to explain, as best we could, in those cases, what we were thinking. So we were unclear as to why you eliminated, in some cases, much of the acceptance criteria.

SCHILTHELM: Again, Drew, I think regulatory guidance has gone through the NRC process and deviation from it in a standard review plan doesn't seem appropriate.
In our view, the simplest thing to do to avoid either advertently or inadvertently deviating from regulatory guidance that's gone through the NRC process was not to try to reiterate it in the standard review plan.

Now, the ANSI standards are a different beast. They haven't gone through the NRC process as far as endorsement. So there is a distinction between the two.

PERSINKO: But we felt we were trying to be explanatory and helpful to the reviewer, as well as the applicant, by explaining it more.

SCHILTHELM: We saw divergence. One example of divergence is the requirements for a criticality monitoring

system. That said that you must follow the ANSI standard plus, and those pluses didn't seem to be -- the SRP didn't seem to be an appropriate place to implement additional regulatory guidance, when you have a reg guide.

WEBER: Were those pluses out of 70.24?

SCHILTHELM: No.

TEN EYCK: I see just one area of potential problem in this, and recognizing that this is guidance, there's been times in the past where some of the reg guides become outdated and to say, from an efficiency point of view, rather than to spend the cost of going back and going through the entire reg guide process, what we have been trying to do is to look at more efficient ways of doing it.

And in some cases, using the standard review plan is what we would look for as acceptance criteria in those areas has been the avenue that has been approached or taken, rather than in lieu of having the resources and the time and the cost to go back and formally go through the reg guide process, recognizing here, again, that this is just a guidance document and not a requirement.

SCHILTHELM: I appreciate that, Liz, and I understand why we might do that. But I think we walk a fine line when we do that, because the reg guide process is a open process and the standard review plan is not always an open process. There is

nothing that mandates it be. This is, this one is.

There would be nothing to mandate it be next time.

WEBER: Unless the Commission says so.

SCHILTHELM: Again, I'm not suggesting that it's, in all cases, a bad thing to do. I just think we need to be very careful when we do it and if there is a problem with the reg guide, then we should, in some cases, maybe address the reg guide.

WEBER: Steve, would an acceptable alternative be to specifically identify those acceptance criteria that you see departing from what's in the regulatory guides or the ANSI standards?

I think what Drew is saying is, hey, there's a lot of beef in the acceptance criteria and the acceptance criteria are going to be key to guiding the NRC staff reviewers in judging the adequacy of what's come in from the applicant.

I think you would give up a lot if you no longer had those acceptance criteria, if you only referenced the standards or reg guides or industry codes, you would lose a lot of the value to having a standard review plan.

KILLAR: I guess one of the concerns I have is that when you put together a reg guide or a NUREG or something along that line as a way of -- what the NRC considers is an acceptable way of implementing the regulation, and then that should be the

acceptance criteria when that falls in a license application for that particular application.

The concern we have is that the idea, one of the things you want to do with the standard review plan is keep the reviewer from wandering off the farm and by having it limited to what has been accepted or designed as the acceptance criteria or the acceptable way for the licensee to meet the NRC regulations, that helps the reviewer kind of keep his bounds, so to speak.

So that's one of the concerns. I know we expressed this earlier. In fact, Dr. Paperiello expressed this earlier. The reviewer has so broad acceptance criteria that he keeps looking for what's there and keeps asking more and more questions and it never comes down to a final conclusion, because he has this open area to roam in.

So by bringing it down helps come up with, okay, here's the bottom line, either you meet it or you don't.

PERSINKO: But I would argue that in many cases, where we described it in more depth, that that would actually help the reviewer limit his or her review.

SCHILTHELM: We always get accused of not having examples. Let me respond with a very specific example. Back to the criticality monitoring system. Our criticality monitoring system is in full compliance with the regulatory guidance.

There is a requirement in the standard review plan

that your criticality monitoring system not employ radiation detection technologies that look for two different types of radiation.

Well, we, in fact, have to deploy technologies that look for two different types of radiation, because we have a hot cell that gamma radiation can't get out of, but neutrons can.

So in that sense, we couldn't meet the additional requirements of the standard review plan.

Now, I would hate to have to go into a technical debate with a license reviewer who thought he was following the standard review plan as to why we weren't meeting this requirement of the standard review plan, and we all know that's guidance, but we all know how that can turn into requirement. The EDO acknowledged that the last time we met with him.

So that's the kind of problem we see with adding to that guidance. It's when we at existing facilities have a perfectly acceptable system that you guys have concluded is perfectly acceptable, yet through a license renewal, we now have to rejustify and, in the most extreme case, possibly change an acceptable situation.

WEBER: I think that's a good example and it's probably one we'd want to pick up when we talk about the safety chapter of the SRP. But I'm not sure that that would convince me to discard all the other acceptance criteria all throughout the

SRP.

SCHILTHELM: It wasn't intended to.

WEBER: Okay. All right.

SCHILTHELM: Believe me, it wasn't intended to, because I understand there is value in those acceptance criteria.

PERSINKO: But even if it's not in the SRP, I mean, the reviewer may still send you a question on that. So I don't know that it buys you anything there that way. Also, your answer seems like a straightforward answer that you would answer a license reviewer with.

So I'm not sure what we're getting then.

TEN EYCK: Also, I think that the fact that we're going through this public process with this SRP, this is the time that we're looking for you to provide feedback to us on the SRP of situations where the guidance would not be applicable, and I think you've given a good example.

SCHILTHELM: The problem is in trying to root out all those examples, at this point in time. It's very, very difficult, and it's very difficult for you guys, as well.

KILLAR: I think particularly when you start talking about things like this, we certainly can talk about them in generalities, but then when we start talking about a specific comment, you have to take it in the context it's given in and things along that line. I don't think we're necessarily

capturing that here. I think sometimes our discussions are going all over the place as a result of that.

I think we've given you the basic reasons why we wanted to try and limit the acceptance criteria and I think certainly on a case by case basis, there's reasons for extending it or limiting it.

I think as we go through the individual chapters, we can point those out.

SHERR: The last area was the qualitative versus quantitative overarching issue.

PERSINKO: There was a comment that NEI had made about, quoting NRC, that previous -- we've stated on numerous occasions that the use of quantitative analyses such as PRA is inappropriate for fuel cycle facilities.

While it is correct that the rule does not require a PRA analysis, PRAs, we just wanted to get it stated that PRAs can provide useful insights, although it's not required. But there is some element of quantitative analysis in the rule. I mean, you enter that just because of the likelihood evaluations, and we wanted to get your views on how you see quantitative analysis versus qualitative analysis in the rule and the SRP.

KILLAR: Basically, we would agree with you. We spent some time talking about this and recognized that, yes, there are a number of quantitative analyses that we do similar to the

likelihood and the consequence analysis and stuff that is quantitative.

I guess probably our concern is that when we see PRA, it kind of ruffles our hair and stuff, and so it's an overreaction. But certainly as far as quantitative analysis, it is appropriate to do them and we certainly have no problems doing them where it's appropriate.

SCHILTHELM: Along those lines, the only benchmark we have for highly unlikely is double contingency. If you really look at our facilities, double contingency has been a principle that we've implemented to prevent criticalities, according to the ANSI standards, et cetera, and in the final analysis, a criticality has to be highly unlikely, although the performance requirements don't specifically say it, that's the outcome really of the performance requirements.

So that's essentially our benchmark for highly unlikely. Other than that, in trying to define unlikely, we have to move around that benchmark.

PERSINKO: That's specific to crit, though, and we've acknowledged that in the regulation. We've given it a separate performance requirement. But there still are other accidents, potential accident sequences. Well, you're going to have to also determine the likelihood or unlikelihood of the event, which is inherently them some element of quantitative analysis.

SCHILTHELM: But, again, if double contingency is sufficient to make a criticality accident highly unlikely, it should be sufficient to make any other type of accident highly unlikely.

PERSINKO: I think that depends. I'm not sure. It would depend on the specifics, I think.

COX: Let me say something about that. When you say double contingency, I assume you mean essentially two events necessary to proceed to the unwanted consequence. But even in the ANSI definition of double contingency, it does require that each of those events be unlikely. So you're into that sphere where you need to know that each of those events is unlikely and the question is how do you do that.

We've attempted in the SRP to have an approach to defining what that has to be and then, of course, assuring that that remains unlikely means applying certain features, operational or design, to those controls to make sure that it's unlikely.

So you get into talking about what unlikely means and not just -- it's not just double contingency, but double contingency implies some certain knowledge and ability to handle what unlikely is.

SCHILTHELM: I guess what I just heard is disturbing. If I apply the same rules for double contingency analysis to a

fire scenario, would that not be sufficient to determine highly unlikely?

PERSINKO: I think it depends on the situation. I think it depends on the contingencies, quote, or single failures that you want to call it, whatever, what they are. If it was to be two administrative controls that were -- had a higher likelihood of occurring, failing to occur, say, that may not be good enough.

SCHILTHELM: That wouldn't be good enough for double contingency, either.

PERSINKO: That's right. It wouldn't be good enough for double contingency.

SCHILTHELM: I guess I'm searching for a nod that consistency will prevail.

COX: Well, I think we're talking about the definitions here and I guess perhaps we are agreeing. You're saying that double contingency implies the unlikelihood of each of the contingencies, and we agree on that.

SHERR: Unless there are some other overarching issues that --

KILLAR: I do have one question. We didn't understand what question five was. Could you explain what that was?

PERSINKO: It was just a clarification that, as I said in my opening talk, that 70.65 is an additional contents of

application, in addition to 70.22. So all it was was a point of clarification.

You do not meet the regulation if you only address 70.65 in your application.

ROTHLEDER: I just wanted to make one general comment about what was discussed earlier this morning. It seems to me that there are certain what I would call words of commitment that need very sharp definitions and agreement among all parties.

In the ANSI standards, we have the words shall, should and may, and they are very specifically defined. They are words of commitment.

I think the word must is going to have to be defined also eventually. There are words of commitment that came up here that there seemed to be confusion about. The words are assure, ensure, and even the word insure came in here. I don't insure applies. I think the words need to be sharply defined, because I got the flavor here that there was confusion between assurance and insuring something.

My understanding of assure is to dispel doubt. If there is doubt, you have assurance that there is no doubt. Ensure is to obtain certainty, and you can then -- if you define these words in agreement, you should use the dictionary, then you can use phrases to soften the meaning.

For example, you can't have absolute certainty, but

you can have certainty using reasonable measures to assure -- to obtain, to ensure that something will happen.

But I think you need to agree on these things, because I detected there was some confusion as to the meaning of these words. They were used interchangeably and they do mean different things.

I think in general, you mean ensure. I think assure is rarely used. I don't think we're trying to dispel doubt in doing regulation. Sometimes we are, though. Sometimes we actually are. Insure I don't think applies at all. Insurance is -- as I remember it, it's an arrangement where you get payment for a loss. I don't think -- although that does occur, obviously, with accidents, but I don't think we're talking about that here.

So I think we need to get those words agreed upon and I think there may be some other similar terms, other terms of commitment that haven't been mentioned that need to be agreed upon.

Once you do that, then I think you have a basis, common basis where you could build on understanding what these differences are and maybe settle them more easily.

FROM THE FLOOR: I'm not sure there was confusion. I think that the debate was whether you're trying to give absolute certainty or reasonable assurance. That's the only thing we were

talking about. Reasonableness versus absoluteness.

ROTHLEDER: Some people are going to interpret assure as dispelling doubt and if they want to get out of the -- if you use the word assure in the regulation, they're going to use that and say, well, we dispelled doubt, when you really meant ensure, they're going to try to get out of it that way and use a dictionary definition.

And in a court of law, they may win, because you use the word and that's what you're committed to. So you need to use the right word and agree upon the use of the word. I think that's necessary.

SHERR: Thanks. That's certainly going to be true, use the words correctly. I think some of the problem may be, in fact, sometimes in the writing of the text, we use terms loosely rather than very precise. In other cases, I think it might be just in terms of given the context of the SRP, one concluding that even if a word is used properly, maybe it's tending to mean something more onerous than intended or something.

We have to deal with it in substance, as well as in nomenclature.

If there aren't any other comments on the general issues, what we have left then is to talk about the individual chapters. And looking at the briefing charts that NEI has put forward, they're in the order of Chapter 3 first, then Chapter

11, and then taking, in order of the document, which is responsive to our suggestion and we appreciate you taking that order.

Given the time, perhaps it's best to adjourn for lunch at this time and we can reconvene at quarter to 1:00.

[Whereupon, at 11:45 a.m., the meeting was recessed, to reconvene at 12:45 p.m., this same day.]

A F T E R N O O N S E S S I O N

[12:55 p.m.]

SHERR: Felix, you can start with the Chapter 3, the ISA. Is that right?

NEI Slide 5 KILLAR: I think we should go ahead and start on Chapter 3. I think it will point out some of the concerns we have and give you some real life examples.

To start out with an overview of Chapter 3 and our considerations, I'll let Clifton give you an overview.

FARRELL: What I thought I'd -- as you know, Chapter 3 and Chapter 11 we regard as perhaps the two areas that require very careful consideration.

In Chapter 3, we've proposed some rearrangement of the ideas. There's not so much a case of deleting from the draft SRP, the content that you have proposed, but there are some significant changes.

The first one I think that came to be a worry to us was our feeling that the ISA -- excuse me -- the SRP should provide some guidance in looking at the ISA summary. This was lacking in the SRP. And as it is the reviewer's responsibility to get a feel, provide some assessment as to the adequacy of the ISA, by means of the ISA summary, we thought that in Chapter 3 we should include some guidance for that purpose.

