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NUCLEAR REGULATORY COMMISSION

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OFFICE OF NUCLEAR REACTOR REGULATION

OFFICE OF NEW REACTORS

OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS

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PUBLIC MEETING ON DRAFT RIS

DISPOSITION OF INFORMATION RELATED TO THE TIME

PERIOD THAT SAFETY-RELATED SSCs ARE INSTALLED

+ + + + +

WEDNESDAY

JANUARY 20, 2016

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ROCKVILLE, MARYLAND

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The Public Meeting convened at the Nuclear Regulatory Commission, Two White Flint North, Room T3B45, 11545 Rockville Pike, at 1:30 p.m., Harold Chernoff, facilitator, presiding.

PRESENT:

HAROLD CHERNOFF, NRR, Facilitator

DENNIS MOREY, NRR

SCOTT MORRIS, NRR, DIRS

CATY NOLAN, NRR

KEN O'BRIEN, Region III

ALEXANDRA POPOVA, NRR

JESSE ROBLES, NRR

SHELDON STUCHELL, NRR, DPR

ERIC THOMAS, NRR

JOHN THOMPSON, NRR

ALSO PRESENT:

DAVID LOCHBAUM, Union of Concerned Scientists

VINCENT BACANSKAS, Entergy*

KELLY BAKER, DC Cook*

STEVE FRANTZ, Morgan, Lewis & Bockius*

SAM HARVEY, EPRI

FRED MASHBURN, TVA

STEPHEN MEYERS, STARS/Ameren

BRUCE MONTGOMERY, NEI

MARTY MURPHY, Xcel Energy

JOHN PFABE

JOHN SAMS, Ontario Power Generation*

RICK WEINACHT, Curtiss-Wright Corporation*

*Present via telephone

P R O C E E D I N G S

1:34 p.m.

MS. POPOVA: Okay, good afternoon.

First, I'd like to thank everybody for attending this meeting.

My name is Alexandra Popova and I am the Lead Project Manager for this issue in the Office of Nuclear Reactor Regulation.

So, we're here today to discuss the disposition of information related to the time period that safety-related structure systems and components are installed.

Before we start the meeting, I'm going to cover a couple of administrative topics.

For security purposes, NRC policy dictates that visitors to the Agency are required to wear and display their badges as well as be escorted at all times while within NRC controlled space.

If you are not an NRC employee, you must be escorted at all times once you enter the elevator lobby on the first floor.

Therefore, if you need to leave the room for any reason, please ensure that an NRC employee is with you.

So, there's a couple of NRC employees who

are raising their hands right now and, if you need to leave the room for any reason, just grab one of them.

We'll make arrangements at the end of the meeting to have NRC employees escort you back to the elevator lobby on the first floor or to the bathrooms on this floor.

We also plan to take a break about an into the meeting.

Please turn off or silence all your cell phones during the meeting as a courtesy.

Also, for people that are at the round, so that's these tables here, the mics are always on, so if you want to mute them, you have to push the button that says push. Yes, so you have to hold it and that's how it's muted otherwise, it's always on.

So, there is an attendants list that is in the middle before the pews as well as one that should be circulating the round. Please fill out the information and pass the list along.

Once the lists are completed, please pass them back to me. Or just leave them in front of the pews.

For those who are participating on the phone, please send an email to axp16, so that's A-X as in x-ray, P as in Papa, 16 at nrc.gov. My email is

also listed on the Public Meeting Notice.

I will reply to your email with the meeting summary and the slides.

The list of the attendees and the phone participants will become part of the meeting summary and that will be made publically available.

Okay, so the purpose of this meeting is to allow for open discussion between external stakeholders and the NRC regarding components that are installed past their time period.

NRC staff is developing a RIS to reiterate existing requirements related to dispositioning information pertaining to the capability of safety-related structure systems and components to perform the safety-related functions in nuclear power plants.

Once developed and aligned internally, the draft RIS will be posted in the Federal Register and open for comments. Please submit all formal comments through the Federal Register.

Once the public comment period closes, the NRC staff will review and disposition all formal comments received through the Federal Register.

Submitting comments can be done by searching for the draft RIS on www.regulations.gov.

This is a Category 3 Public Meeting which

allows the public to participate in the meeting by providing comments and asking questions throughout.

Please state your name and company before speaking since this meeting is being recorded.

This meeting will not decide any Agency or staff positions and it will not interpret regulations other than what is current established by guidance or staff position.

No decisions regarding this draft RIS will be made at the meeting.

During the question portion of the meeting, I will first take questions here at Headquarters and then go to the phones.

So, if you are on the GoTo Meeting and have a question or would like to discuss, please send me a message and that way, I can queue you.

This is a two hour meeting scheduled from 1:30 to 3:30 p.m.

For those who desire to provide feedback about the public meeting process, please email me. Again, my email address is axp16@nrc.gov.

I welcome the participants on the phone and ask that they keep their phones on mute except to discuss issues.

To place the phone on mute, press star six

and star six again to unmute.

We understand difficulties encountered when listening by phone. By muting the phones, it will minimize the noise heard by all.

I'd like to open the meeting with introductions. We will first do introductions here at Headquarters and then move to the phones.

Actually, no, correction, due to the large number of participants on the phones, we are only going to do introductions here at Headquarters. And, we will be doing introductions just in the round.

As we go around the room, please be sure to clearly state your name, your position, your company and, for NRC staff, the office that you work for in the NRC.

So, I'll start off. Once again, I'm Alexandra Popova, Lead Project Manager for this issue. I'm in the General Communications Branch in the Office of Nuclear Reactor Regulation.

MR. O'BRIEN: I'm Ken O'Brien. I'm the Director of the Division of Reactor Safety for Region III.

MR. MORRIS: I'm Scott Morris. I'm the Director of the Division of Inspection and Regional Support in NRC Headquarters.

MR. CHERNOFF: Harold Chernoff, I'm the Chief Operating Experience Branch in NRR. And, I would just add, the microphones at the tables are directional, so you need to be within about 6 to 12 inches or the people on the phone won't be able to pick it up.

MR. THOMPSON: John Thompson, Lead Technical Contact for this RIS, Operating Experience Branch, NRC.

MR. MASHBURN: I'm Fred Mashburn, Corporate Licensing, TVA.

MR. LOCHBAUM: Dave Lochbaum, Director of the Nuclear Safety Project for the Union of Concerned Scientists.

MR. MEYERS: Steve Meyers, STARS Alliance.

MR. MURPHY: Marty Murphy, Director of Regulatory Affairs for Xcel Energy.

MR. MONTGOMERY: Bruce Montgomery, Nuclear Energy Institute.

MR. HARVEY: Sam Harvey, Principle Technical Leader for Electric Power Research Institute.

MR. MOREY: Dennis Morey, I'm Chief of the Reactor Systems Branch in Division of License Renewal at the NRC.

MR. STUCHELL: Sheldon Stuchell, Chief of the Generic Communications Branch.

MS. POPOVA: Okay. Scott, would you like to provide some opening remarks?

MR. MORRIS: Yes, I'll just make a few -- a couple of opening remarks and we'll turn it over to Harold and we'll just right in.

So, obviously, welcome everybody here. I'm, I guess, a little surprised at the quantity of folks who have come to the meeting and are on the phone. But, I guess that's a good thing. There's an interest in what we do and why we do it. So, we're looking forward to a good exchange here today.

Clearly, our goal, our main goal here is to listen to your feedback, comments, concerns or other thoughts on the draft Regulatory Information Summary that we attached to the Meeting Notice for this particular meeting.

There's a fairly substantial history associated with the rationale for developing this RIS. Some of you know what that is. Some of you know that history, some of you don't. I think Harold's going to touch on a little bit of that just to make sure everybody has a common understanding of the real reason we're here today, what brought us to this point

today.

But, yes, I'm looking forward to a good exchange. It is a Category 3 Meeting, as Alex mentioned. So, we look forward to comments, not just from the industry, but also from members of the public, including ECS and any others.

So, if you feel like at some point you want to make a comment, you know, please alert us and we'll give you the opportunity to express that.

So, with that, I'm going to shut up and hand it off to Harold and let's move this forward.

MR. CHERNOFF: Again, the thanks for the opportunity to talk. We often don't get enough time to sit across the table in a room and listen. And, that's what we're going to be doing mostly as far as NRC staff. Our intent here is to listen and make sure we understand what your comments, what feedback various people have. That's our purpose.

We're not here to debate or espouse our beliefs. We want to hear from the people in the room that we don't work with on a day to day basis.

With regard to background, we have just a half dozen overview slides that we'll go through and then we'll open it up into the real purpose, which is to get some information from the folks in the room.

In the Operating Experience Branch, one of the things we're tasked with is to look at large and small trends and activities in both events and regulatory actions, findings, enforcement, et cetera.

And, we launched into a couple of years ago, almost three years ago now, we produced a study that actually was a follow on to some other activities we had done related to implementation and vendor recommendations at the plants.

And, in this case, we were looking and found what we saw as a small increasing trend in findings and Licensee Event Reports involving age-related issues and failures of equipment in the field, safety-related SSCs.

And, the data actually shows a break over point of things that had been in the field more than 15 years. And, just simply, there were about 17 of these type of events in 2009 and, by 2012 we'd seen an increase to about 32. And, it's a mixed set of data. It's not all Licensee Event Reports, it's not all findings.

Overall, the percentage of findings attributed to these kind of things was pretty small. It was about two percent of overall findings.

Most of the examples that we saw related

to, as you might suspect, to electrical subcomponents, be that cards, relays, breakers, power supplies, et cetera.

MR. MORRIS: Are you on a different slide?

MR. CHERNOFF: No.

MR. MORRIS: Just checking.

MR. CHERNOFF: Yes, you want to advance -- let's go two slides I think will get us -- thank you, guys.

MR. MORRIS: Just trying to help you out.

MR. CHERNOFF: I know. This is preamble to this.

So, in looking at that and we also saw that the cause was varied. There were a number of -- there was no single smoking causal factor that we saw. There were some issues regarding keeping abreast of operating experience. There were issues regarding performance-based monitoring. And there were some even issues where maybe a maintenance rule miscategorization had led to the finds or the incident.

There were also a variety of, for the ones that were findings, a regulatory basis for those findings.

This led us, as one of our actions, we had

a number of actions out of the study that, internally, we were taking including ones focused on staff and how staff was doing oversight focus in this area.

But, one of the other ones that we felt was important was to take the opportunity to communicate out what we saw.

The study was made publically available back in 2012 or 2013, so it's in public ADAMS and I believe it was attached to the Meeting Notice for this meeting.

