
From: Lewis, LaShawonna
Sent: Friday, September 16, 2016 12:05 PM
To: Clark, Theresa; Wiebe, Joel
Cc: Keene, Todd; Orf, Tracy; Rohrer, Shirley; Miller, Ed; Brown, Eva
Subject: RE: REQUEST: listserv Exelon letter

Good Afternoon All,

Listserv Complete! Thanks.

Shawonna Lewis

Administrative Assistant
U.S. Nuclear Regulatory Commission
NRR/DORL/LPLIII-2 and LPLIV-2
OWFN 08-H4
301-415-1389
LaShawonna.Lewis@nrc.gov

From: Clark, Theresa
Sent: Friday, September 16, 2016 11:54 AM
To: Wiebe, Joel <Joel.Wiebe@nrc.gov>; Lewis, LaShawonna <LaShawonna.Lewis@nrc.gov>
Cc: Keene, Todd <Todd.Keene@nrc.gov>; Orf, Tracy <Tracy.Orf@nrc.gov>; Rohrer, Shirley <Shirley.Rohrer@nrc.gov>; Miller, Ed <Ed.Miller@nrc.gov>; Brown, Eva <Eva.Brown@nrc.gov>
Subject: RE: REQUEST: listserv Exelon letter

Thanks so much! Yes, it's been distributed internally already.

From: Wiebe, Joel
Sent: Friday, September 16, 2016 11:53 AM
To: Lewis, LaShawonna <LaShawonna.Lewis@nrc.gov>
Cc: Keene, Todd <Todd.Keene@nrc.gov>; Orf, Tracy <Tracy.Orf@nrc.gov>; Clark, Theresa <Theresa.Clark@nrc.gov>; Rohrer, Shirley <Shirley.Rohrer@nrc.gov>; Miller, Ed <Ed.Miller@nrc.gov>; Brown, Eva <Eva.Brown@nrc.gov>
Subject: RE: REQUEST: listserv Exelon letter

Lashawonna,

Can you listserv this? I think the rest of the dispatch will be done upstairs, but you may want to check with Theresa to verify that.

Just listserv it via the normal Byron/Braidwood listserv process.

Joel

From: Clark, Theresa
Sent: Friday, September 16, 2016 11:39 AM

To: Miller, Ed <Ed.Miller@nrc.gov>; Wiebe, Joel <Joel.Wiebe@nrc.gov>; Rohrer, Shirley <Shirley.Rohrer@nrc.gov>
Cc: Keene, Todd <Todd.Keene@nrc.gov>; Orf, Tracy <Tracy.Orf@nrc.gov>
Subject: REQUEST: listserv Exelon letter
Importance: High

Hi—the letter linked below is now publicly available in ADAMS (public link = [ML16243A067](#)). Could you please help us Listserv it as we had discussed earlier in the week? Let me know if you need any more information. Thanks so much!

[View ADAMS P8 Properties ML16243A067](#)

[Open ADAMS P8 Document \(09/15/16 Letter to Exelon from Victor McCree.\)](#)

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Theresa Valentine Clark
Executive Technical Assistant (Reactors)
U.S. Nuclear Regulatory Commission
Theresa.Clark@nrc.gov | 301-415-4048 | O-16E22

From: Clark, Theresa
Sent: Friday, August 26, 2016 10:35 AM
To: Inverso, Tara; Araguas, Christian; Sampson, Michele; Bloomer, Tamara; Jolicoeur, John; Bowen, Jeremy
Subject: FYI: Byron/Braidwood backfit appeal panel report

Hi all! Passing along just for awareness as this report is being discussed in several offices. Vic has not made his decision on this backfit appeal—this is just the panel's report to him. Any questions, let me know. Thanks!

From: Sprogeris, Patricia
Sent: Wednesday, August 24, 2016 1:41 PM
To: RidsNrrOd Resource <RidsNrrOd.Resource@nrc.gov>; Correia, Richard <Richard.Correia@nrc.gov>; Mizuno, Geary <Geary.Mizuno@nrc.gov>; Lewis, Robert <Robert.Lewis@nrc.gov>; McGinty, Tim <Tim.McGinty@nrc.gov>; RidsNroOd Resource <RidsNroOd.Resource@nrc.gov>; Johnson, Michael <Michael.Johnson@nrc.gov>; Lubinski, John <John.Lubinski@nrc.gov>; Mayfield, Michael <Michael.Mayfield@nrc.gov>; Tracy, Glenn <Glenn.Tracy@nrc.gov>; RidsResOd Resource <RidsResOd.Resource@nrc.gov>; RidsOgcMailCenter Resource <RidsOgcMailCenter.Resource@nrc.gov>
Subject: Backfit Appeal Review Panel Findings Associated with Byron & Braidwood