A second consideration in Chapter 3 was the addition

that the NRC made in the latest version, whereby you included a lot of guidance, which we regard as very helpful and valuable, in conducting the qualitative assessments of -- evaluation of consequence or likelihood in terms of qualitative parameters.

In the earlier version of the draft Chapter 3, you focused on quantitative examples and supplemented that with a detailed example in Appendix A.

Well, at an earlier public meeting, we discussed the need to perhaps give the license applicant an alternative to look at -- to take a qualitative approach, and, as such, we feel that we should balance off Appendix A with what we call Appendix B, which would go through a similar example, but enable the applicant to take this qualitative approach.

Now, these are issues -- this is guidance that pertains to the writing, the formulation of the ISA, and as such, we feel that that information is not appropriate for SRP, the one that we're working on right now, but should, in turn, maybe be transferred to -- excuse me -- I think it's NUREG-1513, which provides the applicant very detailed instructions as to how to go about performing the ISA.

To me, that is something that will have to be addressed at the time you are doing the ISA, which approach do we use, a quantitative or a qualitative. So our feeling is that the Chapter 3 should focus more on guiding the reviewer through an

evaluation of the ISA summary as opposed to the ISA itself.

So that's just -- we really haven't deleted information or guidance in total. We're just suggesting that some of it be relocated to the separate NUREG document that just focuses on the ISA preparation.

And as such, we are suggesting that Appendix A and this new Appendix B, the qualitative approach, be relocated to 1513, as well.

It is our intention in the future to perhaps come up with an example to be included as the Appendix B example. We have not done that yet, but I think our intention is to provide that at some time in the future.

I would also like to mention that -- maybe we can just step through the letter that I highlight some of the points that I made. We feel that in accordance with Section 70.62, which defines the safety program to be three components, one of which is the management measures, but, of course, we're going to deal with that separately in Chapter 11.

So really we come back to Chapter 3, having principal components, the commitments that pertain to doing the ISA, and updating it, implementing issues, addressing performance, vulnerabilities and so on.

The second part would be addressing some issues in the ISA summary.

Now, we say that the ISA summary has to give the reviewer enough information to understand how the ISA was performed, the qualifications of the team that did it, the major safety significant results and the procedures for how you're going to maintain it.

The Chapter 3 will provide guidance in the first two areas, commitments in the ISA summary, and, as I mentioned, we'll leave management measures to Chapter 11.

Just continuing here. I wanted to make a couple of notes on some specific concerns we had with the Chapter 3, one of which I guess is more of an editorial issue, and that is I've tried to achieve some consistency in the structure and the use of terminology throughout all 11 chapters. So many of my comments perhaps are trying to put this consistency.

And another one which I tried to be religious in is to always use the reasonable assurance term, as opposed to ensure.

And finally, I tried to do away with some of the repetitiveness that I think was a problem in some other chapters, including Chapter 3, where so much of the information, the guidance presented in the areas of review seemed to be repeated in the acceptance criteria and then seemed to be repeated in the guidance on how to do the evaluation of -- report the evaluation of the assessment.

So I think we could tighten up the language a little

bit there.

Just a couple of minor points. We think there are a couple of misinterpretations or misapplications of the NRC/OSHA memorandum of understanding as they pertain to chemical safety. A couple of examples of reactor terminology that slipped through that I think we should tidy up. As was mentioned earlier in the audience, there are, again, some inconsistent uses of terms such as management controls or consequences of concern or items relied on for safety. But I think just a general tightening up of some of the terms to be consistent with the rule.

I do want to make another correction. In the explanatory letter, I make reference to performance indicators, and, again, that should be performance requirements; not only the requirements in the rule, but the requirements that we are committing to in the license. So those are just as important.

I guess we were preparing for the meeting on performance indicators the day I wrote this and performance indicators slipped through. It should have been performance requirements, but I think that's just one example.

So if we just review the principal changes that I have or NEI has recommended on behalf of industry. First, we think the guidance on conducting the ISA should not be included in Chapter 3, but that important guidance should be switched to NUREG-1513. We think the guidance on the evaluation and

assessment of the ISA is not appropriate here, although at several places in the revised -- in our proposed revisions, we say the reviewer should focus on the ISA summary, but make yourself fully -- or avail yourself of the ISA documentation that's kept on site and the ISA.

So we're not trying to dissuade the reviewer from consulting the raw sources of data, but we're just trying to focus him on the -- what have been identified in the ISA as safety-significant events or accident sequences that must be looked at.

The third thing, as I mentioned, we suggest relocating Appendix A to the NUREG-1513 and then supplement that with the qualitative risk assessment approach.

Finally, we suggest restructuring Chapter 3 into the first section, which is license commitments, and the second section, which is the ISA summary.

Now, going back to a comment earlier this morning, these license commitments, many of them are, in fact, forward-looking and we can go through those a little later. You know, the commitment to address a vulnerability that has come up or when you do a revision of the ISA and something needs to be addressed or you have to change an item relied on for safety, well, those are forward-looking commitments and we try to provide some guidance accordingly.

Finally, a very minor point. We suggest that the chapter should be renamed integrated safety analysis commitments and the ISA summary.

So those are some of my thoughts that led us to propose this restructuring of Chapter 3. In fact, in some areas, we have added some suggested guidance in evaluating the commitments or putting some other comments in the requirements that were not in draft Chapter 3.

So I think we're just trying to round it off here a little bit. I have not looked at your questions on Chapter 3. I'm not sure how we'd like to go through this. I'd be more than delighted to walk ourselves through page by page, if that -- explaining some of my justification as to why we deleted something or moved it around or added some language.

Would you like to maybe stay at the high level and talk about some philosophical issues of how we decided to rearrange Chapter 3 or recommending it, or go down to detailed comments?

SHERR: Why don't we just see what kind of questions we have.

FARRELL: Okay.

COX: I just want to be sure that I understand the opening comment really well. You're recommending the removal of Appendix A to NUREG-1513 and also a to be developed Appendix B to

the same place, and I think the basis was that the appendix is looked at as a description of how to do an ISA rather than something to do with the ISA summary.

FARRELL: That's correct.

COX: Okay. I understand that. I've got to tell you that it is our -- it was our intent that Appendix A is what would be delivered to the NRC; that is, a filled-out Appendix A is what would be delivered to the NRC as the report of the work done on the ISA; that is, Appendix A would be the summary of what was done on the ISA, not the entire multi-volume ISA.

So we looked at Appendix A as the summary, not directions on how to do an ISA, but rather how to present the results or what we would call the ISA summary.

But I understand your view on that and we'll think about that.

KILLAR: There is one issue that I think we would like to air, and that comes back to the content of the ISA summary. I believe our thoughts are a little more to narrowing the content of the ISA summary to those higher risk accident sequences that were evaluated and leave the low risk or accident sequences to the ISA itself, with the proviso, as we mention in here, that the reviewer, when he's working on the ISA summary, should go back and maybe go to the site and look at the methodology that was used in the ISA and just walk through of what we -- what the

applicant may have considered to be a low risk accident scenario and confirm that, yes, the criteria are reasonable and so on.

But I guess we feel that the ISA summary should just focus more on the higher risk accident scenarios instead of trying to incorporate all the accidents that were analyzed in the ISA.

KILLAR: One of the things in looking at Appendix A, we viewed Appendix A as an example of an acceptable method for the NRC for defining your terms of unlikely and highly unlikely, as far as how you got there and things along that line, and that's also part of the reason why we felt it was more appropriate to put it in 1513, rather than have it in the standard review plan, because we felt by having it in the standard review plan, it leads you down to this is the way it should be done rather than this is an acceptable way to be done.

And by putting it in 1513, we thought it gave us a little bit more understanding that this is one method for defining those terms and it's not limited to only that method.

PERSINKO: Just a thought about what you said, Cliff, about leaving the less than intermediate and high risk sequences in the ISA rather than the ISA summary. If that's the case, then this chapter really does have to include information, I think, about directing the license reviewer to look at that information.

In other words, if you want to take that approach, I'm

not sure you can limit it to the ISA summary then.

SCHILTHELM: Drew, one of the things we had problems with in looking at the structure of the chapter was, to your statement, possibly yes, but it really -- we had a really difficult time looking at the structure of this chapter and determining where the reviewer was being directed to look.

Intermixed were things that you would expect to find in the ISA summary, things that you might expect to find in the detailed information on the site, and things that you really might expect to find in license commitments.

So restructuring the chapter was intended to gain clarity there. Realizing that there's probably a need for the reviewer to look all three places, but it was very difficult for us to decide what the reviewer was being asked to do until we could separate those three places and then say, okay, now, is this appropriate, an appropriate level of review for this particular aspect, whether it be license commitment, ISA summary or ISA.

So this may not be perfect, but it's a very good first shot at trying to separate the three places, so that we could at least talk consistently about where we were asking the reviewer to look.

KILLAR: Also, in response to that, one of the things we were looking at and we actually thought we had an

understanding of is that the ISA summary would be focused on the high risk, high consequence areas, and that the other areas, there would be a discussion about them, but there wasn't as much interest or focus on those because of the impact on the public and environment.

And that it was more just to let you know that, yes, we have looked at these other areas and they're not of the high risk, high consequence category and to let you know that we haven't forgot about them, but it was not -- certainly not the focus of the ISA summary.

PERSINKO: We're concerned that we need to see the entire spectrum in order to know that these are indeed the high and intermediate sequences. If we don't see the entire spectrum, we don't know if they really are or they aren't.

The other thing I'd like to point out, too, is that the regulation doesn't draw that distinction. It says for each process, should describe the following. It doesn't say for only high hazard processes.

SCHILTHELM: We've still got time to fix that.

PERSINKO: The comment period is still open.

SHERR: This, again, comes down to one of the issues that we talked about earlier in terms of what's in the submittal, whether on the docket or in the application, versus what's at the site. There is always a balance in terms of how much time -- how

much part of the review, in fact, involves time at the site and going through information there or what can be done at headquarters on the basis of the information that's available.

Maybe this is, again, one of the broader questions in terms of the level of detail. To the extent that the reviewer does have to make some judgment in terms of whether all the sequences that have been identified as high or intermediate consequences, in fact, represent all the ones of concern means that one has to look at what sequences aren't included, and it's just a question of where that information lies.

I don't think, based on the comments that Cliff was making, that, in fact, NRC staff needs to review that aspect of it. It's just a question of is that a part of the submitted information NRC has at headquarters or is that information that NRC would totally need to focus on when it goes to the site.

KILLAR: I agree with you, Ted. I think one of the things that we're looking for is that there has to be some, I guess, say, consistency across the board and that the NRC reviewer should have some familiarity with the risk and the work that we're doing at our facilities. So, therefore, by reading some of the general statements about the low risk things, he realizes, yes, these are low risk things, without having to see all the analysis that went into make that determination.

That was primarily where we were coming from, is that

we will provide some information to let you know that we have evaluated them, but do you need to have that type information for low risk facilities that you have or low risk, low consequence accidents and things that you have for the high risk, based on a graded approach, performance approach.

We want to focus on the high risk, the high consequence events, but certainly not to completely not cover them, but not to spend as much time on those as we do on the other ones and then the reviewer maybe not understand that he's got to spend the time on the high risk ones, because he's got to look at all these things.

EDGAR: Nevertheless, I think you make a good point. There's got to be a well defined -- we have to come to agreement as to what we send in and what's available to you at the site. But I think Clifton has made a very good first try at trying to organize this in a way that we view as, I think, responsive to what you need, as well as kind of an efficient way to go about it.

So it seems to me that we ought to note your comments and go on through this thing and present it, and then we can talk about it. Does that seem logical?

SCHILTHELM: Maybe the first discussion we ought to have is just walk through what we see as licensing commitments, those things that will be clearly stated in the application as

commitments. If we can walk through those and understand where we might differ, then we could go from there.

COX: That sounds okay to me. But I'd just like to ask one question. As you go through this, are you really pointing out that there are ISA commitments and there is an ISA summary, and they're different, and do you consider information in the ISA summary is not a commitment in any way? Is that why the separation? Is that the thrust of the separation of these two parts of the chapter?

SCHILTHELM: The standard review plan is also a standard format and content guide. We're going -- if you line up the chapters, our presumption has been, and if this is incorrect, please help, our presumption has been that there will be a Chapter 3 of our license application that's called, whatever this Chapter 3 ends up being called.

We call it the ISA chapter. And that Chapter 3 will contain those commitments that we make that become commitments in our license through the application that say this is -- these are the ground rules for execution of the ISA.

We also see a completely separate document that will be the ISA summary. Now, we're completely committed to maintaining that document and in keeping it up to date and one of the commitments, in fact, that's in here would be a commitment to

a configuration management program that will accomplish that.

So we see a -- yes, we see a distinction between those things that are commitments in the license, as to how the process is executed and the care and feeding that goes into taking care of what we've created, to what is actually the ISA summary. So we see a great distinction between those two things.

Now, if your view is different, it would certainly help us to hear some of that, because right now we're sitting in this paradigm that we're used to.

COX: Let us think about that.

EDGAR: I think another way to say it may be that the commitments section describes how to do it. The summary is really the product of our meeting those commitments.

SCHILTHELM: We really thought that's what came out of the Commission directive that says don't put the ISA summary in the license. So we think that created the distinction.

COX: Are you going to walk through some description of commitments versus summary?