But, in looking at, is there a need to communicate something a little broader? We felt there was and that is the purpose of the draft RIS which is to discuss dismission, as the slide shows, of information related to how long safety-relates SSCs are installed.

And, there's a careful wording there, it's to discuss the disposition of the information, okay, how you go about doing it, what the processes are.

And, to reiterate responsibility of licensee's to maintain SSC structure systems components ability to perform their safety-related functions. And, I'm going to emphasize safety-related functions here.

So, can we go to the next slide, please?

So, these are the main points that I hit. We had the study. We saw a slight trend. We're not talking about, you know, stoke your mattress, statistics breakdowns, we're talking about judgment calls regarding small sets of data. Okay?

And, we felt there was additional focus needed both within the staff and from industry perspectives.

Next slide, please?

This is a very short list of what would likely be a fairly long list if we tried to list out all the regulatory requirements that have some kind of a juncture or intersection with this activity.

But, these are probably the more significant ones. The NRC Approved Quality Assurance Program that each operating reactor has. Their technical specifications, and particularly within their technical specification their administrative section regarding procedures and establishment of procedures in accordance with Reg Guide 133.

And also, of course, the maintenance rule which is the performance-based aspect to the regulations for equipment monitoring and control.

Next slide, please?

Okay, I spoke a little bit about

enforcement history. And, to be very straightforward, we have a number of examples of findings and they vary. And, how they are written up, the action that we took, also varies.

And, this is very typical of our ROP Program. We try to write findings close to the nexus of what we feel that the main issue is.

So, in one case, a problem might be written up as a failure to follow or failure to comply with Tech Spec 541 Procedures where there this procedure that's been established but it wasn't followed.

On the contrary, at some case, a finding might have been written up under design criteria because there was not an application of either design criteria or maybe establishment of procedures. There were no procedures written.

And, one of the complexities is, I don't think we have -- we've come to the consensus that there is no single formulaic way to address this issue because it's about how you disposition information that you get and that you see at the plant.

So, from an enforcement point of view, we have a number of findings. There were, John, how many in the overall study roughly?

MR. THOMPSON: Hundred and five.

MR. CHERNOFF: A 105 within the scope of the study that were cited and there's a pretty good variability about what specific findings were tied to from a regulatory perspective.

Well, I think that's -- okay, that's the very brief introductory remarks.

Now, a couple of other items. Really appreciate everybody staying within the spirit of the meeting and speaking to the draft document in front of us.

There are a lot of ancillary related things. We're really not here to get into those in detail. So, what we're focused on is any comments, thoughts, perspectives on the draft document that was sent out. That's our primary purpose and appreciate it if we can help do that. And, the focus is on external stakeholders.

So, with that --

MR. MORRIS: Well, if I could just add to that?

MR. CHERNOFF: Yes.

MR. MORRIS: It's not -- just to echo a little bit and maybe clarify a little bit what Harold just said.

It's -- we're interested in feedback on what we've provided in the draft Regulatory Information Summary, both what is in there and what may not be in there that you think should be in there. So, it's both of those things.

MR. CHERNOFF: Thank you. Good point, good point.

With that, if there are any questions about logistics before we get started and open it up for comment? Yes, Dave? Dave Lochbaum, please?

Just to reemphasize, when you speak, please identify yourself and affiliation so that people on the phone --

MR. LOCHBAUM: Dave Lochbaum, Union of Concerned Scientists.

I have a request. The TIA that's mentioned is not publically available. I'm not sure exactly how NEI spoke so eloquently about a nonpublic document. But, could that document, ML-15127A569, be made publically available?

MR. O'BRIEN: This is Ken O'Brien with Region III.

We originally did that TIA and I don't recall if we made that publically available when we finished it. We subsequently withdrew that TIA in the

guise of finishing this issue from a generic standpoint.

I'm not sure there's anything that precludes us from putting it out there. It could confuse us a little bit because that same sort of information's in the RIS right now and it was focused on a single issue at a plant, specific plant, so it's more localized than I think we're trying to talk here.

MR. CHERNOFF: Is it okay to say that we'll take a look and make it publically available?

MR. O'BRIEN: Yes, yes, I think that's what I said but maybe not as clearly.

MR. CHERNOFF: Yes.

MR. MORRIS: It's nothing magic, it was like a process issue -- this is Scott Morris -- process issue. We went through the TIA, so we took it off the website.

We withdrew the TIA in lieu of -- the TIA, as Ken pointed out, are done a retail site by site basis whereas RIS is a wholesale generic basis. So, we pulled the TIA in lieu of a RIS.

Yes, there's nothing we can --

MR. CHERNOFF: We'll look at making that happen. Thank you.

MR. O'BRIEN: I don't see anything to stop

us from that.

MR. MURPHY: This is Marty Murphy.

If -- Xcel Energy -- if you do make that publically available again, will you make it clear it has been withdrawn?

MR. O'BRIEN: Oh, yes.

MR. MORRIS: Sure.

MR. O'BRIEN: Withdrawn, by the way, doesn't change the aspect of it. As I said, we withdrew it, not because there was anything in there we thought was wrong, but instead, because we were looking it more holistically.

MR. LOCHBAUM: Understood.

MR. MONTGOMERY: Yes, this is Bruce Montgomery, Nuclear Energy Institute.

I'll open by just saying, I appreciate the opportunity to discuss this draft RIS.

We have a number of questions and probably some comments that we'd like to make. And, in a process of doing that, we're really just seeking to clarify our understanding of what this RIS is communicating to us.

We do note a significant difference between that TIA we were just discussing in terms of the level of detail of information and positions taken

and this draft RIS.

So, in our minds, we're trying to make sure we understand that we, you know, what's the difference between the two documents? And, exactly what is the staff trying to communicate to the industry?

So, from our perspective, we have Steve Meyers from Ameren, a STARS organization who's going to be our spokesperson. He was the primary author of the industry paper that was submitted October 20th.

So, we'll start the questioning, just in terms of trying to understand the staff's position relative to what you were talking about, Harold, which is the different citations and the bases for the citations, they do vary.

We have some specific concerns or questions about some of those citations that we'd like to talk about today. So, I'll turn it over to Steve.

MR. MEYERS: Okay, thanks. Steve Meyers, STARS Alliance again.

Harold, I wanted to ask you, and I appreciate your introductory comments, and we note that there's a number of CFRs cited.

But, I didn't hear you discuss the regulatory gap. You talked about the performance

issues and some trends that you noticed. But, when we look at the paper, we're not seeing what the specific regulatory gap is, whether, for example, it would be against the implementation of the quality assurance programs or actual regulations.

And, if there's some weakness in the implementation of those programs versus the findings on the specific components? Or if there's some more important theme in public health and safety with the findings that you've seen?

MR. CHERNOFF: Harold Chernoff.

What we are trying to get across, quite simply, in the RIS is, again, not statistically significant, however, we saw a small trend and we think additional focus and attention is warranted.

And, to be very clear, in the RIS, we tried to be very clear in the RIS that we were not saying, of course, it would be inappropriate in a RIS to say that you needed to establish any kind of new program or process. We are not doing that.

What we are trying to say is, in some cases as evidenced by the findings and the dockets, the individual dockets, there have been deficiencies identified in the implementation of plants existing programs.

And, those things have manifested themselves in some preventable equipment failures or actual, you know, failures in process.

So, we don't have a specific regulatory gap, per se. We have, I would characterize more of a noted unlevelness in implementation in some cases.

And, what we want to make sure is that more than just the plants that may have been affected by an individual finding or made aware of this and they can share it and inculcate it in their activities through their -- through the plant's operating experience program which will be the way most of the people would bring in the RIS and get with the RIS.

Did I answer your question?

MR. MEYERS: Yes, I think so.

I have a follow on question with that.

MR. CHERNOFF: Sure.

MR. MEYERS: The examples you gave there of the credible, or what I believe is the credible information that you used in the RIS to describe these findings, the failures of equipment, the items that you just discussed, is that what you really intend the credible information to the scope to include or it broader than that?

MR. CHERNOFF: Well, we don't have a -- we

can't give you a perfect definition of what credible means. I think you know that.

What we mean is apply reasonable judgment as professionals to the information source and the information content and act in a responsible manner with that information.

And, I know that's a lot of generalities, but it's very difficult to be more specific because you may get information from a fellow licensee, a fellow license member of your fleet. You might get information from a manufacturer. You might get information from industry organizations like INPO or WANO.

Some people, you know, might even take internal actions based on things from trade information, industry trade information.

All of those could be -- we are not going to try to judge credible. It's really the licensee's responsibility.

You know, if you want to go back into the history, this is really kind of the root of operating experience was to not inundate the staff with everything but to sort out the chaff from the more meaningful information and take appropriate action on the more meaningful information.

MR. MEYERS: I'm going to ask -- I'll turn this over to somebody else, but I could just follow on with that.

Generic Letter 8328 is referenced which, I think, we typically think of in terms of establishing communications with your suppliers and receiving that information and evaluating it.

But, it sounds like your scope of what you just discussed is broader, quite a bit broader than that to include EO, things from INPO and so forth to be informed.

MR. CHERNOFF: As possible sources of what we would call credible information.

And, please, feel free, maybe there's a better use of terminology than credible information. That's what we came up with.

Yes?

MR. MEYERS: Yes, when I read the paper, what stood out to me as credible information, to me, was discernable as information that was received from a supplier subsequent to your initial procurement documentation that, for example, provided your vendor maintenance instructions and so forth, that would provide some type of a technical condition that was previously unknown.

I didn't really read this to include the other board terms of EO you discussed because we have other programs for those.

So, all right, I'll let somebody else go.

MR. CHERNOFF: Understood.

MR. MONTGOMERY: Harold, Bruce Montgomery.

Back on the discussion of the performance gap where you indicated a slight increase in trend and findings, you know, I would just observe, as you do, I'm sure, that there's a difference between the number of findings that are cited in the actual safety performance of systems.

MR. CHERNOFF: Sure.

MR. MONTGOMERY: So, could you talk a little bit about what information you have that specifically to the failure rates that you -- or trend in failure rates in safety-related equipment over the past several years?

MR. CHERNOFF: I'm not sure we're prepared to talk about that beyond what's in the study. We could recount a little bit of what was in the study. Is that what you're asking for?

MR. MONTGOMERY: It is.

MR. CHERNOFF: Okay. John, do you want to try to address that a little bit?

MR. THOMPSON: Well, we're talking with a small data set. I mean, over the five years that the study looked at information, we had 77 inspection findings.