Date: August 24, 2016

From: Gary M. Holahan
K. Steven West
Thomas G. Scarbrough
Michael A. Spencer
Theresa Valentine Clark

This package, consisting of 5 documents (ML16243A067, ML16236A202, ML16236A208, ML16214A199, and ML16173A311), is publicly available in ADAMS.
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[View ADAMS P8 Properties ML16236A198](#)
[Open ADAMS P8 Package \(Backfit Appeal Review Panel Findings \(Byron and Braidwood\)\)](#)

Thank you, Patti

Patti Sprogeris
Assistant to Michael R. Johnson
Office of the Executive Director for Operations
301-415-1713

From: Clark, Theresa
Sent: Friday, September 09, 2016 8:38 AM
To: Lewis, Robert
Cc: Holahan, Gary; Rasouli, Houman
Subject: FYI: 3 DRAFT backfit appeal related documents

Good morning, Rob!

Gary and I are working on three pinks that will be needed to complete the Exelon backfit appeal review. They are not final and may need to be significantly revised depending on what Vic's decision is. However, I wanted you to know that they are working. Given the expected schedule next week and the draft nature, I propose that you not formally review the pinks, but Gary or I could brief you on the content/decision when appropriate so you are in the loop. Please let me know if you have any questions or concerns. Thanks!

- **Letter responding to Exelon**
[View ADAMS P8 Properties ML16243A067](#)
[Open ADAMS P8 Document \(09/XX/16 Letter to Exelon from Victor McCree\)](#)
- **Letter responding to NEI (which had sent a letter in support of Exelon)**
[View ADAMS P8 Properties ML16246A150](#)
[Open ADAMS P8 Document \(09/XX/16 NEI Comments in Support of Exelon Generation Company Second Level Appeal \(To: Anthony Pietrangelo, From: Victor McCree\)\)](#)
- **Memo to NRR**
[View ADAMS P8 Properties ML16246A247](#)
[Open ADAMS P8 Document \(Appeal of Backfit Imposed in Braidwood and Byron Stations \(To: William Dean, From: Victor McCree\)\)](#)

--
Theresa Valentine Clark
Executive Technical Assistant (Reactors)
U.S. Nuclear Regulatory Commission
Theresa.Clark@nrc.gov | 301-415-4048 | O-16E22

From: Clark, Theresa
Sent: Wednesday, September 14, 2016 1:18 PM
To: Cai, June
Cc: Inverso, Tara; Bowen, Jeremy; Bloomer, Tamara; Sampson, Michele; Gartman, Michael
Subject: RE: Suggestions for safety spotlight topics

Here are two that could be of interest:

- Byron/Braidwood backfit appeal (NRR/OEDO)
- Non-Responsive Record

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Theresa Valentine Clark
Executive Technical Assistant (Reactors)
U.S. Nuclear Regulatory Commission
Theresa.Clark@nrc.gov | 301-415-4048 | O-16E22

From: Cai, June
Sent: Wednesday, September 14, 2016 1:14 PM
To: Inverso, Tara <Tara.Inverso@nrc.gov>; Clark, Theresa <Theresa.Clark@nrc.gov>; Bowen, Jeremy <Jeremy.Bowen@nrc.gov>; Bloomer, Tamara <Tamara.Bloomer@nrc.gov>; Sampson, Michele <Michele.Sampson@nrc.gov>; Gartman, Michael <Michael.Gartman@nrc.gov>
Subject: Suggestions for safety spotlight topics

The next Quarterly Strategic Alignment meeting is Nov 1. Please let me know in the next couple of days any suggestions you have for safety spotlight topics.

To refresh our memories, we've had three of these meetings so far, and previous topics have been:

Non-Responsive Record

Thanks so much

June

From: Clark, Theresa
Sent: Thursday, September 15, 2016 9:54 AM
To: Valliere, Nanette; Ruesch, Eric; Castleman, Patrick; Frazier, Alan; Krsek, Robert
Cc: Lewis, Robert; Rasouli, Houman; Inverso, Tara; Bowen, Jeremy; Holahan, Gary
Subject: FYI: backfit appeal documents signed

Good morning, all!