FARRELL: All right. Well, I guess we can look at areas of -- Chapter 3.3, 3.3.1 specifically details nine license commitments that we are recommending for placement in the first part of Chapter 3.

I can step through these. The first one is to -- a commitment to compile and maintain a database of process safety

information that includes information on the hazards of materials used and so on. That's one of the three components of the safety basis.

The second one is to implement procedures to keep the ISA and ISA summary accurate and up-to-date. As part of that, we also make the commitment to maintain the ISA as the facility's safety basis and we commit to promptly analyzing and incorporating into the ISA any changes in the process safety information, operating procedures, design bases, and so on. That's kind of a forward-looking commitment there.

The third one is the applicant agrees to promptly address any safety significant process vulnerabilities or unacceptable performance deficiencies that are identified in the ISA. Again, that's a license, a regulatory requirement that we're committing to.

Number four was to design and implement a corrective action program to address any deviations from safe operating conditions. Now, that is more -- thinking back on this, this is perhaps more a management measure. I forget when this letter -- this work was done early August. Well, I think now that we're working on Chapter 11, this corrective action program perhaps might be better addressed in Chapter 11.

But needless to say, maybe it will overlap as appropriate, but we do commit to have an incident investigation

program or corrective action program, as you may call it.

Commitment number five is to design and implement the facility change mechanism in accordance with 70.72, such that any proposed change to the process or operating procedures or flow sheet or items relied on for safety is first evaluated by the ISA methodology to establish its risk and safety significance, and then to determine, first of all, do you need a license amendment or is this something that you can implement without formal approval by the NRC, but subsequently just bring it to their attention on this periodic reporting basis.

Commitment number six is to -- is a regulatory requirement to engage suitably qualified and trained personnel to implement the ISA methodology, both in doing the initial ISA and further updates, as required.

Commitment number seven is to maintain items relied on for safety for higher risk accident sequences. Well, higher risk would be incorporating those accidents identified in the ISA as high consequence and intermediate consequence.

In fact, this should probably be expanded to low consequence, too. I think all of them, and that might be a correction we need to make here. Anyway, to maintain the items relied on for safety to ensure their reliability and availability when required.

Commitment number eight is to implement the emergency

preparedness program for use in the event that an item relied on for safety or a management measure fails.

And finally, commitment number nine, as written here, is to maintain a log at the facility that documents any item relied on for safety or management measure that failed to perform its function when required or when tested.

That was the new requirement that was placed in the latest version of the rule, in Section 70.62(a)(3). I think we'll have a few more comments on that a little later. We have an observation on whether there is a need to maintain this separate log for inspection or whether, in fact, these data, these incidents have been recorded elsewhere in the -- by the applicant, by the licensee. So we might come back and have a comment on the rule about --

KILLAR: We may actually put that up into Chapter 11 as part of your corrective action program and things, because that's typically how we've been doing it. We'd rather stay with the norm rather than go out and create a new wheel.

FARRELL: Now, those I've read from, the areas of review, those are expanded upon on the acceptance criteria, but basically we just follow very much what the NRC has proposed in the earlier draft of Chapter 3 in terms of the specific information that you'd require, just expanding upon the license commitments a little bit.

So those are the core eight or nine overriding license commitments pertaining to the ISA.

KILLAR: Is there anything in our revision here that you feel we've left out that needs to be included as a commitment? Not that I'm volunteering for more commitments, but I just want to make sure that we've captured what your intent was. We felt that we have, but we'll make sure that we have.

COX: I don't know that we could make a dispositive statement on that now, but it looks pretty complete.

KILLAR: Is there anything we committed to that we don't need to? I had to ask. I had to ask.

SHERR: It's understood that all this is implicit within the context of the performance requirements of the rule.

FARRELL: Yes. All right. Maybe I'll step on to the second -- what we would suggest be the second major part of Chapter 3, and that is providing some guidance on the ISA summary. As I mentioned before, we generally feel that the ISA summary should focus on the safety significant features of the facility that potentially pose the greatest risk and set aside, leaving in the ISA those lower risk accident sequences that really do not require the same level of scrutiny as the reviewer should be giving to the more safety significant concerns.

Now, I say here it presents a subset of the facility hazards and accident sequences analyzed in the ISA. The question

will come up, well, how do you establish this subset.

Well, I think as a first cut, we'd look at the use of the performance criteria in 70.61(b) and (c) for the first cut as to what should be high or intermediate level versus non-high or intermediate level.

We would also say that we want to consider, in the ISA summary, those items relied on for safety and management measures that specifically address those higher risk accident sequences, and, again, we'd leave that to the lower ones to spot-checking in the ISA itself.

I'd make a couple of comments here. I think it's important to try to distinguish, to help the reviewer understand the difference between the ISA summary and the ISA, and I make a comment here that the ISA summary differs from the ISA in two substantive ways.

The ISA summary discusses hazards and accident sequences at a systems level, instead of a component level. At the component level, a specific valve or the specific sensor, that would all have been analyzed in the ISA, but we don't feel there is a need to be that detailed in the ISA summary. But, again, that can be checked if the reviewer questions the analysis of an accident sequence in the ISA summary, you can go back and get into the gory detail, if necessary.

The second difference is, as I mentioned, the ISA

summary is focusing on the high and intermediate consequence events that could exceed the performance criteria of 70.61. We, again, would leave the -- again, for the sake of clarity, we're saying that all of the accident sequences can be thoroughly -- can be left at the site in the ISA for checking, as the reviewer needs.

I also -- yes.

MR. SCHILTHELM: Let me interrupt for a moment. Make sure you understand one thing. When you come to the site, if a reviewer were to come to our site and say show me the ISA, we're not going to be able to put a book on the desk.

The ISA entails many, many things. It's meeting minutes, it's scenario work sheets, it's drawings. There's a whole population of things. So when we say the ISA, it's not a nice pretty book at the site. It's a very big compilation of a lot of referenced information.

I just want to make sure we're clear and understand each other on that. The ISA summary is where it turns into a presentable type document, if you will.

PERSINKO: If you were to review the ISA, would you be able to easily see all of the accident sequences analyzed?

MR. SCHILTHELM: Yes. We have sequence tables and it's all databased and everything. So you can get there quite easily.

KILLAR: One other thing I might mention, just in passing, is that I believe one of the questions talked about the system level versus the component level and certainly if there is only an individual component, that component will be identified as the key parameter or key component for safety versus a system of components and stuff.

But what we wanted to avoid is having to list every valve and every pump and every whatever. But if it's only one component, certainly that component will be, quote-unquote, the system for that particular device.

FARRELL: We've included the comment that the ISA summary should basically be a stand-alone document and I've listed about seven principal parts, components that it must summarize or -- I've used the word distill. Perhaps that's not the right term.

But anyway, summarize from the ISA succinctly the methodology that was used in performing the ISA, team members and their qualifications, description of the facility processes, hazards and assessments of generic or general accident sequences.

This is another point maybe I should have stepped on or mentioned a little earlier. We don't want to have to report every one of 2,000 criticality analyses, but there may be -- in the ISA summary -- but there may be a generic type of accident sequence that occurs, potentially could occur at many different

parts of a process.

So we're saying the reviewer should look carefully at the generic type of accident sequence as opposed to trying to look for every single accident sequence. I think that maybe cuts down on the repetitiveness and, again, focus the attention on that type.

Now, the question is how do you come up with these categories, these types. Again, that's -- I haven't even looked at that here, but I think that comes up to an engineering or scientific judgment.

ASTWOOD: In general, just very broad sweep, how many types would you consider that would be?

FARRELL: I'm going to have to defer to one of our operators here. I'm not sure.

KILLAR: Everybody's turning their head, so I think we've got a definitive answer.

SCHILTHELM: I was looking for Norm in the audience. He might be able to -- he did. Okay.

ASTWOOD: Broad sweep. Five, six, a hundred?

SCHILTHELM: Broad sweep. If you talk about parameter control or you talk about parameters under control, possibly a dozen, depending upon how you define the parameters, mass control, moderation control, geometry. Not a huge number for criticality safety. Now, for the others, I can't speak to as

well.

COX: The list, after you talk about a stand-alone document, the list of seven bullets there says -- one of the line items is high and intermediate risk accident sequences. Do I take that to mean individual sequences or how do I reconcile that with the first two bullets that said sequences at a systems level versus a component level?

I'm trying to get a grip on that.

SCHILTHELM: Tom, I think we're in a bit of a quandary there, because the rule language has changed a little bit in that area, I believe. Originally, there was some language that said all sequences would be included in the ISA summary. Remember, we're writing this with a proposed rule and we do have some issues with the words in the proposed rule.

I think a general comment, and I think the rest of the licensees would agree with me, anytime we talk about lists of all, that term lists of all is probably going to get us -- get the licensees where they're not comfortable, because that pretty dramatically increases the volume of material and it decreases your ability to understand what we've given you, in our view.

EDGAR: I don't think there is a disconnect there. The first two bullets talk about what the ISA summary does and the next seven talk about really a listing of what's included.

So the fact that we talk about looking at those

accident sequences at a systems level and then subsequently talk about providing a listing of high and intermediate accident sequences, I think they're going to be high and intermediate accident sequences at a systems level.

COX: I'll take that. Sounds good.

PERSINKO: Similarly, though, same question could be applied to items relied on for safety. A stand-alone document talking about items relied on for safety at a systems level, I guess, if you put the two lists together, do you intend to have a list of items relied on for safety on a systems level? I thought you were talking about the sequences.

COX: He was.

SCHILTHELM: I can't remember if that's what -- I think that's what the rule says right now.

PERSINKO: The rule says a list of items relied on for safety.

SCHILTHELM: Does it say at a systems level? I don't recall.

PERSINKO: No, it doesn't specify. Here is where I see it coming at a systems level, and I guess I was asking -- I mean, it could be, but if you say that this system is an item relied on for safety, I mean, I guess unless there is something to the contrary, it appears that the whole system is an item, everything on the system is an item.

So anyway, that's -- I was wondering how you saw that.

FARRELL: You're right, Drew. A literal interpretation of 70.65.6, when you want a list of all items relied on for safety, that would be low accident sequences that weren't high or intermediate.

SCHILTHELM: Bear with us here for a minute. But isn't the definition of items relied on for safety restricted to those items that are necessary to achieve the performance requirements? So doesn't the definition of an item relied on for safety already make the cut at those higher level --

COX: No. Look at it this way. If an item is relied on for safety in an accident sequence, because it makes the accident sequence low risk, when otherwise it would be intermediate risk, then that item is relied on for safety.

SCHILTHELM: Right. So the definition of items relied on for safety that's currently in the rule makes the cut at that level. If the accident sequence can't produce the consequence, for example, then you don't have an item relied on for safety in that system.

COX: If an uncontrolled accident sequence was not at least intermediate, then you don't need an item relied on for safety.

SCHILTHELM: So I'm not sure where all this discussion has gotten us in relation to these bullets. But I think the cut

has already been made, to a certain extent, by the language in the rule.

COX: I think that's right, to a certain extent.

FARRELL: Let's see. The last requirement of the ISA summary was to talk about the management measures that you are recommending for those accident sequences.

I follow that up with a paragraph, again, trying to help the reviewer what really to expect and, again, I talk about focus just on the generic or the general types of credible accident sequences and not the detailed descriptions that would be present in the ISA; the fact that the ISA summary relies more on narrative descriptions and the schematic flow diagrams rather than on detailed technical analyses and data and data analyses or CSEs or whatever. Those, again, would be available elsewhere.

Finally, just a general comment that I think the ISA summary should be structured to walk the reviewer through the plant's operations to give him an understanding of the principals of operation of the facility and to recognize or at least assess the applicant's identification of facility and process hazards and identification of items relied on for safety and so on.

Now, I have also attempted or made a suggestion that the information that should be included in the ISA summary is perhaps more easily structured into three divisions. One, I have identified a category called general information, where it's

information of a general nature about the facility, the ISA methodology, the ISA study team and so on. Definition of terms.

So you kind of get that general information focused in one section.

The second, part two of the ISA summary should be the process specific information. This is the real heart of the matter, where you look at the processes, analyze the process hazards, the general types of accident sequences, how you reviewed the risk, how you've assessed the risk, what items relied on for safety have been identified, and what are the complimentary management measures.

Then, finally, the third part of the ISA summary description is the requirement in 70.65 to provide the two tabulations of items relied on for safety, one which the item is the sole item relied on for safety and the other is just the more generic list of all items relied on for safety.

So the information that has been requested in draft Chapter 3 is all here, but I've just rearranged it a little bit and I think in a little clearer fashion.

Next, I offer about a page and a half under 3.3.2.4 on the ISA summary review topics, and these are very similar to what you have proposed before. They include, under the first category, first of these three categories, under general information, information that can be cited from -- referred back

to earlier parts of your application, the site description, facility description, the ISA team, the ISA methods, definitions of terms, and the specific quantitative standards that you've used to establish those permissible acute exposures to hazardous chemicals produced from licensed materials, and licensed material.

I think we're very similar to what had been included in the draft Chapter 3 under general information requirements.

Under the second part of the ISA, we have process specific information, and here, the first item, of course, is all the processes that you analyzed in the ISA; the second step would be to provide the safety assessment of each process that you analyzed, and that would include such things as the process description, maybe a simple flow diagram to introduce the reviewer to it, and the hazard identification, types of accident sequences that you've identified, the unmitigated consequences of each type of accident sequence, and your assessment of whether the unmitigated consequences would exceed the performance requirements of 70.61(b) and (c), and then, as required, the likelihood of occurrence and how you established that likelihood, qualitative or quantitatively, and the risk classification of each general type of accident sequence.