Approximately a third to a half of those involved failures. The other half did not involve failures. We weren't really focused on the failure rate in the study.

What we were focused on was time. How long a component, safety-related component, had been installed and, specifically, beyond what some analysis, whether that is vendor information, plant information or information from elsewhere.

We were interested in age, how long it had been installed. Sometimes that age length resulted directly in the failure. Sometimes it was the realization that it had been installed longer than desired by plant documentation.

So, that's the data set. We weren't looking for a failure trend.

MR. MONTGOMERY: Thank you for that.

A couple of points that I'd like to make is it's before we came to this meeting, we pulled some information from the Institute of Nuclear Power Operations with regard to the trends of failures and

key safety systems for pressurized and boiling water reactors over the past several years and found that the failure rates in all of those key systems was very flat, for all causes, if not evidencing a slight improvement in performance.

The past key factors hit a record 2015 for the plants to 91.8 percent capacity factor reflecting the plants were running very well, doesn't directly correlate to safety system performance, but that's a piece of it.

I'd also like to comment that one of the examples, in fact, I think the key example provided on page two of the RIS which talks about that diesel failure at one of my former plants.

This is Dual Unit failure where there's a failure of a diesel to start and run is attributed to a failure of Agastat relay.

Now, I would admit that the first root cause analysis that we performed did attribute failure of that Agastat relay to a performance function. Upon further research and evidence, though, after we got the word back from the forensic review, it was not the Agastat relay that was the cause, it was the sensing line to that Agastat relay that was -- had debris in it that basically caused that Agastat relay not to see

the pressure impulse that it needed to see to do its job. The Agastat relay was working fine as far as we could tell.

So, we would not think that that example is appropriate for this RIS and that that Agastat relay did not fail, as far as we could tell, from age-related degradation or service life.

Even though it was in service longer than the ten years that the -- we often refer to as a vendor recommendation for service life.

MR. CHERNOFF: Thank you.

Let me just make a couple of general comments.

One is, that kind of information is exactly the kind of feedback we are looking for. So we can -- we'll take this information from this discussion and I can say without much qualms or reservations, there will be changes in the document before it's published.

That being said, though, I want to make sure everybody understands, when it is published in the Federal Register in that form, we do need everybody who has issues they want to bring to the table to make sure and put in formal comments.

Because this is an informal discussion and

doesn't substitute for the formal comments.

MR. MONTGOMERY: Yes, I think a point --

MR. CHERNOFF: I meant to mention that at the outset but I forgot.

MR. MONTGOMERY: I think, you know, it would add to the RIS if there were examples. I think one of the things we would like to see are several examples of not only failures that could be attributed to this issue, the time the equipment is installed in the plant and the area within our -- or the program, if you will, program element whether it be design, maintenance programs or whatnot that didn't prevent that failure or where there was a weakness in one of our programs that would have addressed the issues.

So, we have a number of citations we're looking at right now that you've written up over the past several -- that the Regions have over the past several months and we're very interested in the nexus between --

MR. CHERNOFF: Okay. Those are things that will have to be address on a plant specific basis. And, that's part of the difference in this document by some of the things you've seen previously.

This is a higher level perspective and, you know, we are not trying to say that there is an

imminent safety issue, that there's a, you know, you talked about a performance issues regarding past key factors.

This is to try to draw a focus on things that are out there and could be done better. That's really where we're headed.

And, if I could at this point maybe, and we can circle back, but are there people outside of the NEI STARS that maybe want to -- Dave, do you want to provide -- Dave Lochbaum, provide some comments?

MR. LOCHBAUM: Dave Lochbaum, Union of Concerned Scientists.

I have one question to try to understand what the RIS is going towards.

And, several times it talks about if a system structure or component has been installed in a nuclear plant for longer than the amount of time described, yet, in some of the support documents that led up to it, there was a talk about somewhat of shelf-life and an in-service life.

Is the RIS mainly focused on how long a widget is installed or is it also looking at the shelf-life that may -- precedes that installation time?

MR. CHERNOFF: Yes, that's an excellent

question and I think as we refine our discussion, what we saw is, there are a number of different terms used throughout the industry and in different standards and regulatory documents.

And, one of the points of, at least within the staff, debate and discussion related to, I'll just call them special terms or defined terms.

So, we tried in the document to get away from using any of the defined terms because we did not want to exclude or, you know, intentionally exclude anything because we wanted to be fairly general.

What we're really talking about are a couple of situations where, one, in some limited sets, there actually is information in the FSAR. There are not a lot of them, but FSAR level information that talks about how long something is expected to be in the plant. Okay?

There's the more common situation, much, much more common situation where either though the plant's own experience or one of these other sources we talked about previously, information comes into the licensee that might have a negative impact on something that's in the plant, be it a Part 21 from vendors or others, et cetera.

And, our emphasis in the RIS is both of

those situations need to be looked at and dispositioned.

The program's already out there in the facilities to do those dispositions. That's -- and when you start to go to a lower level of detail, more detail, it becomes quite complex unless you're talking about one situation.

So, if you were to talk about a maintenance rule criteria situation, that's fairly easy to talk about in that realm.

When you're trying to talk about it more broadly, it very quickly can become confusing with regard to the terminology and the limitations of the individual programs that are out there.

There's overlap on these to a fair extent which is good. And, again, what we're trying to do is draw people's attention to the need for continued focus and, for example, not assuming things beyond what you can evaluate and justify.

MR. LOCHBAUM: I do have one follow up.

I appreciate that answer. It's helpful.

I think the RIS is a good step of balancing what needs to be done in safety. So, think it's a -- we support the RIS.

I think one of the reasons we think the

RIS is important or for the NRC to clarify its expectations in this area, there are many reasons.

I think one of them includes the license renewal rule that was revised in May 8, 1995, Federal Register 22461. Reading from the Statements of Consideration for the rule change, part of that rule change excluded active components from consideration under aging management.

And, it said, quote, however, the Commission does not believe that it can generically exclude structures and components that, and paragraph two is, are not subject to periodic plant maintenance or replacement, end quote.

You know, conceivably, waiting until something breaks or run to failure is a scheduled replacement. You know, that's probably not what was meant by that.

So, if there's a decision that run to failure is an option, it looks like the license renewal rule, subsequent license renewal rule, needs to go back and throw active components back in, if the game plan is to run to failure as your scheduled replacements theme.

Thanks.

MR. CHERNOFF: Thanks, Mr. Lochbaum.

I think, in some circumstances, we have Agency documents that acknowledge that given proper consideration and evaluation, there are some components that have a level of significance that would make run to failure appropriate.

However, you know, that's not a default condition, that's a reasoned end point after review and is part of the program that the licensees have for administrative maintenance.

So, like many things, it's not a situation where we can say it's never appropriate or it's always appropriate. It depends. It depends, obviously, on the applications and the components involved.

MR. LOCHBAUM: I appreciate that clarification. I think that speaks to -- well, I think the RIS, the draft RIS, or the proposed draft RIS, whatever, is so valuable in that it doesn't prescribe that the service life is the be all and end all.

It says if you have an evaluation whether it's run to failure or whatever, to ensure that that component doesn't have an unusually high or unduly high chance of failure, then it's okay.

So, I think you spoke to the aspect rule, we think is a proposed rule, is so good is that it

doesn't assume that this verily you will abide by the service-life. You just have to have something that shows that what you are relying on is thoughtful, considerate and make sure you cover all those bases.

MR. CHERNOFF: And the just one more -- the other aspect of this is, just to be -- maybe anticipate a couple of questions is, we also very clearly understand that manufacturers have a multitude of complex reasons for how they speak to service-life of something they're selling.

They have warranty issues. They have production issues. They have cost issues. We understand that.

So, there is no automatic because a vendor says something that that automatically applies to a plant specific installation. It may not be installed in the same environment or the reasonable evaluation might determine that, in the in situ installation, a longer period of time might be warranted.

Again, it depends on the specifics very much so.

MR. HARVEY: Yes, Sam Harvey, Electric Power Resource Institute.

I just want to reinforce that because, in our preventive maintenance basis database, when we go

through all that process, we find that the vendor recommendations aren't always technically based.

So, that those intervals are not necessarily always valid on a technical basis.

MR. CHERNOFF: Can I ask, in both directions?

MR. HARVEY: With both directions. I have examples, we just did a service-life evaluation study for Agastat relays, EGP. And, we took all of them out of service-life from various utilities that were in safety-related applications at the ten year interval recommended by the vendor.

Found nothing wrong with them, subject to accelerated thermal degradation tests, since that's the primary degradation means, and found that they would run 20 to 30 years before we had approached the end of life of those.

Contrary to that, electrolytic capacitors, for example, most vendors are 10 to 12 years. Our evaluation says seven's probably a good year for replacement.

So, it goes both ways.

MR. CHERNOFF: Okay. Good point, thank you.

Steve, I interrupted you.

MR. MEYERS: That's all right. I have several things I'd like to comment on.

But, I just want to talk a little bit about use of the EPRI PM Basis Database and as it relates, John, to some of the findings that you discussed in your report that half had failures and half had not.

I wanted to ask and you can answer, did you review how licensees had or had not applied that EPRI PM Basis Database in evaluating the life that they had when you looked at those findings?

And, you can answer that in a minute, but my point on what Sam mentioned with use of this tool is that, you know, this is a living database that has experts participating on development of the recommended templates for nearly 40 different component types, with 300 templates.

And, there has been a couple mentions in the NRC -- and some of the NRC inspection findings reports were licensees that applied this. It was, you know, not really a decision on it, it's just that they have or have not applied it.

But, when I look at the RIS, it certainly seems like that the RIS is silent on this, which I understand. But, this is a very important tool that

incorporates, I think, all the things that you've brought up that we need to -- the OE from the site, the OE from the industry, the vendor feedback, the vendor recommendations.

Because, frankly, when -- you know, there's two things in this RIS it seems to me like you've got going, the concern with the ongoing new developing credible information and then you also discussed the licensing basis and the documentation that has likely was developed 30 to 40 years or more ago and may not even be updated.

But, use of this EPRI PM Basis Database keeps this living and alive for licensees to use as one of the best tools that would be available to evaluate any deviations from that.

Would NRC consider accepting that as a technical -- as a tool to do the technical determinations or be interested in learning more about it from EPRI?

MR. CHERNOFF: Let me ask John to answer the first part of that question first. Then, let me speak to the second part of it.

So, with regard to what the -- the question, as I recall, was with regard to whether the study looked at the EPRI data implementation document?