This morning, Vic signed the three documents associated with the Byron/Braidwood backfit appeal. They are being processed now, and we expect that they (along with the panel documents referenced within) will be made publicly available in ADAMS later today. Please let me know if you have any questions. Thanks!

- **Letter responding to Exelon:** [ML16243A067](#)
- **Letter responding to NEI:** [ML16246A150](#)
- **Memo to NRR:** [ML16246A247](#)

All 3 documents are publicly available in ADAMS

--
Theresa Valentine Clark
Executive Technical Assistant (Reactors)
U.S. Nuclear Regulatory Commission
Theresa.Clark@nrc.gov | 301-415-4048 | O-16E22

From: Clark, Theresa
Sent: Thursday, September 15, 2016 10:00 AM
To: Holahan, Gary; West, Steven; Scarbrough, Thomas; Spencer, Michael
Subject: FW: backfit appeal documents signed

Good morning, all!

This morning, Vic signed the three documents associated with the Byron/Braidwood backfit appeal. They are being processed now, and we expect that they (along with the panel documents referenced within) will be made publicly available in ADAMS later today. Please let me know if you have any questions. Thanks!

- **Letter responding to Exelon:** [ML16243A067](#)
- **Letter responding to NEI:** [ML16246A150](#)
- **Memo to NRR:** [ML16246A247](#)

All 3 documents are publicly available in ADAMS

--
Theresa Valentine Clark
Executive Technical Assistant (Reactors)
U.S. Nuclear Regulatory Commission
Theresa.Clark@nrc.gov | 301-415-4048 | O-16E22

From: Clark, Theresa
Sent: Thursday, September 15, 2016 9:59 AM
To: Dean, Bill; Evans, Michele; McDermott, Brian; McGinty, Tim; Lubinski, John; Correia, Richard
Cc: Holahan, Gary; Keene, Todd
Subject: FYI: backfit appeal documents signed

Good morning, all!

This morning, Vic signed the three documents associated with the Byron/Braidwood backfit appeal. They are being processed now, and we expect that they (along with the panel documents referenced within) will be made publicly available in ADAMS later today. Please let me know if you have any questions. Thanks!

- **Letter responding to Exelon:** [ML16243A067](#)
- **Letter responding to NEI:** [ML16246A150](#)
- **Memo to NRR:** [ML16246A247](#)

All 3 documents are publicly available in ADAMS

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Theresa Valentine Clark
Executive Technical Assistant (Reactors)
U.S. Nuclear Regulatory Commission
Theresa.Clark@nrc.gov | 301-415-4048 | O-16E22

From: Clark, Theresa
Sent: Friday, September 16, 2016 11:01 AM
To: Harrington, Holly
Cc: Castelveter, David; Burnell, Scott
Subject: RE: Current blog draft and Q&A

Documents are public! Note that I had an error in one ML# I sent before. These links all work:

- Letter to Exelon: [ML16243A067](#)
- Letter to NEI: [ML16246A150](#)
- Memo to NRR: [ML16246A247](#)
- Backfit appeal review panel charter: [ML16173A311](#) (link to public ADAMS already functions)
- Backfit appeal review panel memo to EDO: [ML16236A202](#)
- Backfit appeal review panel's detailed report: [ML16236A208](#)
- RES risk analysis report: [ML16214A199](#)

From: Clark, Theresa
Sent: Monday, September 26, 2016 9:43 AM
To: Boyer, Rachel
Cc: Wertz, Trent; Walker, Sandra
Subject: Fwd: Appeal of Backfit Imposed in Braidwood and Byron Stations (To: William Dean, From: Victor McCree)

Hi Rachel!

This memo tasks NRR to provide a plan in 120 days. Can we please ticket it to NRR so it doesn't get lost?
Thanks!