The third requirement would be to describe the items relied on for safety for each of these accident sequences and

including the type of item relied on for safety, whether it's an engineered, administrative, augmented administrative or control, and if the applicant has so wished, explain how you have decided to grade, safety grade each of those items relied on for safety, and, of course, the corresponding management measures.

There were a couple of instances, I think, in draft Chapter 3 where the language reflected an earlier version of the rule, which indicated that safety grading was required. Now, of course, that was changed to it's an option. It's a logical thing you would do, but 70.62, now you can -- grading is permissible, but not mandated. So I made a little change there.

The fourth item is to describe the management measures that you're applying to each item relied on for safety and, again, if you've graded them, explain how that was done, your methodology. Then, finally, two requirements. One is how you're complying with the nuclear criticality monitoring requirements of 70.24 and, finally, how the design of the facility or the process at an existing facility adheres to the baseline design criteria in the rule revisions.

Finally, the third component of the ISA --

COX: Excuse me, Cliff. Could I interrupt, please, before we get on to the third component? I'd like to ask a question about the second, the process specific information, item two, safety assessment of each process and the several items

under there.

FARRELL: Yes.

COX: Under there you've got (e) and (f) under two, the likelihood of each general type of accident sequence. Prior to that, there were consequences of each general type of accident sequence, and following that, the item (f) was risk classification of each general type.

I'm thinking that the things like likelihood and unmitigated consequences are of the nature of unique values or attributes for a single accident sequence, and it's not clear to me how you establish a likelihood for a type of accident sequence.

I'm not saying that we come up with an answer here now, unless you have one, but I see this as a difficulty in working this plan out here and in reporting things like likelihood, consequence and risk, if you're going to try to somehow generalize that to a set of sequences as opposed to individual sequences.

SHERR: The same comment applies to the next item, item three, where we talk about the items relied on for safety in relation to the general types of sequences, that same type of problem.

SCHILTHELM: I think our problem goes back to a problem we have with the rule in the list of six or seven items

that are encompassed in an ISA summary. I think we still have an issue with the rule language there in that we think -- and correct me if I'm wrong, guys -- but we think that there is too much detail being requested to be in the ISA summary by that rule language.

So we're trying to craft a standard -- recommend a change to the standard review plan, thinking about the rule language, the proposed rule language that exists, plus our notion still that we're not entirely pleased with the proposed rule language that exists.

So I think we get a little bit mixed up sometimes when we try to propose this.

WEBER: You would have us delete this level of detail from the summary?

SCHILTHELM: Our view, and I can't speak for everybody right now, but our view at B&W, at BWXT is that we could provide this level of detail, but this level of detail is difficult to understand and comprehend, because it's a population of tables and scenario worksheets that can get very detailed and difficult to understand.

We think that providing a summary -- and we've still not quite captured, in our own minds, what that summary is, but a good summary that conveys to you why the process is safe and the types of accident scenarios that can occur would be of more value

to you. It's certainly of more value to me as a manager than a bunch of tables. And that would be of more value to you on an ongoing basis.

Now, during the licensing process, certainly you have to look deeper than just that text generalization and summary, and that's when you have to actually maybe come to the site and take a look to see that what we say in text is supported by what we've done in those tabulations.

WEBER: I heard Tom's question to be more technically how do you do this.

SCHILTHELM: You don't.

WEBER: Yes.

SCHILTHELM: It's scenario by scenario.

WEBER: Right.

SCHILTHELM: We're trying to describe something that you don't actually do in practice, but we're trying to come to a point where we have a description of general types of accidents that we can present to NRC in the ISA summary that will be clear and clearly written. But that's supported by analysis of individual accidents and application of risk criteria to individual sequences and scenarios.

Does that answer your question at all, Tom?

COX: I think we've come to an answer. I think probably Mike articulated it, that you're really -- I think your

view is that you really can't reconcile these kind of attributes with a general set of sequences.

I just wanted to see if you felt that way or understood that or what your general approach was to that. I think we do need to work on that.

But let me say that we're also in a quandary as to how the reviewer finds reasonable assurance of safety for high and intermediate risk sequences, which we now feel obligated to review, without looking at those sequences. And I think we're not prepared to say that we're going to do all that at the site and then write an SER that only relies on the information at the site.

So that's our current problem.

SCHILTHELM: And if we could suggest something, it might be that you still have the ISA summary that describes in general, in general terms, what those accident sequences can be and the kinds of things that we're controlling.

I remember a couple of years ago, Mike and I got in a discussion about trust and verification. You have to trust that we can do it right, but you have to be able to verify on a case basis and sufficiently to satisfy yourself that we have done it right, but you can't possibly verify that we've done it right everywhere. You have to be able to trust that we've done it right everywhere.

COX: Exactly. But we had -- I think at this point, we're thinking that the ones we will verify are those for high and intermediate sequences, and we're trying to grade it so that we can diminish our look at those of lesser importance.

SCHILTHELM: Having done the ISA on about 70 percent of our facility, really the ISA is a criticality safety issue, because the criticality safety sequences dominate what can go wrong at a facility. And there are a lot of them.

And I don't think that if those are the high risk things or those are clearly the -- they take you to a high unmitigated consequence, you can't possibly review them all. You don't have the staff to do that, nor the time to do that. So you have to -- you will have to gain confidence that we have done that adequately.

And by the way, you've done that for the last many, many years, because I don't think there have been huge issues with criticality safety at these facilities. I know we've had a few and I'm not saying there have been none, but I think in general, you have developed that confidence.

KILLAR: The other thing I would think is that as a reviewer, when you start looking at types of accident sequences, you're probably going to end up looking at types of initiating events, what's initiating that sequence to start and what are you doing to prevent that initiation, whether it's double contingency

and criticality, if it's fire protection for concerns about any type of fire, what you've done as far as natural phenomena, if you're worried about earthquakes, material falling and things like that.

So I think, as a reviewer, I think that's -- I think that Tennessee is going to be going in that direction, as to what's the initiating event and what have you done to control or mitigate that initiating event.

DAMON: My name is Dennis Damon. I'm a crit safety reviewer at the NRC. Having looked at B&W's ISA, one of the things I'd like to point out about this whole business of trying to summarize and deal with general types of accident sequences and how they were evaluated, is that it's true that there are a large number of accident sequences that appear in an ISA and what I observed to be true is there are a lot of very simple sequences that are of types which are repeated over and over again, and they appear throughout a plant's ISA.

For example, at B&W, there might be a process whose criticality is controlled by a storage rack with a fixed number of spaces and arranged in a certain arrangement and analyzed to be subcritical and handled by a piece count type of an administrative control in the use of this rack.

Well, it's true, there is not a lot of gain by actually literally listing every single instance where such a

control might appear and describing in great detail how the rack is arranged or something like that.

On the other hand, when you get into liquid systems, there can be arrangements of valves and tankage and piping and so on, such that it's very difficult for anyone to understand how that scheme is made safe, unless basically something equivalent to a fault tree is drawn that shows, well, the different combinations of things that can occur and why each one of them that can occur, in fact, is covered by an item relied on for safety.

So what I'd like to say is that I think both sides are right here, that in some cases, you can summarize and group, and, in other cases, if you don't put in the specific detail, the reviewer will have little choice but to come down to the plant and find -- figure out the detail there.

So what the bottom line here is is that I'd recommend that in the cases of complex systems, that have a lot of and's and or's and so on in them, that you go ahead and make a good description of that process and send a fault tree in, because it will facilitate the whole process, because if all the reviewer gets is a description that says, well, I'm controlling mass and moderation on this process, I have a mass -- I have mass controls and moderation controls, and literally that's all it says, as a summary.

There is nothing he can do with that and he's got to go down to take a look to see if you analyzed it properly.

So what you're trying to do with this process is communicate to the reviewer, through examples, in a sense, yes, this is a competent organization, they're doing this stuff well, as opposed to trying to summarize it in some other sense.

What you're really trying to do is communicate to the reviewer that you know to analyze these things and here are all the items relied on for safety that cover all these.

So when you come to the list of items relied on for safety, it actually should be comprehensive, but it could be summarized in groups. I've got all these things and they're all piece count controlled things by this certain type of method.

So it's a very delicate process here. I think none of this will be captured by any of the modification to the words in the SRP or in the rule. It will come through how it actually is practiced, is my view. We could play with the grammar and the syntax of the language here and we'll never really perfectly capture this idea, but it's a communication process is what I'm getting at.

KILLAR: Drew, do you have any other questions on this section before we move on?

PERSINKO: No.

FARRELL: Now, the next chapter is the acceptance

criteria. I'm not quite sure. Should we step through these? They're just kind of an elaboration on the items that -- areas of review. I'm not quite sure what you're feeling would be as to the best use of our time.

PERSINKO: Maybe you can walk us through the rationale of the changes you're suggesting, the major changes you're suggesting.

FARRELL: All right. I'm not quite sure what to do here. If we look at the first section under acceptance criteria, no comments on 3.4.1 or 3.4.2. They're fine, except as I've noted here.

PERSINKO: Well, you've deleted some of our language and suggest inserting new language.

FARRELL: All right. In 3.4.1, the first sentence is just clarifying what's in the rule, the three components, again, to refresh the reviewer. The license commitments to perform ISA using current process safety information and to keep the ISA updated and current as the facility' safety basis.

I don't think there is a substantive problem here. I thought my language was just a little clearer, but that's not a critical -- that's not a point of big contention.

The comment in 3.4.2 about NUREG-1513, my thought there is, again, as I mentioned earlier, we would like to provide this Appendix B, if it's permissible, the quantitative approach

to risk evaluation currently in Appendix A is fine, but it's not necessarily the only one. So we'd like to complete.

Also, I think -- I must confess I have not really dwelt on 1513 very much, but from my scanning through, I -- there was some mention of ISA summary and that had not been brought up-to-date with what we've now put in 70.65.

So there is a -- but I understand that 15.13 is still in the drafting stage, so that's just an observation there.

WEBER: Just a point of clarification, for my benefit, 1513 is not the ISA summary document, correct?

FARRELL: No, that's the ISA document.

WEBER: Right. But your comment was that the example of an ISA summary is incomplete. So you did review the ISA summary, which is a separate document from NUREG-1513.

FARRELL: Yes. Proceeding to 3.4.3, regulatory acceptance criteria, the text I have deleted I thought was just repetitive. It really didn't help us at all. It was just more background information, so I thought let's just clean it up. So, again, no substantive comment there.

Then we go into all the -- just an elaboration of the nine commitments that I read off a few minutes ago, just in a little more detail.

Again, I'd make a comment on item number four, which discusses corrective action program. As I mentioned earlier,

that -- thinking back, thinking over this a little later, now that we're working on Chapter 11, perhaps the detailed consideration or evaluation of an applicant's incident investigation or the corrective action program might be deferred to Chapter 11, but that was just an after thought.

I don't quite know how to address Drew's question as to the thinking, specific thinking that went into the elaboration on these nine license commitments. So many of them just follow the specific requirements of the rule. Just a little more elaboration.

I guess if there are any specific questions.

SCHILTHELM: Drew, maybe it would help you to understand what we did. We took your SRP Chapter 3 and we took two colored highlighters and we spent the day going through making two colors; one color represented what we thought went in license commitments and one color represented what we thought went into an ISA summary review.

And we fundamentally rewrote this thing. I'm not sure we intentionally removed anything of substance that was in the SRP. We may have inadvertently removed something of substance, but I'm not sure we intentionally set out to remove anything of substance. We just simply put it apart and put it back together differently.

FARRELL: There were a few instances where we said

some information required was actually ISA documentation, a third color, and that stuff should stay at the site.

EDGAR: Then we took the other material out intentionally to put in 1513. We didn't get rid of it.

SCHILTHELM: So the content, we believe, is the same as what was there originally. Now, like I said, we may have missed something, but -- so maybe it would help to go through your questions one by one at this point rather than belabor what we did with Chapter 3.

COX: That could be true, but I'd still like to ask you a question right here, since you're right here now at the ISA summary. And based on what you -- how you have presented this, as a separation of commitments versus descriptive material, the opening statement here under 3.4.3.2 says staff will find an applicant's safety program description as presented in the summary to be acceptable if the following criteria are met.

So you're referring to the applicant's safety program description and you've put these criteria in what you call the ISA summary section.

Do you not feel that commitments made relevant to the safety program -- I said that wrong. Do you not feel that statements made regarding safety program description are commitments on the part of the applicant or licensee? Because the rule says tell us about the safety program description, and

that would be part of a license application.

I think we would look at your description of a safety program as a commitment to design and operate a safety program in a particular way.

SCHILTHELM: I'll take a shot at answering, and it's not specific to Chapter 3. You've got 11 chapters of safety program description that are called out in this SRP and will become license application content that will become commitments of the license, in our view.

That's the way we viewed this. So you have 11 chapters worth of safety program commitments, one of them, Chapter 3, is description of the ISA program and how it's done and the ground rules.

So, no, we view those as commitments that will be captured through the license application.

COX: Are you saying that this sentence then just needs to be changed? Because this says applicant's safety program description, as presented in the ISA summary, will be acceptable if the following --

FARRELL: Yes. What is presented in the ISA summary is a component of the safety program, yes. You are quite right. I think that the words written there need to be improved.

The ISA does not constitute the entire safety program. There are ten other chapters that are just as important. So,

yes, the language is erroneous.