MR. MEYERS: Yes, if you found in your concerns in those findings, the half where there were failures and half that were not, had you looked at all use of that database by licensees?

MR. THOMPSON: The short answer, no.

MR. MEYERS: Okay.

MR. THOMPSON: We are aware of use of templates on -- through the reading of inspection reports during the INPO database searches and stuff.

We're also aware that the templates are specific to a component type, so you don't have general template.

So, when we look at a performance issue and a cause of failure and it's a relay, then you would have a specific template or maybe two templates or updated revised template.

We looked at some of those templates but we are also aware that the NRC doesn't endorse many of these EPRI templates. Many of these templates are new, 2011, 2012 date.

The one you talked about on Agastat relays and some of the other more general relays is new information. So, that has --

And, I know in Ken's case and some of the plants involved in the TIA, that came up as the center

of discussion. And, you know, we just don't have a lot of inside research into the templates.

MR. CHERNOFF: Sam, if I could also ask, my reading of the document, it also looked for licensees to look at their own operating experience and incorporate their own operating experience into the use and appropriateness of the use of those templates.

And, my recollection, again, I don't want to get into a debate about all the field issues, but my recollection is, in some cases, that may not have been done as thoroughly as maybe EPRI guidance desired it to be done.

MR. HARVEY: I can't speak for the individual utilities, of course, but, yes, the templates, and they're all living and they're always constantly evolving.

And, to the point where they're even getting into subcomponents for some of these components.

So, that data is very specific. It still has to be evaluated for the conditions and use at that plant.

MR. CHERNOFF: And, this is a good example of why we try to stay at a higher level because we

want to try to draw attention to what needs to be done in this case, disposition of information, not the varied tools that are out there to do it.

Because there's a number of different ways to approach it that could be fine. And, we're not -- you know, you're not hearing us precluding things, you're hearing us make sure that it gets looked at. That's trying to be our emphasis.

MR. MEYERS: Yes, the exception to that, though, is that the findings and the way the RIS, the undertone in the RIS, is that it's compliance-based with a mile environment program that, you know, you replace per the manual at X, where that's 30 -- can be 30 and 40 year old information that we've moved beyond and evaluated that.

I'm just saying, that's kind of the read, the gist. But, without that background information in the RIS, the other point you were talking to, you were leaving it kind of vague.

MR. CHERNOFF: I just want to be clear, you mentioned earlier about licensing basis information that hasn't been updated, and I know that was probably, you know, mixing two thoughts.

Because there is a requirement to keep that licensing basis information, you know, current

and up to date. I know you guys are aware of that.

MR. MEYERS: Right.

MR. CHERNOFF: And, it's a mix of licensing basis information and more detailed design basis, design basis supporting information that's out there.

MR. MEYERS: But, you can't update it if the vendor hasn't updated it. I mean if they don't --

MR. CHERNOFF: I would challenge that you could update it. It's up to your engineering organization to make those decisions and to, in fact, what --

MR. MEYERS: And, that's where we use the tool.

But, I wanted -- you talked about the licensing basis in general. And, I think the general approach, while we understand that, the lack of some background information in the draft RIS on how licensees did or did not implement commitments to the IEEE standards for the qualification program of components in mild environments and ongoing prescriptive maintenance-type programs.

I think that lack of discussion in there leads you to a little bit narrow focus when you read it and go down the path of what's really required by

a licensee.

Because, they could be in complete compliance with their quality assurance program and licensing basis by use of these EPRI tools and other things versus a strict time-based replacement.

So, additional discussion on possibly Reg Guide 1.89, IEEE 323 and how licensees did or did not commit to those standards, I think, would be helpful in explaining how this relates and doesn't relate to time-based requirement replacement.

MR. CHERNOFF: I do understand the comment. I would ask if you would think about the counterpoint to that is when we talk about something and not everything, it also is subject to criticism.

So, for us to talk about all the potential things that might come into play in these kind of situations would be a Sisyphean task.

However -- and so, our decision in this, as Dave Lochbaum put it, the proposed draft Reg Guide was to be at a higher level where we could be more certain of not leaving something out or inferring something that we didn't intend.

And, it is a -- we found it a difficult balance to discuss and work with. And that is part of why we're soliciting this input.

MR. MORRIS: Scott Morris here.

I think the reason it's taken us as long as it has to move from withdrawing the TIA and producing a proposed draft RIS is precisely that issue, is what's the right level of detail to be in here to convey the message we're trying to convey?

And, I will tell, internally, there are a lot of different opinions about that. I mean this was the lowest common denominator, I guess, perhaps.

MR. CHERNOFF: Or, you know, the camel, you know the horse designed by a committee at this point.

MR. MORRIS: Right. So --

MR. CHERNOFF: And, hopefully, it'll be refined by this dialogue we're having today.

Let's do -- Dave had --

MR. O'BRIEN: One more comment.

I want to FYI a little on -- this is Ken O'Brien.

I want to FYI a little bit on Harold and Scott and something I heard both from Steve and, I'm sorry, but I apologize, I forgot your name.

MR. HARVEY: Sam.

MR. O'BRIEN: Sam, thank you. I knew it was another S in there, I lost it for a second.

A piece that I heard here was a dialogue was the idea of using the EPRI methodology as another informing source of information as licensees try to discern for themselves what the appropriate frequency as replacement, modification, repair, whatever.

And, what I heard from Sam was a discussion not of gathering PM data, but instead, taking a whole -- in this case, the Agastats or maybe some other relay, taking a whole group of information from a lot of different utilities and figuring out -- taking them out of service and looking at them, saying are these still able to perform? Are these still in good shape? So on.

And so, there's almost an evaluative process there as opposed to looking at a preventive maintenance program which says I haven't had three failures in the last year, so therefore, I'm good.

That's a new piece of knowledge of putting those two together. I just want to highlight to you that that's different than I've heard it described by many licensees to me in the past as it relates to this particular issue.

So, it's a little different than preventative maintenance template program and a little bit more, going back to what you said earlier or the

dialogue, where a vendor gives me an answer. It's service-life is X amount of time and we're beyond X amount of time. Am I using preventative maintenance? Am I using some other evaluative process? How do I go about that?

There's a struggle there and so, I just want to highlight that there's a nuance there that I don't know if everybody appreciates that was a little different than on just using PM data.

MR. HARVEY: Yes, and this is Sam Harvey again.

And, there's a lot that goes into this creation of those templates including OEM, vendor recommendations and other things including some of these studies that we have conducted independently.

So, there's a lot that goes into and a lot of different information sources and that's what I wanted to make clear. It's just not -- there hadn't been a failure in the last three years.

MR. O'BRIEN: Well, I'd offer, I've never heard the program described with this aspect to it and the detail as I've talked with the licensees.

MR. MONTGOMERY: Well, by its nature, a preventative maintenance program is preventative, it's not reactive. And, I think I hear language often

times that says that, hey, you know, like what you said, if you don't have to the past three years, you know, we don't have to do anything.

It's this preventative program, as Steve points out, takes into account many different sources of information. The idea is to prevent failures and maximize reliability for the type of equipment for the service it's in.

So, I think that we ought to be asking ourselves is, is the preventive maintenance program and the staff's oversight process for the maintenance rule working for us or not? If it's not, what is the specific gap and what do we need to do to close that gap is there is one?

And, I think that information or that discussion, so far, I think, has been lacking. The slight uptick in findings, I can explain that probably in a couple of different ways.

So, again, we have data that indicates our performance trends are either flat or improving and at very high levels of reliability rates. So, I'd like to get into that sort of a discussion at some point in time because we struggle with, what's the problem we're trying to solve?

MR. O'BRIEN: I'll offer a history, that

way I don't have to go outside the bounds of what's already on the docket. This is Ken O'Brien.

So, we've issued unresolved items, so at least three utilities in Region III. And, the issues that are associated with components in service beyond the vendor recommended service-lives and asking the question, so why is that okay?

And, I think that's a question that reasonable to ask as an inspector, why is that okay?

And, I think often, we're not getting a -- we've looked at, here's an engineering evaluation. We often we're an answer that's documented in the inspection report, so I'm not going outside -- that says well, we haven't had a failure.

For components where you're relying upon them to perform a safety function, I think we all would agree that there's probably a higher level of expectation that we all have in terms of the knowledge as to why we're taking specific actions.

And so, that's what we're trying to get at and that's where I think the gap that you're talking about comes to. Is it a 50.65 issue? Is it a preventative maintenance program issue?

Is it a Criterion 3, the program isn't there? Is it a Criterion 5, the program's there but

we're not following the procedures? Or, is it a Criterion 5, the procedures are there, but they're not comprehensive enough?

Or, is it I forgot it completely and it's not covered or it's a subcomponent so far down that I hadn't thought about it? Or, is it OEM not aware of? Or, is it a case where I don't have the vendor's information? And, to be very frank with you, it's not something that was on our list and we don't have information to demonstrate it's good, bad or otherwise.

Usually, when we're coming at something of this nature, you find the vendor information is an easy one to go at. But then, you also find, as Harold and John have pointed out, we have OE that we look at, both your OE internally and our OE.

And then, you also have events that we look and we say, well, gee, this brings to light a new issue and we try and go out and look at that.

So, I think that's a little bit of where, Bruce, the gap is. We're trying to figure out how these different pieces fit together and that's why I see -- I think you see, and I've heard it before, you know, the citations are different.

And, part of the reason, as Harold

articulated, the citations are different is, often, we're trying to get at different answers. Because some licensees have phenomenal programs but didn't do a real good job of implementing it in a procedure.

Or, they have phenomenal programs that are implemented well in a procedure but somebody didn't follow the procedure.

Or, they're thinking they're covering it under X and really, it needs to be covered under Y.

And so, that's why I think you see a little bit of the difference and that's why I think we struggle a little bit here, as Harold pointed out earlier, that to define a very specific, singular regulatory requirement, because I think it's a host of requirements. It's a host of issues and we're trying to --

There's so many that it's very difficult to get them all -- all the horses in the barn at the same time, but I think that's where the regulatory gap is when we're trying to figure out the overarching answer without prescribing the absolute answer to the industry.

Because, if you look at the NRC's regulations, they're intended and focusing on you come up with the answer. Here's the performance that's

expected. And that's part of where the problem is here, I think.

MR. CHERNOFF: And, that's also perspective. This is a RIS, it's not a bolt and it's not a generic letter. There's no inference of a significant imminent safety issue that needs, you know, immediate attention of those levels.

MR. O'BRIEN: Thanks for the clarification. You're absolutely correct.

MR. CHERNOFF: It's an improvement area that we're focused on.

Let me do two things because I want to make sure we give everybody an opportunity to participate.

Mr. Lochbaum, I think you had one comment and then let's go to the phones and see anybody on the phones has anything after that, then we'll circle back.

MR. LOCHBAUM: Dave Lochbaum with the Union of Concerned Scientists.

It was an interesting discussion on time-based replacements. My understanding of the NRC's position in the draft RIS, is it if a component's within its vendor recommended service-life, you've got to meet tech specs and all of the other things, if

it's beyond that, there needs to be some explanation of why that still okay.

And, that could take any number of forms but, you can't just have that it hasn't failed yet as the reason why it's still -- those components are still operating.

Is that my -- do I have a correct understand of what the RIS is seeking to accomplish?

MR. CHERNOFF: I think that's a generalization that's fairly accurate that you -- if and there are a lot of ifs here, but if the information, the vendor information that you were citing, is specific to your component in your plant, that you have multiple programs that would tell you, you need to assess that.

And, it's not okay to say, that was a plant in a different part of the country or it was a BWR instead of a PWR.

It doesn't mean that that assessment needs to be complex. It doesn't preclude, for example, avail you of EPRI's activities properly used. And, I'm emphasizing the properly used because there's a long discussion about using plant-based OE and informing those templates with plant-based operating experience.

And, I just wanted to, you know, add emphasis. I think that's a good -- that information is good. It's very similar to what we do a lot of time when we're looking at topical reports. We approve a general concept in a topical report, but we always almost exclusively have implementation conditions. And, that's often where the rub comes in in following those implementation conditions.

So, I think, you know, in a broad sense, Dave, your comment is correct. What we're trying to say is those situations where that information comes through need to be addressed.

And, it could be the obvious choice is corrective action program, operating experience programs, another aspect of your quality assurance program to disposition those besides those.

All those are okay, engineering dispositions, there's a plethora of ways it could be appropriately addressed.

MR. LOCHBAUM: Could I ask that question in a slightly different way?

MR. CHERNOFF: Sure.

MR. LOCHBAUM: The examples that the NRC provided up to this date, but led into this, the findings or violations or however, weren't that the

licensees evaluations were inadequate, is that they were just not there and the component was beyond its vendor service-life. Is that a fair statement?

MR. CHERNOFF: Is that accurate, John? Within the study, is that accurate?

MR. THOMPSON: In some cases.

MR. LOCHBAUM: Partial credit.

That's fine. There were a lot of examples in that study, so that's a fair question. I withdraw the clarifying question.

MR. CHERNOFF: Fred, if you could hold for just a second and we could pulse the phone bridge and see if anybody's --

MR. MEYERS: Can I just comment on that last point before we move off of it? I think it's important to recognize, however, I appreciate what you're saying, but under a licensee's quality assurance program, the requirement to develop maintenance schedules does not require the licensee to formally document a deviation from a vendor recommendation.

You have to consider many factors under your quality assurance program and vendor recommendations are one of them.

But, a deviation from a vendor manual,

unless you've committed to it in your licensing basis, does not require a formal evaluation.

It's sound engineering practices and it's a determination of a maintenance schedule, but it's not a documented evaluation of why you're not doing something.

MR. CHERNOFF: Okay.

MR. MEYERS: It's an evaluation of --

MR. CHERNOFF: So, help me understand, every plant out there either is under a Confirmatory Order or part of their licensing basis under IC5, TMI Action Item, they have an operating experience program. Okay?

Now, my question is, when you get operating experience that comes in from whatever source that says this widget is only good for six years, tell me, what do you do with that?

MR. MEYERS: New information would be processed. If it was from a vendor, it would go through your V-TIP and then it gets ultimately entered into your CAP program, if it's applicable, just like your site OE or industry OE that we read about.

If it's vendor information that was already in the manual, that type of information is the type of documentation that I'm talking about that you

considered in the development of your maintenance schedules, but you don't have to evaluate a deviation from it.

MR. CHERNOFF: When the information comes in and you put it in -- your next step was you put it in your vendor or your --

MR. MEYERS: If it was from a vendor, it would probably start with the V-TIP Program.

MR. CHERNOFF: Okay. If it was not from a vendor, it would go into your broader operating experience program? Okay.

And, you look at that for -- your next step was applicability? Okay. And then, what's your next step?

MR. MEYERS: If you determine it's applicable, it would wind its way into the CAP Program.

MR. CHERNOFF: Okay. And then, what do you do in the CAP Program?

MR. MEYERS: It would be evaluated to determine what potential impact that would have.

MR. CHERNOFF: That's exactly what our point is. That's simply, that's our point. It's the processes, process the information, make a decision based on processing the information.

MR. MEYERS: Well, but what I'm hearing, though, is you're expecting to see documented evaluations of where you have deviated from something that you got long time ago.

MR. CHERNOFF: What you describe is producing documentation of your consideration and your determination.

MR. MEYERS: On a current time going forward basis, not historical, not past.

MR. CHERNOFF: Yes, no one has mentioned going back and trying to look at all the equipment in the plant and producing extemporaneous contemporary documents for all the equipment that's already out there.

MR. MEYERS: But, right now, that's what the RIS would, I think, lead most people to conclude is necessary.

MR. CHERNOFF: Okay, we'll look at. I mean that certainly was not our intend. There is, of course, a RIS cannot create a new requirement or process. So, that was certainly not our intent. We'll look at the wording.

But, what you described is the point we're trying to get at.

MR. O'BRIEN: So, Steve, I guess I'd ask

you the question as part of this purpose for us to understand. So, if you are trying to get at the point that Harold was making, and I'll avoid using the word maintenance because I'm not sure I'm necessarily in alignment with that dialogue, but if you were trying to get to the point of dispositioning information that comes available to you from whatever venue to determine whether it has an impact and whether or not you want to continue to use a component in service in the plant.

How would you propose we word that to ensure that's what's occurring? That's what I don't -- I don't need an answer now, but that's what I'd offer you. And, that's part of what we're trying to get at.

I'd offer you -- I used to inspect at one in time, but I'll tell you that I'm not qualified to do that anymore -- but I'd offer you Criterion 3, Criterion 5, Criterion 16, 50.65. I can quote a bunch of them off the top of my head, all of which have probably some aspect to it.

And, Criterion 17, I think is the one, if I'm not mistaken, would tell me I need to document things that are important to safety.

When I make a decision that I'm going to

do something different than somebody that sold me a component or somebody that's used a component a long period of time or something else, it would seem that it would be necessary for me to document why that's okay because, otherwise, it would be difficult.

What we're asking here is a part of this and that's why we're looking for your insight and your feedback is, if there's a better way of describing what you just described, by the way, being led by the quiz guru over here, we've both decided he was leading the witness.

If there's a better of describing that, I think that's what we're trying to look for. We're not looking to create a new requirement. We're not looking to create a different requirement. We're looking to make sure that we both have a similar understanding of how best to ensure the components that you rely upon in the plant are able to perform their intended function when called upon.

And, any time we get information that potentially call that into question, and that can come from a lot of different means and a lot of different measures, we want to make sure that you're properly evaluated.

And, any time you properly evaluate

something, since it's important to safety, I think Criterion 17, if I'm correct, it's been a long time since I was allowed to inspect, but I think that's one that requires you to document activities important to safety.

MR. CHERNOFF: Let's go to the phones. And then, after we do that, let's take a short break.

MS. POPOVA: Okay. So, anyone that's on the phones that has a question or a comment, just please state your name and your company.

MR. FRANTZ: This is Steve Frantz from Morgan Lewis.

And, the RIS seems to suggest that you have to use the Corrective Action Program and you have to do operability determinations any time you receive information, for example, from a vendor.

I think as we've been discussing, there are other programs out there besides the Corrective Action Program and the operability determination program that can be used, such as the operating experience program, the engineering program, the maintenance program.

And, if you go forward with this RIS, I suggest you identify that these other programs are also available to be used to evaluate vendor

information, that you don't necessarily have to use the Corrective Action Program, although that may be an option.

MR. CHERNOFF: Thank you.

I think we do not disagree that there are other programs than, I'll just say, the three that are the majority of the discussion in the RIS. So, I appreciate that comment.

MS. POPOVA: Are there any other questions on the line?

MR. BACANSKAS: Yes, this is Vincent Bacanskas. I'm Chief Engineer with Entergy Nuclear.

And, I wanted to offer something for Harold to take a look at. Mr. Lochbaum referred back to the active components in the license renewal rule.

And, I'd like to remind you that, in the early '80s through the early '90s, the NRC conducted a research program resulting in numerous NUREG documents being issues regarding nuclear plants aging research program where both accident passive components were studied with respect to failure rate, failure modes and what the operating history had been to date.

My understanding at the time, I authored probably five or six of those documents was that this

was in support of license renewal rule for these components.

So, I think it would be most interesting to look at the current study and compare it to the failure rates that the NRC staff, through publication of the NUREGs already identified 30 years ago. Just a thought.

MR. CHERNOFF: If I could just ask a question with regard to looking at that and it being interesting, can you help me relate that to the draft document in what regard? Because we're really structured around failure rates.

MR. BACANSKAS: I understand. But, what you're saying is, that is the result of the operating experience study that you saw an uptick or a slight increase.

MR. CHERNOFF: In findings.

MR. BACANSKAS: In findings, okay, as well as failures. And this kind of goes back to what Bruce Montgomery was saying as well. Have we changed the capability of the equipment to protect the health and safety of the public? Which is a thought of mine.

MR. CHERNOFF: Yes, just --

MR. BACANSKAS: And, that goes back to the failure rates. And, there's also numerous AEOP

studies in the past that looked at failure rates of equipment and I think this could be correlated to vendor recommendations at the time, this hopefully addresses it.

So, my premise is, maybe in the small area that we're looking, there's an increase in findings, but not necessarily in any real material effect when operating the unit.

MR. CHERNOFF: Okay, thank you for that clarification.

And, just to reiterate, you know, the study did not look at failure rates of equipment or tried to ascribe any kind of a trend positive or negative to actual equipment failure rates.

But, I have a better understanding of what your point is. Thank you.

MS. POPOVA: Are there other -- any other questions online?

MR. WEINACHT: This is Rick Weinacht. I'm with Curtiss-Wright. I'm the Manager of the Equipment Qualification Data Bank.

I have three points that I'd like to make.

One is that, in these discussions of service-life, we seem to be omitting the corresponding service condition. A service-life cannot be assessed

unless the service condition is known.

And so, when we find, for example, a service-life statement in a vendor document that says, an Agastat relay can only be used for 20 years. And, a 1968 document, that has no context for the operating plant because the service conditions are not the stated with that service-life.