COX: If I understand your description of these two sections, you don't intend for the ISA summary to be any part of the safety program description and considered as a commitment. I thought you were telling us that this ISA summary, which is a separate document and submitted separately, is not part of the license application, per se. Is that right?

SCHILTHELM: Let's back up. We're accustomed to a license that has -- many of us have had a two-part license in the past. But we're accustomed to a license that has commitments to programs that we can't change without license amendment. And those are the safety program commitments that we make, and that's been our traditional licensing process.

We see those as different than the ISA summary. The ISA summary is a document that we submit on the docket during initial licensing or during substantive license amendments, major changes to process, that supports and gives you information that that process is okay to operate, whether that process be a new process or be a new facility.

But the safety program commitments stand alone from that and they are part of the license application and they're what we have committed to do, from a programmatic standpoint.

That's been the -- that's what our licenses are today. And I'm not sure, at least B&W and BWXT sees that changing very

much. We're still going to have 11 chapters of commitments that we will do this this way. Plus, we're going to have an ISA summary that says yes, we did this this way and this is why these processes are safe, this demonstrates the acceptable risk profile of these processes at this licensed facility that's operating under these license commitments.

WEBER: So you don't see this as a one-part license.

KILLAR: We see it as a one-part license, but what we see is Chapter 3 generates two documents. One document is the license commitments and conditions that we will meet as far as doing implementing the ISA program. The other document that is submitted with the application, but is not part of the license, is the ISA summary, which demonstrates how we carry out that program.

So you have a level of confidence that we are carrying out the program effectively.

SCHILTHELM: Let me answer it slightly differently. We see it as a one-part license containing 11 chapters that does not contain the ISA summary.

COX: And do you feel that you can change the ISA summary without amendment to the license?

SCHILTHELM: Under the conditions of 70.72, absolutely.

KILLAR: Yes. Now, we can't change the ISA summary

without getting a license amendment if we're changing anything that's in those 11 chapters that we committed to as part of our license.

WEBER: Unless 70.72 applied.

KILLAR: That's what I'm saying. Under a change process, we can change the ISA summary without an amendment, provided we don't violate any of the provisions that we committed to. But if we need to change something that impacts the license conditions, in order to change that ISA summary, we have to get your approval to do that.

SCHILTHELM: Let's switch gears a little bit. Those license commitments in those 11 chapters are presumably there because they are very important and changing those would -- if we were to change them, they could degrade the safety of our facility.

So I could see you guys wanting to see changes to those 11 chapters. Those are the fundamental commitments to the way we do business.

Now, there may be some administrative changes that could occur under 70.72, but fundamentally, that's our agreement and our contract with you as to the way we're going to do business, and I wouldn't think you'd want that changed in any substantive way without some review and approval.

KILLAR: Going back to a little bit of a philosophical

discussion here, in that Part 70 is a possession license and that we have the ability to possess and manipulate radioactive nuclear material, provided we're doing it in accordance with conditions that you agree to that we would handle it safely by doing that, and, as such, that makes up the license conditions.

COX: Okay. I'm clear where you are on that.

SCHILTHELM: Is that where you guys are or are we just way off base? You're saying yes, I'm clear, I understand where you are, but you haven't said where you are.

COX: My view is that 70.72 is a fairly comprehensive statement, which puts a lot of conditions down under which you will secure an amendment to change the ISA summary. So I don't think of the summary as being something that's really outside of the license commitments.

I see your view, but I think of it as being quite a bit a commitment, which can only be changed when you do not violate 70.72. It's just a matter of perspective, I guess.

SCHILTHELM: And I don't think either of us would disagree with what each other has said at this point.

WEBER: Get back to your question?

COX: We've already hit a couple of them.

FARRELL: With respect to that first sentence, I think simply deleting a few words would satisfy the question. If you just simply said that the staff will find an applicant's ISA

summary to be acceptable, ta da da, I think deleting safety program as -- safety program description as presented in the ISA summary, just remove those words.

WEBER: That's the first sentence of your revised section 3.4.3.2.

FARRELL: Yes. I think what I was -- my language was not correct here. It was a little confused. I was saying that the ISA summary is a portrayal of the ISA, which is one of the three components of the safety program, but that didn't come through. Simplify it.

KILLAR: The intent in this section is for the reviewer to look at the ISA summary and see if the ISA summary is adequate, if it meets the needs. So that's what the reviewer is looking for, is to review the applicant's ISA summary.

PERSINKO: Shall we go through the questions and see how that progresses? Start with number one. In your general comments, you had exclusion of the results of the ISA from a facility's licensing basis makes redundant to the license reviewer a majority of the content of the draft SRP.

We asked what do you mean by licensing basis and what do you mean by redundant to the license reviewer? I guess we didn't understand that.

COX: Maybe I could sharpen the question a little bit. The first phrase, at least. Your comment was exclusion of the

results of the ISA from a facility's licensing basis. I think we're trying to understand how excluding the -- how the results of the ISA is excluded from a licensing basis. I'm not sure what that means.

KILLAR: Maybe we're misunderstanding what you mean by the licensing basis and our interpretation of licensing basis. I think when we look at the licensing basis, we look at things like licensing commitments, and that's why we have some concerns when you start talking about the ISA, the results of the ISA being licensing commitments, and that certainly the commitments are to do the ISA, to provide the ISA and to do it appropriately, but the results of the ISA is just for the purposes of determining how our safety programs are applied.

So I'm not sure that when you talk here about licensing basis, we're not getting into the question here of whether it's part of the license or not.

PERSINKO: It's not part of the license, but it's part of our licensing basis. It's what we have relied upon to issue the license.

KILLAR: So you're looking at it from licensing basis for the purpose of information, documentation that's available for your review, and from that aspect, we have no problems with that.

COX: That is what we consider.

KILLAR: If you had the licensing basis, that it was part of the commitments we were making and stuff.

FARRELL: The redundancy is not a disparaging remark on the information contained in the ISA. It's just that that information is available, but the focus of the reviewer is on the ISA summary.

PERSINKO: Okay. The next question we talked about, qualitative standards for likelihood and consequence, I believe we've discussed that one already.

KILLAR: Basically, what we're doing is we're not deleting them from, we're just moving them into 1513.

WEBER: The practical import of that, from your perspective, is what?

KILLAR: In that when you're looking at 1513, you're looking at doing the total ISA and part of doing the total ISA is doing your evaluations and it actually gets into the next question, as well, I notice here, dealing with definitions of how you determine what's likelihoods and what's the -- I'm trying to think of the term here -- what's likely and unlikely and what have you and stuff.

And so you do all that through your ISA and then you report the results in your ISA summary. So that type of information should be in the 1513 to help the individuals as they're doing the initial ISA capture that information.

WEBER: So by removing it to NUREG-1513, you see it as setting aside those issues with respect to the adequacy of the ISA summary.

KILLAR: I'm not sure what you mean by setting aside the adequacy of the ISA summary.

WEBER: Removing it makes it no longer a factor for consideration and judging the adequacy of the ISA summary?

KILLAR: The reviewer still has to be comfortable with the results are adequate. Whether they have to know every individual calculation that they went through to get those results I don't think is necessary.

PERSINKO: I don't think they need to know every individual calculation, but like I said, they do have to have a feeling that it was done correctly. So they may look at some type of abbreviated cut set.

COX: We've just slipped into talking about two different things here. The question is about detailed guidance on establishing standards, not looking at the results of detailed calculations.

You feel -- your comment here was guidance on establishing standards should not be in the SRP, but rather off in 1513. We weren't talking here about evaluating each accident sequence.

KILLAR: I think maybe here we've got misuse of the

word standards. What we were talking about is basically Appendix A should be in 1513 rather than the standard review plan.

COX: And that is because you think of Appendix A as guidance on how to do an ISA.

KILLAR: And how to do specifically the calculations for the likelihoods and things along that line.

COX: Let me just, again, comment, in passing, that we looked at Appendix A as a way to present the results of the ISA summary, really a format and tables or a way to present the results of the summary, not a tutorial on how to do an ISA.

WEBER: And that's why it was in the SRP, because obviously that would be one acceptable way to present those results. And if a reviewer saw it laid out like that, that would support the positive finding.

KILLAR: But it goes back -- from my perspective, it goes back to when the NRC says that NUREG-1513 provides an acceptable approach for doing ISAs and presenting the results, it's more appropriate to put it there than put it in here, because what happens is the reviewer says, okay, Appendix A says this is a way that it could be done, and if they do it some other way, they're going to have to justify why we're doing it some other way.

EDGAR: I think it comes down to the fact that we didn't recognize that as a suggested summary, format and content

guide. So we took it out of there just to kind of, for lack of a better term, to unclutter this chapter.

PERSINKO: I think we've covered number three. Number four, we talked about, we may have covered also, we talked about detailed guidance versus commitments. Commitments to performance indicators, again, which now may be the incorrect term. So I'm not so sure how this applies any longer. I think we've covered it in a previous discussion.

Number five, we -- let's see. There were a number of items you suggested removing and we just wanted to know why you wanted them removed. Section 3.1, and I'm not sure if that's one of the ones Cliff had said he did it for his -- he thought it was clearer by taking it out, I'm not sure if that's what we covered or not.

FARRELL: Those five points have been developed in the areas of review. I guess this is just -- I was removing it from the purpose of review down into actual areas of review, and the commitments to perform the ISA and to use the competent staff and to so on. I think that's just an issue of relocating it to Section 3.3. But all of the information requirements have been addressed.

PERSINKO: We may have covered number six, as well, but we were asking how the ISA summary -- what you intended to include in the ISA summary that demonstrates compliance with the

performance requirements, because that was also one of the requirements in 70.65.

SCHILTHELM: That goes back to that whole discussion of how do we come up with a summary that summarizes the list. I think we have work to do there, collectively, if that's a goal that we'd like to achieve. I think that's an area where we need to work.

PERSINKO: Number seven was you're going -- I think we covered that, too. We covered about a systems level, what did you mean by covering things as a systems level. I think we covered that with Tom's question.

KILLAR: I think Dennis also brought up some good points there.

PERSINKO: I think so. Also, I think we covered number eight, as well, about high and intermediate consequence events and we've conveyed to you our concern that we do need to see the entire spectrum to know that the -- we have confidence that they are indeed the high and intermediate, and we've covered that.

I don't know that we fully resolved it, but we talked about somehow between what's available at the site and what's submitted. We do need to come to that conclusion.

Number nine was just the question about you suggested removing two paragraphs in our Section 3.3 and we wanted to know

why.

Let me see.

KILLAR: Do you know which two you're referring to? Because the first ones we removed aren't until you get to the ISA summary review topics.

PERSINKO: 3.3.2.4, I think.

FARRELL: I don't think that the substance has been eliminated from Chapter 3. What this strikeout reflects is a consolidation of the information in the ISA summary into those three areas, the general information, the process specific, and the items relied on for safety.

PERSINKO: Yes. It's the one that I think Cliff had talked about in his presentation, these two large strike-outs under what Cliff has now number 3.3.2.4, and I think Cliff said he did this because he was rearranging.

FARRELL: That's right. Also, for example, in the original language, in the first paragraph, I think it's the fourth line from the bottom, it says -- that new sentence -- the application provides licensee commitments that demonstrate, and so on. Well, as part of the reorganization, we've pulled commitments back into an earlier -- its own section. So, again, it's just reorganization. So the content is all there.

PERSINKO: The next question had to do with your comment that says licensee commitment is to be evaluated in the

commitments section of the program review.

I assume you're referring to the breakdown that you now are proposing with one section of commitments and one section of ISA summary.

KILLAR: Right, because this section is dealing with the ISA summary.

FARRELL: Again, of the safety program review, again, it's referring to Chapter 3. So not all aspects.

PERSINKO: Once again, you suggested modification and we were wondering why you were suggesting a modification to our wording. You're actually suggesting removal of Section 3.3 and I assume it's because of your reorganization that you would like to propose, unless you had some other reason for that.

FARRELL: No. This is a commitment. The applicant commits to compile and maintain a current and accurate set of process safety information and if you go back a couple of pages, I think under 3.3.1, item 1, that's where the information now occurs. The applicant commits to compile and maintain a current database of process safety information.

Again, it's just separating commitments from ISA summary type information. So that's just item number four, which I struck out, which was just relocated.

And in the second sentence of item number four, the applicant should explain this activity -- i.e., keeping the

process safety information -- administer that by means of the configuration management program.

Well, yes, I guess that could carry through. It's just that as I note, we are considering that a management measure in Chapter 11 and we will refer back to one of the programs that the configuration management program is to oversee is the maintenance of this process safety data information. Again, just editorial.

PERSINKO: Number 12 was about providing unmitigated consequences of each type of accident sequence and a comparison of performance requirements and a ranking of terms of risk. The question, I guess, was just trying to understand the relationship between the unmitigated consequences, rankings and terms of the risk.

Noting that you could have a higher risk accident, they don't always correlate. High consequence would not always be ranked higher than risk. I think it was just trying to denote those differences.

COX: Consequences is not the whole story on risk, that's all.

SHERR: The fact that you have been lecturing to us the last few years.

KILLAR: That's why we have E, we have likelihood. If you have likelihood with the consequences, then you have risk.

FARRELL: As part of the ISA exercise, you're going to come up with your risk matrix or something like that and that risk matrix approach would be described in the ISA summary. So I think that would address this number 12.

SCHILTHELM: Let me add one thing about the risk matrix approach. After you've completed the ISA at your facility and you have an ISA, the risk matrix approach almost doesn't apply anymore because you're not going to design any facilities that don't have an acceptable risk profile.