The other two points I'd like to make are with regard to the draft RIS and the lack of clarity about the regulatory issues that it contends that can be summarized.

I think there are two areas we have the opportunity to provide some clarity. And, one is when does vendor information become part of the plant's current licensing basis or design basis documentation?

I think the RIS does a very poor job to provide any clarification on that issue.

The second is, there seems to be a jump that when a vendor service-life exceeds it, that constitutes a nonconforming condition. And, the Commission paper pointed this out and I think that's a technical error that still exists in the draft RIS.

We need to recognize that exceeding a vendor recommended service-life does not in and of itself constitute a nonconforming condition.

MR. CHERNOFF: Okay. Could you, on that last point, I think our language actually in the draft RIS talks about the potential to be a nonconforming condition. And, if you would help us, if we've got other language in there some place, can you point us to that?

MR. WEINACHT: I think I could. I could provide that in formal comment.

MR. CHERNOFF: Or you could email it in would be fine.

MR. WEINACHT: Okay.

MR. CHERNOFF: But, our intent in the language and, I'm looking at page two of five, I happen to have it open to that, where we talk about documenting a potential nonconforming condition.

So, again, it depends. We are one -- you're right, we don't speak directly to when things become part of the licensing basis. That was really not our intent to try to define that. And, in and of itself, you could write a long document about that.

But, certainly, on your last point, we wanted to be sure that our language indicates that something like that might be a nonconformance rather than try to be predictive that, in all cases, it would be.

So, this is that balancing act we're talking about because, depending on what it is, what's it's relied on for, where it is in the documentation, all those things matter.

So, if you wouldn't mind, we'd certainly appreciate -- you could use Alex's email address, but also certainly, if there's some language that similar to what you described in the item that gets published, please ensure that you follow up with some formal comments on that, too.

MR. WEINACHT: I'd be glad to.

And, just to point out one other thing regarding this whole balance. I am aware of a finding that occurred during one inspection where the licensee had a documented evaluation that demonstrated the life of a component was 27 years.

And, the NRC inspector provided a document that was not in the licensee's current licensing basis or even the possession of this licensee that said the item was only fault like for 20 years.

And, the licensee did not have an evaluation that showed why that document presented to him was invalid because they had never seen the document before.

But, they did have a documented

engineering evaluation that demonstrated a life longer than that and they still received a fine.

Those are the kinds of balances where the NRC is overplaying its hand in terms of saying vendor recommended service-life takes precedent.

MR. CHERNOFF: Okay. And, just in the interest of time, if we can -- we've got a couple more -- at least a couple more comments on the bridge, we'll try to get those in and then take a very short break.

MS. POPOVA: Yes, I'm seeing a couple of comments coming through the GoTo Meeting. So, if you'd like to ask those, now would be a good time.

MR. BAKER: This is Kelly Baker. I'm from DC Cook. I'm the Design Engineering Manager.

And, I kind of inherited one of the unresolved items from the NRC design inspection. We were one of the three recipients of the TIA that has turned into this RIS draft.

And, our position has been approaching this has been a very difficult one because guidance that was provided in the TIA that we received seems to suggest that, what I believe someone said earlier, that since we have no basis for not performing time-based replacements on any of our relays that are

installed, that we have to evaluate each one of those as a nonconformance.

So, basically, looking at the vendor service-life as a design requirement that we're not meeting.

And so, we'd have a huge evaluation required to go through the number of components we're talking about which is on the order of thousands of relays with hundreds of different individual model numbers that might be in different service conditions to evaluate whether even the nonconformance exists.

And, this was just basically not the way the plant was licensed. And, not a consideration at the time, even finding a service-life for many of these components is going to be extremely difficult.

So, that's kind of the position I'd like to present to those who are drafting this guidance.

My understanding from what's intended is that we only need to look at new information received on vendor service-life that would call into question any evaluations or time-based replacements we have if new information is provided that changes -- that would change our evaluation.

But, that's not the way it reads to us currently.

MR. CHERNOFF: Okay. And, obviously, Kelly, I know you appreciate that we're, you know, we're not in this forum going to go into details of the incidents that you're talking about. But, I think I understand your comment and appreciate it.

MR. MURPHY: Harold?

MR. CHERNOFF: Yes?

MR. MURPHY: Marty Murphy from Xcel Energy.

I think, and maybe this is something we can talk about when we come back and I think you've touched on it already, that the RIS is being written at a high level.

However, I think, you know, industry can read this as very much still aligned with what's in the TIA. And, I think we just heard that from DC Cook and I think the rest of us have that concern that this, essentially, just continues to espouse the position that's in the TIA.

MR. CHERNOFF: And, Marty, what I've asked is, help -- not necessarily right now in this room, but help us with some specifics of what are the points that you're seeing that are particularly problematic and, you know, make some suggestions. That's what would be most helpful.

MR. MEYERS: And, you know, I think the reason you have so much participation and concern in understanding this because of, you know, the potential impact with all the evaluations that was just discussed on the phone is that, in one plant that was looking at this while they had over 3,000 components under 50.49 for a harsh environment, they had over 27,000 components that were in a mild environment and over 200 million estimated to do evaluations and replacements.

MR. CHERNOFF: Yes.

MR. MEYERS: So, there's a lot of concern and I know your message is different than what we read and it's different that what's in the TIA, but as Marty says, it's like the precedence, at least out there, that this is getting back to where you're evaluating 27,000 components.

MR. CHERNOFF: I mean, the messages can be difficult at times, but if there is information that brings into question a broad category of equipment installed in the plants, it needs to be dealt with in disposition still. And, that could, at times, be, you know, very large.

I can't speak to the specifics. I wasn't involved in any of those and probably wouldn't be

appropriate in this forum anyway.

But, we are focusing in this document on things that you become aware of, not trying to impose additional documentation on things that are already out there.

MR. MASHBURN: So, let me make that --

MR. CHERNOFF: You go ahead, absolutely, yes.

MR. MASHBURN: -- very clear since I've been sitting on my hands here for a moment. This is Fred Mashburn, TVA.

That plant that he was mentioning is rather near and dear to my heart. And, it may not be one of the cats that you were intending to herd in this TIA, but we've been talking in terms of becoming aware of information from a vendor or credible information that calls into question the capability of the components that do their safety-related function.

The other side of this that's near and dear to my heart is the question of, is this intended to imply that, when we go out and purchase new components, shall we say, let's say a multi--case circuit breaker is going into a safety-related component that is not in a harsh environment that we have to request the vendor to provide us with service-

life information.

MR. CHERNOFF: Okay, very direct answer to that, it depends. It's your decision, it's your obligation to ensure the suitability of the purchased item for its intended purpose. So, you guys have to make decisions in your engineering process as to how much information you need to ensure that it can perform its function.

MR. MORRIS: Yes, there's an EPRI PM template that's already factored in a lot of stuff. And, you take that and you adapt it to your particular application at your particular site that, in my mind, ought to be good enough.

MR. MASHBURN: So, I've heard --

MR. CHERNOFF: And, I've heard it also before, no one at this table is saying you need to have akin to a queue listing out the service-life of every component in the plant. That's not what we're --

MR. MASHBURN: Well, especially for equipment that we are purchasing or intending to purchase at that point in time.

MR. CHERNOFF: Right. But, your obligation is that you do enough engineering work to assure that it will function suitably for its mission.

MR. MASHBURN: Okay, I heard it depends, but my definition was no, not necessarily.

MR. CHERNOFF: I'm an old licensing guy, so it depends is like --

MR. MASHBURN: It sounds more like a --

MR. CHERNOFF: -- you get every paragraph with that. Right?

MR. MASHBURN: Thank you.

MR. CHERNOFF: Okay. We probably need to take a break shortly.

Okay, let's take -- I've got 2:54 on my clock and let's come back in ten minutes, 2:55, so in ten minutes, let's come back.

Let me remind everybody, you need escorts if you are not an NRC employee, badged employee, you need escorts to leave the room and we will come back to the people on the phone when we come back.

Thank you.

(Whereupon, the above-entitled matter went off the record at 2:55 p.m. and resumed at 3:06 p.m.)

MR. CHERNOFF: I appreciate everybody wrapping up the side conversations and taking seats so we can get back under way.

All right, so our IT assistant is going to be unmuting the bridge. Assistant is probably not an

adequate term to describe his help for us today.

Just a couple of -- before we get back into the comments on the phone, I think it's pretty clear we've gotten a lot of good feedback and good info so far from a variety of people. This is what we wanted to do.

I want to remind people the focus of the document is on raising awareness and focus and attention on dispositioning of information that comes in. I think it's clear we probably won't have time to get everybody that wants to speak today the opportunity.

And, what I'd like to do is make sure that people please, if you don't get the opportunity or you think of something you didn't add to the dialogue, email it to Alexandra ax16 -- no?

MS. POPOVA: It's axp16@nrc.gov, but it's also on the Public Meeting Notice.

MR. CHERNOFF: So, please email any additional thoughts you have to her reasonably promptly, within a week or so would be great so that we can take those under consideration.

We will also add those to publically available ADAMS so that everybody can take a look at it and we'll figure out a way to do that so it's

identifiable as associated with this document.

With that, if we can go back to the phone bridge?

MS. POPOVA: Any questions still on the phone?

MR. SAMS: This is John Sams with Ontario Power Generation.

MR. CHERNOFF: John --

MS. POPOVA: Can you speak up?

MR. CHERNOFF: Yes, we're having trouble hearing you, if you could speak up or move closer.

MR. SAMS: I'm on a headset, so hopefully it actually picks up.

As far as the safety-related systems, I guess the main question about the RIS here, we looked at as part of our AP-913 INPO document for equipment reliability.

We're looking -- some of the safety-related equipment that, you know, it's in the safety-related system but its failure really doesn't result in an, you know, really much of an impact on the safety related system.

And, not the special safety systems like containment, but on some of the safety support systems.

And, basically, the toss to, say, do the Agastat relay replacement is significant if we do it as a PM. But, if we're looking for, you know, when is the right time and we've looked through the EPRI templates and, you know, that gives the basic guideline around where we believe, you know, from an industry, we may -- are seeing failures but, you know, we now have a new tool within that that actually looks at what the risk of, you know, not doing certain time-based maintenance.

And, if we have an evaluation like that in our system, would that be adequate for what the inspectors would be looking for?

MR. CHERNOFF: Thank you.

I don't know that we're in a situation where we could answer that. It's a very specific question and I think you understand the components of the application, the installation and whether or not you follow through on the implementing requirements of the EPRI templates for plant specific information as well. All those things factor into that.

So, I don't think we can give you, you know, it's not our purpose here to try to give specific answers.

But, if it runs through your processes

and, like everything else you do at the plants, it's incumbent upon the licensees to follow their processes, provide sufficient documentation.

And, that first standard is your own self-assessment and self-scrutiny as to the adequacy of that documentation.

And, I know that's a lot of generalisms, but I think that's all we could do in this forum on that.

MS. POPOVA: Are there other questions on the line?

MR. CHERNOFF: Okay.

MR. PFABE: Can you hear me?

MR. CHERNOFF: Yes, go ahead.

MR. PFABE: I have a question along similar lines about the violation and challenges.

A few findings in the field and practical experience, the --

MS. POPOVA: Could you please state your name and the organization you work for?

MR. PFABE: Oh, I'm sorry. I'm sorry, let me just pull over.

This is John Pfabe, the Licensee Engineer Consultant.

A few times in the past, I've noticed an

inspector may be particularly knowledgeable or have a particular focus in an area and he may not necessarily accept the licensee's position on an item.

It may be reasonable and we go back to the old discussions of engineering judgment and it depends who the engineer is, that type of thing.

Is there a way of minimizing impacts or going off on another science project or even, you know, minimize the chance of receiving a violation on another process because when difference of opinion, whether or not something's strict enough or there's enough scrutiny's been done to the studies or documentation.

MR. CHERNOFF: Let me -- this is Harold Chernoff, let me address just a piece of that and then I think Ken O'Brien would like to address part of it.

One aspect we mentioned at the very beginning of this was, some of our findings, poor choice of words.

Some of our observations in our study were internally focused on things that we can do better. So, we have some actions, you can go to the study and you can see generally what some of those are. They are directed at improving our guidance documents to our inspectors and providing some orientation and

training to try to improve that activity which you're speaking of.

But, Ken, if you want to speak beyond that?

MR. O'BRIEN: Yes, I'll just kind of articulate, as in any inspection activity, our inspectors, as they go through the evolution, they have a nice open dialogue, hopefully, with the licensees and the individuals they're interacting with.

And then, from there, they'll propose at an exit meeting their potential findings which, as a standard statement as a part of that dialogue, are always open to management review.

And, that's one of the things that occurs to make sure that there's a clarity and an understanding, hopefully, a consistency between all the inspectors throughout the Agency and we act as a single voice and those things will come back to the Region for review and evaluation by management.

And, if there's a disagreement, we'll raise it up even higher to make sure that there's an understanding of what the particular issues are and that we're being consistent across the Agency.

Another reason that you're seeing this

dialogue here today is to try and make sure we're doing things in a singular voice with a consistent manner in seeking input from those that we regulate.

MR. MORRIS: Well, and in truth -- this is Scott Morris -- this is exactly what happened in this case and it went to the next level which was the Region, who was considering these issues, reached back to Headquarters and said, hey, help us. What's the right answer here? What else -- have we got it right or was there something we're missing?

And, so that's why Headquarters is having as part of this and why ultimately we're having this meeting.

(Whereupon, the above-entitled matter went off the record at 3:14 p.m.)

MR. PFABE: Right. And I understand that it's a great challenge, but sometimes you get differing professional opinions and then the item just drags out for a year or so. Whether it's a study or additional data has to be gathered or developed. You know, so, we're going into a new area where vendors may be going out of business that make these elite components. Similar to others in the commercial field, but the data may not be available. Sometimes the level of review may vary across different

licensees or it's very costly for programs. You just -- you have a pretty good challenge ahead of you.

MR. MORRIS: Thank you.

MR. PFABE: Trying to focus this correctly going forward the next 20/40 years.

MR. CHERNOFF: Thanks. I think we understand this is not an easy, simple fix or necessarily a major significant problem either. It's something that we want to --

MR. MORRIS: Okay. I mean I think --

MR. CHERNOFF: -- tune and focus attention on.

MR. MORRIS: I think at some level maybe at its foundational level this is really operating experience 101 discussion. Is really what this is. Right. I mean it's not a whole lot more than that and we have an operating experience organization internal to the Agency who's charged with among other things to assess, you know, equipment issues, performance issue, all kinds of things and look for -- as Harold pointed out, separate the wheat from the chaff and if there's wheat, you know, what does it mean and how can we use that information to modify our inspection programs, to communicate observations to the industry, et cetera, et cetera, et cetera. So.

MR. CHERNOFF: And just to emphasize, the most important part of what we're trying to do is communicate out information. Okay. And that -- I purposely am not talking about enforcement. I'm talking about getting messages out in a broad sense so people are aware. That's the most important thing we do. The operating experience.

MR. PFABE: Yes, I understand. Thank you.

MS. POPOVA: Okay. So, let's go back to the room for any more questions or discussions.

MR. MEYERS: This is Steve Meyers, STARS Alliance back to -- this is really operating experience and recapping that, Harold, you discussed, you know, this is really time zero going forward with credible information.

And the draft RIS is silent on the 50.2 discussion, design basis information that was in the TIA. So, I still just find it confusing.

Is this really like time zero going forward with new credible information that's coming in or can you just discuss why this is silent on 50.2 and, you know, this old documentation that may or may not even be in your CLB? The change there.

Because, again, you know, I think, the industry and the inspectors have started down this

path and it sounds like you've made an adjustment here.

MR. CHERNOFF: Well, the -- okay. We -- 50.2 design, it's a regulatory definition. Okay. You can go in. You can look if there's additional guidance on what it means. It's a very specific subset of information within a licensing basis.

The important part of that is it has some additional requirements on it beyond the more broad general information. You've got the general licensing basis information which was really defined in the regulations for the first succinct definition with respect to license real rules. It being a term of art for the beginning to that point, but in license rule regulations, it was -- there's an actual definition.

And so, these things are all important and they classify the level of significance of particular pieces of equipment, but at the end of the day, you know, when the sun starts to set on the power plant, the important thing is that the information that came in or you found -- in other words, I don't want to overemphasize this time zero concept because a lot of times as you're doing self-assessment activities and other things, information that maybe people weren't really cognizant of but had been on site is revealed

and so, you know, we're not trying to exclude that kind of a situation either.

But, it does not necessarily matter whether it's 50.2 or other licensing basis information or support and design basis information because your programs are designed to deal with it in a graded approach based on what it is.

So, that's why we felt it was more effective to talk about the main programs and as one of the previous commenters said these -- you know, the three that we focus on are not the only ones, but they're kind of the biggest ones, the broadest ones.

That's why we shifted that discussion a little bit. Because the recognition is within those things there's a tiered emphasis and tiered requirements already embedded into those activities.

MR. MEYERS: Well, do you consider the bender maintenance owner's manual type information is 50.2?

MR. CHERNOFF: Well, no, I can't give you that answer because it depends on the site. It depends on the equipment. It depends on -- some people have taken and made design basis documents and they've -- some people actually have incorporated -- referenced those directly into their FSARs which

raises them to a licensing-based information where they may have only previously been supporting information.

It varies quite a bit and so, I'm just not going to try to put an exclamation point or a dot on something that's really very broad and varied across the fleets that are out there.

MR. O'BRIEN: So, Steve, I want to take your question and comment in a slightly different manner. So, I'm going to leave the witness here for a moment if you don't mind.

What I think you're asking -- no. What I think you're asking is you think it would be valuable for the Agency as a part of any RIS to articulate a perspective generically, broadly, however we might be able to as it relates to how this information you come about and how it may relate to design basis 50.2 or supporting information or the associated NEI guidance.

Is that a statement that you're looking for?

MR. MONTGOMERY: Yes. Yes, that would be very helpful. This is Bruce Montgomery.

I think that given where you were with the -- you're trying to communicate at a fairly high level. You said that several times.

So, when you're in that mode, I think it's best to help supplement communication with examples and I think examples that would indicate where you would believe that certain types of information relating to installed time period rose to the level of design-basis information and you saw those instances where we deficient in that area of the industry. Those types of examples whether it be CLB, design basis or Appendix B type information that should have found its way into a repair and replacement program, but didn't that would go a long ways to help us understand your position and the basis for your position.

The other piece that our colleague was talking about from Sequoyah were there was a finding that they failed to establish an installed time period in equipment that was procured where one didn't previously exist. That's a concern to us because the implications of that would mean that we would take all of our safety-related equipment and then somehow establish an installed time period and retrofit it to our plans.

That's not what I think you intend.

MR. CHERNOFF: And you don't see anything in the RIS I don't think that infers that.

MR. MONTGOMERY: So, our question would be -- and this would be really for the regions. I would presume that those specific findings would be rewritten in some fashion or ever pulled.

MR. O'BRIEN: So, it's an interesting question. Let me move on beyond that and I'll come back to it if you don't mind. This is Ken O'Brien again.

I guess I'd offer that in addition to the question that I think you're posing, your perspective would be helpful for us to understand. So, not just asking for us to help do that, but your perspective would be helpful for us to understand as it relates to 50.2 design-basis information, supporting design-basis information and the application of any, I think, it's 9704.

A number of other things of that nature would help in that regard.

Generally, licensees take corrective actions to violations that we put out here. So, now, I'm going to go on to the second part.

So, if we issued a violation and the licensee didn't contest it, we assume that you put it in your corrective program and took actions associated with it.

I think the RIS here is trying to get at the broader question, the broad guidance to the industry and the agency as a whole to make sure we're all clear on what we're trying to accomplish. I think an outcome of that would be a process moving forward that's more consistent and more clear to everybody. I'm not sure of the additional value we might gain for something that was previously cited for which the licensee took corrective actions.

But, again, this RIS may be able to address it if you provide the information from your perspective as how those pieces apply.

MR. CHERNOFF: Can I ask a follow-up question, Bruce.

It's always problematic when you start to present examples from real data sets that are out there and we've heard several people talk about their specific issues.

Do you think we could accomplish a similar objective that you're asking for by using, if you would, developed examples? In other words, not from a citation or a finding, but just a here are the circumstances and this is what we think based on these circumstances.

Would that still be helpful or would that

defeat what you're trying to get at?

MR. MONTGOMERY: Well, I think examples that are hypothetical, if you will, will be just as useful of examples that were from --

MR. CHERNOFF: Okay. Thank you for stating it much more clearly than I did.

MR. MONTGOMERY: But, I think the gentleman who called in who indicated -- and, of course, Sam Harvey's discussion around the EPRI databases and how those evolve into PM templates on our AP913 processes.