So to put these different operations into this risk matrix almost becomes irrelevant because you design operations to meet the performance requirements. And by definition, when they operate, they will have an acceptable risk profile.

So it's an important thing you need to recognize about that risk matrix, and that it will go away at some point in time. They'll just operate acceptable facilities.

WEBER: But you'll still have a relative distribution of risks among the activities that you have.

SCHILTHELM: You'll have acceptable and unacceptable. Unacceptable won't operate, acceptable will.

WEBER: But even within the range of acceptable risks, you're going to have a distribution of risk. You're going to have some activities that are inherently safer than others.

SCHILTHELM: I don't know that the rule requires that.

WEBER: No.

SCHILTHELM: And I don't know that any of us will.

WEBER: But that's the kind of information that the NRC would use in our inspection program to focus on those things that are of more risk significance than others.

SCHILTHELM: I think you all need to think about that a little bit, because that's not what this rule requires. And if I demonstrate that this high consequence event is highly unlikely, I don't need to go any further. I don't need to categorize how highly unlikely.

WEBER: Something to think about now between now and Thursday is what risk information would we use in our inspection program.

SCHILTHELM: I agree.

SHERR: We're, I guess, through question 12 at this point. We have 24 questions. It might be a good time to break and then if we can reconvene in about ten minutes.

[Recess.]

SHERR: We can continue our discussion of the ISA chapter. No gavel. I think we have 12 questions left, although we've quickly reviewed those and I think we're down to three questions that probably are still pertinent to discuss.

PERSINKO: During the break, we went through the remaining questions and a number of them have been covered

already and a number of them have to do with asking why certain -- why you were suggesting to remove certain language, and I think the answer to all those is because you've reorganized it and you've divided it up differently, but you're not really removing a lot of the language, just reorganizing a lot of it.

So we're culling it down based on that. We think question number 17, the comment from NEI was that it recommends removal of the statement that the ISA team leader should not be the cognizant engineer expert in the process.

Shouldn't the purpose of the recommendation to ensure an unbiased analysis of the process be satisfied by some recommended approach? So we want to know why you were suggesting that.

KILLAR: Our concern here is that whoever leads the process should be familiar with the process and be knowledgeable about the ISA approach and when all the interactions are required.

And while you may have a cognizant engineer that really knows the actual process, whether it's an ADU line or a pelleting line or what have you and stuff, they may not be as familiar with the overall ISA approach.

So we felt it would be better, rather than say that the leader of the ISA be the engineer for that area, it would be better that the leader be someone who is very knowledgeable about

the ISA process itself. And that was the direction we were going in.

MILSTEIN: I agree with what you just said. But what you took out was that the ISA team -- the leader of the ISA team should not be the cognizant engineer or expert for that process. In other words, you don't want the leader of the ISA team to be the person that designed the process, because he has a -- you can say he has kind of a vested interest in it. He's designed it and he doesn't particularly like criticism of his process.

So the idea is that -- and this is generally recommended in the AICHE handbook, that the cognizant engineer for that process, the person that designed it is not actually the leader of the ISA team, and that's all. And that was removed and I was wondering why that was removed.

KILLAR: To backtrack what I said, because I was thinking about a different point. Certainly that we didn't feel that the individual who is the head of the section could be the leader. I understand where you're coming from, from the CHE handbook and stuff. I don't know if there's any real hard feelings one way or the other on that. Steve and Charlie?

SANDERS: Quite frankly, I believe that's right. It looked like, in spite of what our comment was, that what's written is right.

KILLAR: So we agree with you.

PERSINKO: The next question we thought is number 18. Applicant should provide acceptable qualitative or quantitative definitions of likely, unlikely, highly unlikely.

We were just -- since you were proposing acceptable, we thought what criteria would you propose for acceptable? We thought the way you had described it in the SRP in your proposed language was vague.

KILLAR: I'll let Clifton handle that one. He's our scribe.

FARRELL: Well, yes, it is going to be vague. I guess the -- depending upon what approach the applicant decides to go. If he wants to go all qualitative, it's going to be a very verbose description probably to come up with those definitions.

I guess if you want to go quantitative and assign a number or you just say something happens once in the life of the plant or once every week, I guess that's really up to the applicant, and I don't know --

MILSTEIN: But this is a -- in the SRP, it's supposed to give guidance to the license reviewer. So the license reviewer has to make a decision as to whether that's -- what is acceptable. So how is he going to make that decision if there is no criteria? If all you say is it has to be acceptable, then any reviewer can make his own decision on what's acceptable.

FARRELL: Well, based on his experience, I suppose, in

reviewing license applications for other plants, he's --

MILSTEIN: Is that what you want? You want the license reviewers to --

FARRELL: Well, we'd like an experienced license reviewer, yes, that would be -- no, I'm not being facetious. I'm not -- if we need to give some examples in here, we certainly can, but some qualitative or quantitative numbers, yes.

One of my -- I did have a concern with the draft SRP in that they seemed to focus a lot on what is incredible and if something is not incredible, it's credible, and I thought we -- and I haven't tackled that issue, but it would be nice to.

I put some language in as to what might constitute credible, but maybe we should take the positive aspect in arguing that. But that is an area we could certainly flesh out, yes.

SCHILTHELM: We've got some collective work to do here. This goes back to the discussion earlier. Really, the only benchmark for acceptability we have right now is double contingency in the criticality safety arena. And that, somewhat by implicit definition in this rule, meets the highly unlikely criteria.

Other than that, we don't have a lot of sources to draw on to say what is acceptable. So when we began our ISA, we built it around double contingency and criticality safety and we said, okay, if this is acceptable, if double contingency is

acceptable, our definition of acceptable for other things needs to be consistent with double contingency, because that seemed to be the benchmark.

But outside of that, I don't know what we do because we're not talking about probabilistic numbers. We're not going to put a number on this. So we need to come up with a way collectively to decide where we need to be.

FARRELL: I guess that the issue is, in a sense, we've punted, because we've said we've deferred this to the first guys that goes into renewal or the first guy that submits a license application, and I'm not sure punting is what we ought to be doing at this point in the game. Charlie comes up pretty quick.

PERSINKO: The last question we thought that still would remain is number 20. We have talked about quantitative information under one of the overarching questions, but specific to Chapter 3, you made the comment that -- NEI made the comment that under process specific information, process descriptions should contain a limited amount of quantitative information and we were asking what you felt that that limited amount of quantitative information should be, if you had specifics.

KILLAR: I can take a stab at it, and I'm not 100 percent sure whether this is the reason or not. Certainly, information as far as the amount of nuclear material involved, the amount of enrichments, things like that are certainly

pertinent to the analysis.

We do get a little concerned when you start talking about flow rates and productivity rates and stuff because of the competitive nature the companies are in. So, yes, we could provide quantitative information, provided it's quantitative information as impacts the nexus to doing the analysis and the safety information, but we are a little concerned about providing quantitative information that goes much beyond that.

So when we say limited, that's what we mean. We mean limited to what's needed for the analysis.

PERSINKO: That concludes our Chapter 3.

SHERR: Any other comments or matters on Chapter 3 that we'd like to raise?

[No response.]

SHERR: If not, I guess the next chapter on the agenda is the management measures, Chapter 11.

NEI Slide 6 KILLAR: In Chapter 11, we're not as far along as we are on the other chapters. We have got together and discussed Chapter 11 and we've taken a first draft at the changes to be made in Chapter 11.

I might point out, in Chapter 11, we're taking the very similar approach to what we just did in Chapter 3, in that we feel that the chapter has to be restructured to provide a little bit more meaningful benefit to the license reviewer, as

well as to the licensee submitting to this chapter.

I think Cliff has taken a first cut and maybe Cliff can give us a sort of rundown of some of the things we've done.

FARRELL: I have gone through with our group and made some preliminary observations on Chapter 11 and we are just starting to discuss these in detail amongst ourselves. So I'm afraid I might be a bit general in some of my comments.

We have not got to the point of going through and marking up a redlined version of Chapter 11. That's -- well, maybe other than the first page or two here, but that will come hopefully within the next week or so.

Let me just go through some of the points that we discussed. Again, like -- analogous to Chapter 3, we think that Chapter 11 should be restructured basically into one chapter, with some subdivisions for each of the management measures, the seven or eight that are provided and if an applicant comes up with another one, then they would have the option of describing that and including it in the license.

We do have some standard concerns elsewhere. Draft Chapter 11 now is 56 pages long and it contains a lot of material that is repeated from one subchapter to the other, and that makes it rather complex. I have here, for example, document control is addressed in the configuration management section, quality assurance section, procedures section, and records management

sections. Corrective action is addressed in quality assurance, audits and assessments, and incident investigations.

So these and other topics just need to be addressed once. So that is kind of driving our desire to try to condense Chapter 11 down to something a little more manageable and concise.

We still have a concern with some of the prescriptiveness in the Chapter 11 subsections. For example, in Section 11.2 -- I'm sorry, I haven't got it with me, but I made a comment that it allows little latitude in designing and monitoring preventive maintenance and corrective maintenance programs. They're very specific, the requirements, and I think we should allow the licensee a little more leeway in there.

Section 11.6, for example, requires the use of teams to investigate abnormal events or investigators to be independent and requires the use of process experts. We feel that that some of those requirements are not required.

Another comment deals with the quality assurance program. I'd like to spend a little bit of time on quality assurance. We do not believe a separate chapter on QA is required in Chapter 11 and consequently, we think 11.8 should be pulled out. We realize that some people use quality assurance as a distinct management measure.

However, we feel that each of the management measures,

the other seven, records and audits and whatever, are inherently going to have a quality assurance measure built right into them. So we think there is a bit overkill here.

But what we have done is looked at each of these 18 NQA1 type QA requirements that are detailed in Chapter 11.8 and looked at where else each of those 18 criteria are addressed in other parts of the license application, and what we've done is mapped -- I'm sorry, I haven't given this to you yet, but mapped each of the NQA1 criteria onto a particular section of the license application or a management measure.

For example, the requirement for organization, we've already addressed that in Chapter 2 of the application, organization and administration.

Instructions and procedure; well, that's a management measure, the procedures management measure. Procurement and purchasing, that may be under procedures. And so on. Inspection is under maintenance. We've gone through for each of those.

However, there are three NQA1 type QA requirements that are unique, one of which is special processes. The second one is handling and storage. The third one is dealing with non-conforming materials. We feel these are important, that should be addressed. However, we are thinking, instead of -- we're thinking of adding a section to Chapter 11 that would address the grab bag of other management measures that would

address those three issues that are not already NQA1 issues that are not addressed in the license or management measures.

I think part of the problem developed by an attempt to duplicate the requirements for reactors, the NQA1 requirements for reactors to the fuel cycle facilities, the power reactors have to have the formal QA program for application for design, fabrication, installation and operation of items relied on for safety.

And in contrast to Part 50 licensees, there is no regulatory requirement for us to have a formal QA program. However, as I mentioned earlier, we believe that each of the QA requirements, other than those three, are adequately addressed elsewhere in our application or in one of our management measures.

The general requirement of 70.62 to establish and maintain a safety program and to implement appropriate management measures will, by necessity, entail implementation of QA measures appropriate to the safety importance of each item relied on for safety.

For that reason, we feel that there is an overkill of having a separate QA subchapter is done away with. We feel we are addressing QA in the existing management measures or sections of our license.

Now, those are our -- so what we'd like to do is to go

through and reduce the information, the reporting requirements that seem -- that are so duplicative in the chapters and condense those down into a single chapter, with the format of the other SRP chapters, the areas of review, the acceptance criteria, the evaluation findings and so on.

And again, by reducing the prescriptiveness and the duplication, we think we can get a concise Chapter 11 that's easier to work with.

I have gone through again and looked at specific comments on each of the existing subchapters. I can comment briefly on these, but I won't bore you with the details. For example, in Chapter 1, existing 11.1 on configuration management, we feel there is some misinterpretation of the purpose of configuration management.

The chapter seems to dwell on what is, in fact, an ISA function, the safety analysis of facility changes, whereas configuration management should focus more on the procedures to maintain current the documentation of the facility's safety basis and so on.

Chapter 11.1 constantly focuses on changing the ISA, and that, in fact, is dwelt more in the change mechanism of 70.72, evaluating the risks and impacts and requirements for ISA summaries and so on.

We feel that there is just some duplication there

that's not needed. The existing Chapter 11 is more suitable as a program review tool to be used by an inspector than perhaps guidance for a license reviewer.

ASTWOOD: Could you just repeat that part about 70.72, please?

FARRELL: Yes. The regulatory requirements to engage the facility change mechanism, the 70.72, and the ISA, to evaluate the risks, impacts, requirements for items relied on for safety and corresponding management measures, are not really encompassed by the configuration management function.

For example, in Section 11.1.4.3(2), states that the ISA must be maintained current and that suitable hazard accident methods must be used to establish safety margins for any proposed changes. That's fine, that's correct, but it's something that should be probably addressed in the ISA chapter of the SRP and not necessarily here in the configuration management.

The changes will be documented appropriately, but not the actual assessment of the change, its implications, that's really something that falls back into the ISA responsibility.

We do have an ongoing concern about the need to do this design reconstitution to ensure that the facility's configuration is consistent with the as-built documentation. We just express the concern to you that this is a tremendous commitment of resources and we really wonder what the safety

benefits might be.

PERSINKO: But I think it says as necessary to conduct the ISA, I believe. It's 100 percent across the board.

FARRELL: I don't have the language. I didn't bring Chapter 11 with me, so I'm sorry.