The gentleman who called in to talk about how we put those together, if you really looked at those programs, our position is that is the synthesis of all the information that we get. Whether it be a vendor recommendation, testing and analysis, information from OE. They're internal or external as an industry. That's the synthesis of our conclusion and our engineering evaluation of how long something should be installed and how often we should do a replacement or refurbishment.

And the answer that you should have got at these stations when asked hey, it's 22 and the vendor said 20, why is that okay? It's really not the right question to ask or at least the right answer should

have been our PM template -- our PM template basis indicate here's the appropriate frequency for this equipment in this environment for our plant and if we want to have a discussion around that, I think that's where the discussion should occur. That will be the industry position.

MR. CHERNOFF: Okay. And just to repeat that, hypothetical examples would likely help as well. Okay.

MR. MONTGOMERY: We can with that.

MR. CHERNOFF: Because it avoids a lot of issues that we get into when we start dealing with a specific example from a plant. So.

MR. MONTGOMERY: I think that where we can help and where I think the RIS would provide value is examples of what we consider credible and what's the opposite of credible. Maybe we can come up with better terminology and I think you're asking for that and I think also instances where we think something falls into our Criterion 5 Maintenance Programs, drawings, procedures and whatnot and those things which I think are fairly limited would put this type of information at the level of design basis for CLB information. I think you provided some examples. I think what I'm hearing is that it -- you would agree

that most of this information is in our Appendix B Program that govern our maintenance programs.

MR. CHERNOFF: Well, our scope of discussion is safety-related equipment. So, all of that is -- falls under Appendix B even if a small part of it might be graded approach.

But, and, Sam, if I could ask Sam a question. With regard to your organization's -- the template document and the frequency of updates to those documents, how are they managed?

MR. HARVEY: Well, let's -- we can talk about the formation of the templates because those are various things.

MR. CHERNOFF: And we have staff that was involved in that as well. Yes.

MR. HARVEY: We can -- we'd be happy to share that with you. But, the template updates are when something comes in that is credible information that says the basis for this is no longer valid.

So, if we got operating experience, we got a vendor service life instruction or any other type of information that says what's in our template is wrong or no longer valid, needs to be reassessed by the panel of experts from the industry, from vendors, from OEMs and et cetera, we would go back and do it.

Every time one of those templates is reviewed, it's got a date stamp on it and it's also got the basis of what was in that review. So, what was evaluated, what input went into it and everything else.

So, most of that is as we get credible information and not set on any periodicity unless the industry requests let's go back and revisit this. The new ones are all based on requests to go back and establish it. So, we may have valves. Well, now, we've got check valves and we've got some components and check valves in that template.

So, it's ongoing and living continuously. That's why it's on our website because it's continuously updated.

MR. MURPHY: Harold, a question. So, Marty Murphy, Xcel Energy.

With the risks and the intent to keep it at a relatively high level, how do you intend to promulgate some kind of consistent inspector guidance for us?

MR. CHERNOFF: That's -- I spoke to that a minute ago. We have other recommendations from our study that are focused on our internal procedures and training and that'll move forward after we

sort out exactly what we want our message to be.

MR. MURPHY: And will you share that with us so that we have a common understanding of what that is?

MR. MORRIS: Yes, to the extent it's in inspection procedures or manual chapters, absolutely.

MR. CHERNOFF: Not necessarily -- I can't speak to the -- where we end up on training, informal or formal training, I can't speak to that, but the manual chapters are out there.

So, as we edit and change those, it'll become publicly available.

MR. MORRIS: Scott Morris. I just had a question quickly for Sam.

This is a question just seeking understanding. Are the templates for -- your PM templates, preventive maintenance templates presumably have -- without going into a lot of minutia and telling you things you probably already know, I mean there's performance-based maintenance and then there's time-based maintenance. Right?

It captures both concepts? Because, you're they're both important and they're both relevant. Some things are not -- don't avail themselves to performance monitoring. Right. So, you

have to have time-based maintenance. So, they were both factored in there?

MR. HARVEY: They're both factored in there. Absolutely.

MR. O'BRIEN: And this is Ken O'Brien. Time-based maintenance includes replacement?

MR. MORRIS: Right. That's what I meant. I'm sorry. I meant -- that's what I meant to say. Right. Right.

MR. O'BRIEN: This is Ken O'Brien again. I guess the reason I raised that is a lot of people when you say preventive maintenance don't necessarily think that preventive maintenance also includes replacement.

MR. HARVEY: It does. It absolutely does.

MR. O'BRIEN: Because it's not the -- it's not the components. The system you're looking at.

MR. MORRIS: The simplest example I like to use and it's really -- it's simple to the point of absurdity, but, you know, a light bulb, the manufacturer says it'll burn for X amount of hours. Right. And there's really no way to performance monitor it. It's always going to draw the same amount of current. It's always going to have the same amount of lumens until one day you flip a switch and it

doesn't work. Right. So.

MR. CHERNOFF: It'll draw a different amount of current.

MR. MORRIS: Okay. Yes, but in the last microsecond, you get the point.

MR. CHERNOFF: But, that's a good illustration of the issues.

MR. MORRIS: You get the point. So, I'm just trying to make sure and you've answered my question. So, I'll shut up.

MR. CHERNOFF: Now, that I've gotten in trouble with my boss --

MR. HARVEY: Well, like I said, it does and it absolutely includes -- and it includes the environmental conditions. Like is it critical high-duty cycles? No, the environment is well. So, all of those factor into it as well.

So, that's why the template gives you that generic and you have to evaluate it for those conditions.

MR. CHERNOFF: For your plant and your situation.

MR. HARVEY: That is correct.

MR. CHERNOFF: I mean you're saying the exact same thing I was saying and I know we had some

discussions where it's not clear that that was done by the plant necessarily. So, it's important that they do that implementation part.

MR. MEYERS: The EPRI template is more than just a sheet of paper you're looking at, you know, with some Xs in a column. It's -- I mean it provides failure modes and locations and other things that you consider. It's not just a check the box kind of application when it's correctly.

MR. HARVEY: It also have a vulnerability assessment tool built in it. It says if I don't do this, what does it do for my probabilities?

MR. CHERNOFF: And to reiterate something that was said earlier, we understand that we -- I'm in trouble with my -- yes, my boss here and my other boss.

But, you know, we are reasonably cognizant. We have people on staff that were also involved in development of it that we can use the resource to get into more detail as well.

But, it's also -- it takes application and correct application. It's not a pull it off the shelf and apply it type tool.

With that, we are at the end of our time and just a couple of comments. One is I really

appreciate both the tone and the interaction that people have engaged with today. It's all been very pleasant. Which is the way it ought to be when we're talking about something which encourages everybody to take more of these kinds of opportunities to do this stuff.

That being said, I know we haven't probably gotten an opportunity to address everybody's comments and questions.

So, again, please if you would, thoughts you have now, thoughts you develop over the next few days in reflecting upon things that were said, please email those in to Alexandra. We'll get them into ADAMS so that everybody can see them and we will think about them in -- as we go forward in looking at this document.

MR. MORRIS: So, just on that note, so maybe, Alex, you could give us just quick synopsis of path forward to get us from today to the point where we think we'll have something in the Federal Register for formal comment. I know it's a prognostication that's based in guess work, but --

MS. POPOVA: That's a good question.

MR. CHERNOFF: I'm not sure that's a completely fair question.

MS. POPOVA: So, I assume that we're going to have something in the public register this year, but it's going to be -- that'll be based on -- so, this meeting is over, I anticipate that we're going to go back to get drafting our draft and once we have internal resolution there and alignment and we have OGC, our General Counsel, approval, that will be posted in the Federal Register.

MR. CHERNOFF: Can I suggest a licensing answer? When we do the meeting minutes from this meeting, we'll try to get some information in the meeting minutes about general framework of time that we're going to move forward and I think that's about the best we can do.

MS. POPOVA: Yes, that's about the best we can do. But --

MR. CHERNOFF: There are a lot of internal things that have to be worked on and we've gotten a lot of good input and we need to take some time to look at that. So.

MS. POPOVA: Okay. Is there anything else? You guys good?

MR. CHERNOFF: Any --

MS. POPOVA: Okay.

MR. CHERNOFF: If I could maybe ask Dave

or Bruce if you -- you guys were kind of principal commenters. If you had anything you wanted to add at closing here.

MR. MONTGOMERY: Well, certainly, we appreciate the opportunity to have this discussion in advance of issuing a RIS for comments. So, it provides an extra opportunity to -- the level of interest in the room here belies how significant we think this is.

Of course, I think a lot of the reason why we're here is because of what we read in the original TIA and the level of detail that was in that.

But, there was a little discussion we just had over here that maybe as we approach this draft RIS either before or after there might be an opportunity to continue this dialogue maybe in a public forum with a workshop.

MS. POPOVA: So, just as a reminder, the comments that are received through the Federal Register those will be the formal comments which we will take in disposition and then formally answer.

During that -- after we notice the draft RIS, we will have another public meeting to discuss that.

MR. MONTGOMERY: Okay. Good.

MS. POPOVA: So, and that typically happens a couple of weeks after it's noticed in the Federal Register.

MR. MONTGOMERY: Thank you.

MS. POPOVA: Okay. Okay. So, I would like to thank everyone again.

MR. LOCHBAUM: I just wanted -- Dave Lochbaum of the Union of Concerned Scientists. I just want -- I appreciate this meeting. It was very helpful.

I also wanted to not reiterate because I didn't say it yet, but I wanted to point out that I think -- one of the reasons I think this RIS is a good -- draft RIS is a good thing is it -- rather than waiting for the safety event, the really bad thing from happening, there is a performance trend that you're trying to address and I think it's commendable that the NRC's not waiting for the bad thing and then taking a step back. But, is trying to avoid that bad thing. So, I think that's very valuable.

I don't like proactive or reactive. I think it's at least lagging. There was some signs. The NRC's acting responsibly to those signs. I think that's a good thing and I appreciate your doing it.

MR. CHERNOFF: Thank you.

MS. POPOVA: Okay. All right. Thank you for that.

So, I would like to thank everyone for their participation today and just as you saw my message up on the screen, submit anything that hasn't been answered to my email and that will be public and yes, make sure you signed in on the sheet that went around. If you signed in, you don't need to send me an email. You will get an email from me with the meeting notes and summary and the slides which I know you're -- you know, there's not too much to them and that should happen in the next couple of weeks.

So, no further remarks? Okay. The meetings adjourned.

MR. CHERNOFF: Thank you all. Thank you on the phone.

(Whereupon, the above-entitled matter went off the record at 3:37 p.m.)