PERSINKO: Design basis.

FARRELL: So 11.1.3 and item six.

PERSINKO: There is one thing, also, I'd like to point out, and maybe we ought to do it now so that it -- it appears to me that you're using the version of Chapter 11 that was in the June 2 rulemaking package. Many of your concerns we attempted already to address actually.

The version that we posted actually on July 30 is a different version. It tries to do what you suggested, make it one chapter instead of eight separate sections. So the repetitiveness, we believe, is now gone.

So if you see that, you won't see eight separate sections any longer.

FARRELL: I stand corrected. I was just working on what was released in June.

PERSINKO: I know. I just point this out, because at that point in time, if you recall, we had -- you had sent in some comments and we hadn't had time yet to incorporate or address them. So during the time period when the Commission paper was

out until the time we posted it, we continued to try to work on that chapter to address your comments.

FARRELL: I apologize. We'll work on the July version. I honestly didn't recall it being published.

EDGAR: July 30?

PERSINKO: Yes. That's when it was posted. I believe it was July 30 when the rule was posted and I think it was posted at the same time.

What we did there, too, also, as far as QA is concerned, we did try very carefully to show -- we recognized that some of the elements we had listed were actually -- some of them were actually in the QA program, as well, but we had tried to show why they were pulled out and we tried to extensively cross-reference the QA section to these other elements, to try to address, I think, some of the concerns you had here regarding QA.

You also said about no QA program. No, the rule does not require a QA program, but it does talk about management measures in terms of other QA elements.

So QA is included in the rule in terms of QA elements. Now, the SRP still talks about QA program. I mean, a QA program is one way of describing to us how you intend to apply the other QA elements. If you choose to describe the other QA elements to us in a fashion other than a QA plan, I mean, that's fair, also.

But a QA plan is a succinct way of describing how you

apply the other QA elements noted in the rule.

FARRELL: Well, in view of that, in view of the fact that I've been working on the wrong version of Chapter 11, I think maybe many of these, my concerns, might just disappear, like yours with Chapter 3. I'm not sure.

TEN EYCK: We hope so.

FARRELL: So I wonder, is there merit in continuing or shall we defer for a few days and do it correctly?

SCHILTHELM: It might not hurt to run through these. I think I'd like to spend a little bit more time on QA here, but maybe it wouldn't hurt to run through the rest of what you had to say to see if there are a couple other issues that we want to spend a little bit more time on.

SHERR: That's fine.

KILLAR: Can I go back to the design reconstitution? I'm not sure what the new version has, because I'm also working off the old version. But it says in the old version, the applicant describes the design reconstitution that has been done for the purpose of the application. It says because this information may be duplicative of the plant design basis information described elsewhere, this information may be included by reference to other parts of the application.

I think from our perspective, it already is. You can't do your ISA unless you know the design basis of your

facility and things along that line. So I'm not sure that this is a necessary item to be included in here.

COX: We think it's a necessary item to be included in here because of what you just said. It is important to knowing or moving on that first change to your facility. You have to know what you're changing from.

The fact that you have it done may obviate the necessity to do it, but that doesn't mean that we shouldn't bring it up as something that is necessary to take a look at.

I don't really know, as I look at this, whether it's different from what they have been looking at or not. I'm looking at the June 2 version here.

PERSINKO: Much of the substance has not been changed. It's been reorganized to address some of your organizational concerns. But the QA section and the cross-references from QA have been improved and even some of the substance, some of the substance in the QA chapter has been modified slightly, too.

COX: If I could just comment once more on Section 11.1.5.2(6), it says in here that the reviewer will seek evidence that the need for design basis reconstitution was investigated, that it was accomplished as necessary, and that new or revised documentation was properly incorporated into the CM function.

Now, that does not sound too onerous. There's another section under areas of review, 11.1.3.6, which I believe Cliff

referred to, which says only that our reviewer will examine the applicant's discussion of design reconstitution that has been done for the purpose of the application and how that was or is translated into a fixed baseline design basis from which subsequent changes are measured.

It sounds -- if I could use the term motherhood, it's important, but this doesn't say go back and review every piece of hardware in the plant and put it all into a CAD system, which, by the way, some people do anyway.

EDGAR: Is it something as simple, in your view, as saying that yes, we have updated our drawings and so on?

COX: Particularly for those items that are relied on for safety, that are the subject of containment of SNMs, the processes that you would be talking about in the ISA summary, we would expect that you would have a close correlation between the design information, the hardware on the floor, and the procedures that govern its operation.

EDGAR: I understand that. Is it -- I guess what I'm asking is, is it adequate, in your view, for us to say that we have done that and leave it at that?

COX: Now we're back to where we were in discussing a lot of other of these things. At what commitment level do we accept a commitment? I don't think we're in the process --

EDGAR: We've done an ISA. Supposedly, that's done on

the current system. To say to you that yes, we have updated all of our drawings, procedures and so on and they're part of the ISA that we did, that statement can be made in this part of the application.

But if you want to confirm that, you would come out and look at the ISA, I guess. What I'm really asking is how much detail about what we did do we have to put in this part?

COX: Well, that should be covered under acceptance criteria, 11.1.4.3, which was the paragraph that I read a little earlier under design reconstitution, which is limited to existing facilities only, of course, because we would expect that that design -- the design documentation would exist for a new facility.

It says under acceptance criteria, it says that the applicant describes the reconstitution that has been done for the purpose of the application.

Now, if it was a one-line description that said we did everything necessary for the purpose of this application, I would expect the reviewer to probably ask a few questions about how the CM system is set up, what kinds of documents it captures, and when, how they're controlled, to what extent are the items relied on for safety and the associated equipment captured in the system.

See what I'm saying? If it's just a one-line

statement that we did well and you're asking us to just accept that assertion, we probably would not, without asking some further questions. We're looking for a description of how the design and design documentation are kept and managed in the facility.

EDGAR: And that's described in our configuration management program.

COX: We're looking for a description of that program.

EDGAR: That's in there, right?

KILLAR: Yes. I think you've got a difference there. We maintain, in the configuration control system, the current documentation for how the facility is currently set up and operating and running. When you talk about reconstituting a design basis, it implies that we want to go back and get through all the history of how we got to the point we're at today, and we're not sure if there's a whole lot of value to doing that.

Similarly, when we're doing the integrated safety assessment, we have to have the current design and the current basis in order to assure that our integrated safety assessment is adequate, and by having a separate requirement in here for reconstitution of the design basis, we're concerned that we're going to be doing a lot of work that's going to be duplicative of work that we've done for the ISA and we're not going to be able to satisfy the reviewer that we've done what needs to be done,

or, in his mind, what needs to be done.

COX: If you've done what needs to be done, I'm puzzled as to why you could not satisfy the reviewer that that has been done.

KILLAR: Because it's contained in the ISA and in the ISA summary and he's not looking at the ISA and the ISA summary. He's looking at a commitment in Chapter 11 to provide a reconstituted design basis.

COX: If you write a line in Chapter 11 that says go and look at the ISA summary, section so and so and so and so, he will do that.

KILLAR: Okay. That's our question. If that's adequate, that's fine.

COX: If he finds there what he needs to find, it's done. In fact, there's a line right here in the second sentence that says because this information may duplicate the plant design bases information described elsewhere to support the ISA, this information may be included by reference to other parts of the application. I think that addresses what you were just saying.

KILLAR: Okay. Clifton, you want to go on?

FARRELL: Now, the reference may be wrong, but in the old, the June version, there is a Section 11.1.4.3(1), paragraph two, directs that configuration management should initially apply to existing facilities in accordance with the SRP, but should be

independent of the ISA results.

And our concern here, if that language still exists, is that pending completion of the ISA, a licensee would have to assume that any credible accident sequence could be high risk, thereby necessitating identification of a large number of items relied on for safety, all of which would be subject to the configuration management function.

Only when the ISA is completed and those higher risk accident sequences identified in the ISA summary, when you're done that, then that smaller set of safety significant items relied on for safety and subject to configuration management program could be identified.

So our concern here is that we're going to start with an assumption that everything is going to be high risk and there is going to be a lot of extra work implied there until the actual ISA is done.

COX: I'm sorry. Could you put me in the right place here? I missed the reference.

FARRELL: It used to be --

COX: Let's look at that.

FARRELL: This was in Section 11.1.4.3.

COX: Item what?

FARRELL: (1), paragraph 2, item 1, paragraph 2, 11.1.4.3(1), paragraph 2.

KILLAR: The first sentence reads an important element of the applicant's overall CM policy is to establish the baseline CM policy applicable to all applicant's operations independent of ISA.

FARRELL: And our concern there -- well, he just mentioned that. Until the ISA was done, we're going to have to assume that any credible accident is going to be high risk. Maybe this has been changed.

COX: No. I think -- well, I don't believe it's been changed. I guess it's a matter of which comes first here. It's intended to cover the bases in case there is not or when there is not an ISA, which could be some four or five years, in which case we need some CM program in place. That's what this is intended to deal with.

Until there is an ISA, there isn't really a good basis to do a gradation in the features applied to assure safety, and that's really what this is set up to do.

FARRELL: I guess our concern, at least from the existing licensees, is that could be -- that could be pretty burdensome and we just think that the configuration management function should only be applied to the existing facilities once the ISA summary is completed. We're looking at this transition period.

COX: I guess we're not feeling that configuration

management is something that can be disregarded until there is an ISA completed. That's basically where we are on that, just as we are with fire safety, chem safety, and the other things.

PERSINKO: I would assume each licensee has a configuration management program in place now.

FARRELL: Exactly.

COX: We are told they do. I'm not sure which statement is onerous. The second sentence says that baseline initially includes all the CM functions described in the SRP chapter. These CM functions are only five, if you discount design reconstitution, six if you include it. And they don't sound too terrifying in terms of what a normal good CM program is throughout other industries, as well as this one.

SCHILTHELM: I think that's one we need to go back and, like we said earlier, this is work in progress. So I think that's one we need to go back and think about.

COX: And then what is held out here in most of the text of this paragraph is the fact that when an ISA is completed, is the opportunity to decrease or diminish many of the applications perhaps of CM, as you define it at that time.

I guess all I could say on that point is if you could point out those parts that you think are particularly onerous and why, we would certainly consider what to do about it.

FARRELL: Okay. Just a general comment on the old

11.2, the maintenance chapter, about the requirements on how to carry out your monitoring and preventive maintenance and corrective maintenance were pretty detailed and didn't give the applicant much leeway to come up with his own proposal. The general prescriptiveness issue.

COX: This is under regulatory acceptance criteria; one, surveillance; two, corrective; three, preventive.

FARRELL: Yes.

COX: These are essentially one paragraph each. I'd appreciate you pointing out what you think is unwarranted or not needed to be done.

FARRELL: I don't have my notes here with me, but I have one comment here. In 11.2.7, I said there seemed to be a preponderance of nuclear power plant references, and I'm sorry, I don't know what those are, but that was just one example. It may not be appropriate to fuel cycle folks.

COX: There is a reference there that's not appropriate? There are just too many references or reactor-oriented references?

FARRELL: Too many reactor terms that are not appropriate to the fuel cycle people. But I would have to --

COX: I think what we felt there is that there is something in each of those references that is of value in designing and conducting a maintenance program.

The reference list certainly does not intend that you are expected to use everything in there as shoulds and shalls, if you will, or as the -- under acceptance criteria, where we list regulatory guidance, we expect that that would be looked at very carefully, but references are strictly something to help the staff and the industry in, if you will, learning about what is available out there in terms of descriptions of acceptable program.

PERSINKO: If there is other information that we've missed here applicable to fuel cycle or process facilities, please point them out.

FARRELL: All right. Just a couple of comments on Section 3, 11.3, on training and qualification. Our feeling here is the SRP is too prescriptive in specifying the qualifications and training required for plant personnel. For example, it says plant managers and technical staff must have university degrees, and that is a performance standard which appears to be equally as important as demonstrating proficiency in your area of expertise.

So our concern there is that we think the management of the facility should have the responsibility of deciding what levels of formal education may be required or what levels of experience and the relative importance of the two.

Another comment in that same section, and, again, I haven't got it in front of me, but I said the SRP seems to extend

the NRC's review of training programs to cover the knowledge and skills of personnel to design, construct and decommission the facilities, and we feel that the training of personnel for decommissioning, for example, should be addressed at the time of decommissioning and not in the context of new license approval, renewal or license amendment, license renewal.

So I guess we want the training program or we'd recommend the training program be rephrased to ensure that plant personnel have the knowledge and skills needed to perform an activity that -- their activities that are important to or relied on for safety, and not -- and those criteria should be established by the plant management.

ASTWOOD: I just want to make a comment about the decommissioning training. You may have a point about the fact that these people shouldn't be necessarily trained in all aspects of decommissioning the facility, and I agree that you would have to ramp up training at the time of decommissioning, but when you do a license application, you'll have to submit the decommissioning funding plan, which has to talk in some sense about the decommissioning that you plan to do or will have to do, so that you can show that the funding that you've put up for decommissioning at the time of license application is appropriate.

And, therefore, the people that have done that

assessment would have to have some knowledge of decommissioning.

FARRELL: I agree. It's just that the level of detail required, described in the decommissioning plan and the DFP, is much less than 20 years down the road when you're --

ASTWOOD: I agree with that, but I don't think that negates the fact that nobody at the plant needs to know anything about decommissioning.

FARRELL: No, no. Obviously, the management will. Management will have to keep that in their mind, yes.

Let me see. Procedures. I think we'll skip that one.

COX: Could I ask a question on this training business? You have commented that our apparent acceptance criteria are too -- not only too prescriptive, but too stringent. As an example, managers should have a minimum of BS, BA or equivalent. That's what it says here.

Are we agreed that the applicants, in the application, should state what their criteria are for certain managers in terms of training, experience, education? You just would like to see lesser requirements?

SCHILTHELM: We do that now, but it's we, the plant management, who determines what those qualifications are.

COX: But if we don't have some minimum in this SRP, you recognize that all licensees might come up with different criteria, and you think that would be okay, different -- like at

some plants, the managers might have a BS, and at other plants they would not.

SCHILTHELM: Tom, in answer to your question, if we take our current license, we believe we have very adequate training programs, we believe we have very adequate credentials for our managers. We believe we have fairly adequate configuration management programs described in our license.

This SRP Chapter 11 makes our licenses look broken. In fact, your regulatory analysis, if you look at the scores that were given in the regulatory analysis for the upgrades, gives us all a zero, gives five or seven of us a zero for QA. We don't believe we're at zero when it comes to QA.

But you seem to have concluded that we are and this Chapter 11 of the SRP, if you compare that to our license, we would look dramatically inadequate today. So that's why we're saying Chapter 11 is too prescriptive, because it's more than we do today and we believe we have adequate programs in place today.

So I think if you went back and looked at the licenses that exist and looked at the kinds of things that are set forth as minimum requirement, I use the term requirement loosely, in the SRP, I think you have dramatically raised the hurdle as far as what's described in our license.

Now, I understand the ISA and doing the ISA brings a new aspect and there are some new things available to us as tools

that we would describe in our license how we'll use, in training, for example, but not to the extent that Chapter 11 would lead us to.

WEBER: Tom, can I address that? I think when we were writing portions of Chapter 11, particularly the training and qualifications section, we thought we were describing the status quo, because we had already determined the status quo was sufficient to ensure safety.

So if what I'm hearing from you is no, that's not the way it is, then that's a significant thing we'll have to look at.

SCHILTHELM: I'm just speaking for BWXT now. I don't know if the other licensees can share any of that. Maybe I'm the only one that's got an inadequate license.

EDGAR: I think we all -- the section of our license that describes organization requires specific jobs, safety-related, the people to have particular qualifications to hold those specific jobs. Maybe what you've said in here is close to what we do now, but I guess the point we're trying to make is that it shouldn't be prescribed to us how we do it. We should be free to do that.

And if you put in here somebody has to have a technical degree and five years experience and we say ten years experience will suffice without a technical degree, we should be able to make those kinds of decisions without that being

prescribed to us.

COX: It says in here BS/BA or equivalent. You do have the option of describing to us what you think is equivalent.

EDGAR: I guess I'm just -- that's the point we're trying to make.

COX: See, the difference, also, is in the past there hasn't been an SRP. If there is going to be an SRP and there is going to be some direction to the reviewers as to what to look for, then you would think that there should be something there in the way of some measure of how to meet what the regulation says, which is we're supposed to review the technical qualifications of certain people, I forget which those certain people are, to do the activities for which the licensee is being licensed.

WEBER: But I think we understand the comment.

COX: That's right. We're not trying to resolve the issue. We're just trying to develop how -- what our respective -- in fact, what your position is on it, and I understand what you've said.

So I guess the question is answered or understood.

FARRELL: I don't see any major policy concerns with either procedures or audits/assessments, incidents/investigations. Other than trying to consolidate and tighten up the words.

As far as records management, nothing really of a

policy concern. However, we just feel that what is written up as an acceptable system is, again, very prescriptive and it requires listing of each record, its retention period, its retention location, conditions of storage, physical form, the organization responsible for administering and so on.

The organization responsible, that's fine, that's a legitimate concern, but we feel when you get into details as to retention location and conditions of storage and so on, maybe that's something, again, the plant managers should have the right of proposing.

WEBER: Do you have a performance requirement in mind there, what you would like to see in terms of acceptance criteria in the SRP for records management?

KILLAR: I don't know if we have a quantifiable one. I think basically our objective is that if we have a record and we needed to present that record, that we can go and retrieve that record and provide it. That's the closest I can come to performance objective.

WEBER: Okay.

FARRELL: And then Chapter 8, 11.8, I had mentioned earlier on quality assurance. So I think that's pretty much the highlights or at least the version of Chapter 11 I was looking at.

SHERR: That was good timing, Cliff.

FARRELL: Perfect.

SHERR: I take it that completes the overview of the Chapter 11 comments. We'll reconvene tomorrow morning at 9:00 and I guess pick up at that point with -- we'll start from the beginning and go through the various chapters in the SRP.

[Whereupon, at 4:00 p.m., the meeting was recessed, to reconvene at 9:00 a.m., Wednesday, September 15, 1999.]

Part 70 Subpart H Walkthrough

- §70.60 applicability
- §70.61 performance requirements
- §70.62 safety program & ISA
- §70.64 new facilities / new processes
- §70.65 additional content of application
- §70.72 change process
- § 70.74 reporting requirements

Defining characteristics of draft revisions to 10 CFR Part 70

- Pre and post licensing changes
- Risk-informed, performance-based
- Covers major accidents only - Part 20 addresses safety for normal operating conditions/upsets
- Requires 'integrated' look at accident safety
- Consistent with MOU and compatible & consistent with OSHA and EPA process safety rules
- Explicit accident standards for worker, public, and environmental safety

§70.60 - applicability

- Lists the types of licensees that are affected by this subpart
  - Possess more than critical mass of SNM (defined)
  - Enriched uranium processing
  - Fabrication of uranium fuel or fuel assemblies
  - Uranium enrichment
  - Enriched uranium hexafluoride conversion
  - Plutonium processing
  - Fabrication of mixed-oxide fuel or fuel assemblies
  - Scrap recovery of SNM
  - Any other activities as specified by NRC

§70.61 - 3 performance requirements

- Must be 'highly unlikely':
  - worker: 100 rem or more, chemical-caused fatality
  - outside 'controlled area' (public): 25 rem or more, >30 mg Uranium intake, irrev. chemical injury
- Must be 'unlikely':
  - worker: more than 25 rem but less than 100 rem, irreversible chemical injury
  - outside 'controlled area' (public): greater than 5 rem but less than 25 rem, chemically-induced transient illnesses, environmental effluent standard
- All processes must be subcritical for normal and credible abnormal conditions (ANSI/ANS 8. 1)

§70.61 performance requirements

- continued -

- Chemical standards are only for
  - licensed material e.g.,U02F2
  - chemicals produced from licensed material (defined term) e.g., HF from UF6
  - Defer to OSHA - general worker chemical safety issues
  - Defer to EPA - general public chemical safety issues

- Establishes meaning of 'item relied on for safety':
  - Each engineered or administrative control or control set needed to meet a performance requirement must be identified as an item relied on for safety

§70.62 safety program & ISA

Specifies the information maintained on-site

- 3-element safety program:
  - Process safety information
  - Integrated safety analysis
  - Management measures
- Must retain records that demonstrate compliance
- Maintain log documenting failure of items relied on for safety or management measures
- Process safety information -§70.62(b)
  - Material hazards, process technology, process equipment
  - Documented on-site

§70.62 safety program & ISA

ISA (documented on-site)

- Identify radiological and chemical hazards
- Identify accident sequences
- Identify consequence and likelihood
- Identify controls and document assumptions/basis

- ISA Team qualifications
- Timing for ISA completion for existing licensees

§70.62 safety program & ISA

Management Measures (documented on-site)

- Management measures must be established that provide continuing assurance of compliance with the performance requirements of section §70.61
- Measures may be commensurate with the reduction of the risk attributable to that item,
- Definitions
  - Management measures
  - Available and Reliable ...

§70.64 baseline design criteria preliminary hazard analysis

Requirements for new facilities and new processes

- Baseline Design Criteria - use parallels Part 50 Appendix A GDCs
  - Apply before ISA risk information is obtained
  - Consistent with risk-informed regulation
- Defense-in-depth

§70.65 additional contents of application

Overview

- Contains requirements to submit ISA summary and description of safety program (process safety information, ISA, management measures)
- ISA summary on the docket - not in the license

§70.65 content of ISA summary

Specifies information submitted to NRC

- Description of site
- Description of the facility
- Description of each process analyzed by the ISA
- Demonstrated compliance with performance requirements, requirements for crit monitoring and alarms, and BDC (if applicable)
- Description of ISA methodology and team
- Descriptive list of items relied on for safety

§70.65 content of IS,A summary

Continued

- Description of proposed quantitative standards to assess chemical safety
- List of items relied on for safety that are the sole item preventing an accident sequence
- Description of applicant's definition of likely, unlikely, highly unlikely and credible

§70.72 facility changes

General Overview

- Contains requirement for configuration management system
- Any changes which require change pages for ISA summary submitted within 90 days of change,
- A brief summary of all changes covered by 70.72 submitted every six months.

§70.72 facility changes

- Changes can be made without prior NRC approval if the change:
  - does not create new types of accident sequences that exceed perf req or use new processes/technologies that licensee has no prior experience
  - does not remove without equivalent replacement of the safety function an item relied on for safety
  - does not alter an item relied on for safety if it is the sole item mitigating an accident
  - not otherwise prohibited

§70.74 / Appendix A reporting requirements

- Consistent with proposed rule performance requirements
- One hour reports for only high consequence and criticality and near criticality
- 24 hour reports for less than high. consequence events
- Supersede 91-01 reporting requirements
- Reporting loss of environmental controls
- Radiation dose reporting per Part 20

Commission Requests for Comment

Specific Requests

- Backfit
  - Intent to defer qualitative backfit provision
  - Suggestions for backfit provisions that address fuel cycle and associated information that is available
  - Time before implementation
- Any options overlooked to address OSHA preemption issue
- Flexibility of ISA to accommodate wide range of technologies
- 90-day time period to update ISA summary pages

Nuclear Regulatory Commission Public Meeting on Part 70 September 14 -15, 1999

NEI

Overview

- Observations on the Proposed Rule
- Comments on the Standard Review Plan (SRP)

Observations on the Proposed Rule

- Reasonable assurance vs. assurance
- Should be 5 years to implement the rule rather than 4
- Delete the footnote on the change process as it is confusing. The change process allows the licensee to make changes in its facility provided it is not a new process or is not outside of the current safety evaluation.

Observations on the Proposed Rule (Cont.)

- Replace the log required under 70.62 (a) (3) with a system as it is currently part of unusual incident report procedure.

- Backfit provision should be immediately effective

Comments on SRP

- Chapter 3: Integrated Safety Analysis
  - Chapter should focus on:
    - Commitments to perform an ISA
    - What the ISA Summary should contain
  - The complete ISA that is maintained at the licensee site should be performed under . NUREG 1513

Comments on SRP

- **Chapter 11: Management Measures**
  - Reorganize to recognize that quality assurance is one of management's measures and not a unique issue

Comments on the SRP

- Abstract, Introduction, Glossary, Acronyms & Abbreviations
  - Use of the ISA vs. ISA Summary
  - ISA is completed, subject to NRC review, but does not require NRC approval
  - The reviewer should concentrate on the higher risk accident sequence and not all sequences.

NEI

Comments on the SRP

- Abstract, Introduction, Glossary, Acronyms & Abbreviations (Cont.)
  - The NRC examination of the license application should focus on performance requirements rather than how a specific performance goal is to be achieved.

Comments on the SRP

- Chapter 1: Facility and Process Description
  - Minor comments on this chapter have been submitted in writing

Comments on the SRP

- Chapter 2: Organization and Administration
  - "Management systems and structures" and "management measures" are used interchangeably in a confusing manner.
  - Some concerns about specific examples for filling positions such as: degree in nuclear engineering for facility manager.

Comments on SRP

- Chapter 4: Radiation Safety
  - Overly prescriptive acceptance criteria
  - Incorporation of the ISA
  - Commitments versus prescriptive performance criteria
  - Trend analysis
  - Design requirements on ventilation systems

Comments on SRP

- Chapter 5: Nuclear Criticality Safety
  - Need a clearer definition of the scope of the reviewer's assessment.
  - Don't duplicate the review of the ISA
  - Blanket commitment to ANSI/ANS-8

Comments on SRP

- Chapter 6: Chemical Process Safety
  - Confuses the ISA and ISA Summary
  - Indicates that grading is required and reviewer must assess the grading method

Close ()
Comments on SRP

- **Chapter: 7 Fire Safety**
  - Dictates that NFPA Standard 801 be used.
  - Requires a Fire Brigade, Fire Safety Review Committee, dike areas
  - Protection of workers from the effects of fires
    - Fire hazard analysis limited to radiological considerations

Comments on SRP

- **Chapter: 7 Fire Safety (Cont.)**
  - Pure chemical hazards and fire safety without relationship to radiological safety

Comments on SRP

- **Chapter 8: Emergency Management**
  - NRC regulatory oversight of hazardous material with no relationship to radiological safety.
  - Requirement to train offsite emergency response personnel
  - Special tours to fire, police, medical and other emergency personnel

Comments on SRP

- **Chapter 8: Emergency Management (Cont.)**
  - Grading of the emergency program not provided

Comments on SRP

- Chapter 9: Environmental Protection
  - Reviewer should be focus on environmental program
  - Reviewer not to evaluate the ISA
  - Seeks non- radiological data

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Comments on SPR

- Chapter 10: Decommissioning
  - Need to return the "Areas of Review" and "Regulatory Acceptance Criteria"