Theresa

From: "Banks, Eleasah" <Eleasah.Banks@nrc.gov>
Subject: Appeal of Backfit Imposed in Braidwood and Byron Stations (To: William Dean, From: Victor McCree)
Date: 16 September 2016 08:17
To: "RidsNrrMailCenter Resource" <RidsNrrMailCenter.Resource@nrc.gov>, "RidsOgcMailCenter Resource" <RidsOgcMailCenter.Resource@nrc.gov>, "RidsNroMailCenter Resource" <RidsNroMailCenter.Resource@nrc.gov>, "RidsResPmdaMail Resource" <RidsResPmdaMail.Resource@nrc.gov>, "RidsResOd Resource" <RidsResOd.Resource@nrc.gov>, "RidsNmssOd Resource" <RidsNmssOd.Resource@nrc.gov>, "RidsRgn1 MailCenter Resource" <RidsRgn1 MailCenter.resource@nrc.gov>, "RidsRgn2 MailCenter Resource" <RidsRgn2 MailCenter.Resource@nrc.gov>, "RidsRgn3 MailCenter Resource" <RidsRgn3 MailCenter.Resource@nrc.gov>, "RidsRgn4 MailCenter Resource" <RidsRgn4 MailCenter.Resource@nrc.gov>, "RidsNrrDorlLpl3-2 Resource" <RidsNrrDorlLpl3-2@nrc.gov>, "RidsNrrPMByron Resource" <RidsNrrPMByronResource.Resource@nrc.gov>, "RidsNrrPMBraidwood Resource" <RidsNrrPMBraidwoodResource.Resource@nrc.gov>, "RidsNrrDss Resource" <RidsNrrDss.Resource@nrc.gov>, "RidsNrrDe Resource" <RidsNrrDe.Resource@nrc.gov>, "RidsNrrDpr Resource" <RidsNrrDpr.Resource@nrc.gov>, "RidsNrrDorl Resource" <RidsNrrDorl.Resource@nrc.gov>, "Garmoe, Alex" <Alex.Garmoe@nrc.gov>, "Keene, Todd" <Todd.Keene@nrc.gov>, "Gody, Tony" <Tony.Gody@nrc.gov>, "Gendelman, Adam" <Adam.Gendelman@nrc.gov>, "Mizuno, Beth" <Beth.Mizuno@nrc.gov>, "Correia, Richard" <Richard.Correia@nrc.gov>, "West, Khadijah" <Khadijah.West@nrc.gov>, "Bailey, Marissa" <Marissa.Bailey@nrc.gov>, "Scarbrough, Thomas" <Thomas.Scarbrough@nrc.gov>, "Spencer, Michael" <Michael.Spencer@nrc.gov>, "Clark, Theresa" <Theresa.Clark@nrc.gov>
Date: September 15, 2016

Memorandum To: William M. Dean

From: Victor M. McCree

Subject: Appeal of Backfit Imposed in Braidwood and Byron Stations (To: William Dean, From: Victor McCree)

[View ADAMS P8 Properties ML16246A247](#)

[Open ADAMS P8 Document \(Appeal of Backfit Imposed in Braidwood and Byron Stations \(To: William Dean, From: Victor McCree\)\)](#)

From: Clark, Theresa
Sent: Tuesday, November 01, 2016 3:29 PM
To: McCree, Victor; Johnson, Michael; Tracy, Glenn
Cc: Holahan, Gary
Subject: FYI: QSAM "safety spotlight" on backfit appeal
Attachments: Safety Spotlight 110316 - Backfit Appeal (TVC).docx

Hi there! As you know, I'm on deck for a short presentation on the Byron/Braidwood backfit appeal at Thursday's Quarterly Strategic Alignment Meeting. Attached for your awareness is the 1-pager that I'm planning to use. It has been updated to incorporate feedback from the appeal review panel members, and I plan to give it to June tomorrow as she requested, unless you have any concerns. Thanks and have a great afternoon!

--

Theresa Valentine Clark
Executive Technical Assistant (Reactors)
U.S. Nuclear Regulatory Commission
Theresa.Clark@nrc.gov | 301-415-4048 | O-4H10

“Safety Spotlight” on Backfit Appeal | Quarterly Strategic Alignment Meeting | November 3, 2016
Theresa Clark

In September 2016, the EDO overturned on appeal from Exelon a compliance backfit associated with certain pressurizer valves at Byron and Braidwood (B/B).

Key Messages Based on the Appeal Panel’s Review:

- Consistent with the NRC mission and values, it is the staff’s right and responsibility to raise safety concerns.
- It is the agency’s responsibility to employ its processes to evaluate and document the resolution of such concerns.
- Evaluation of issues should consider plant licensing basis, industry-wide precedent, and safety significance.
- Compliance backfits are justified for failure to meet “known and established” NRC standards at time of approval because of omission or mistake of fact, not for new or modified interpretations of what constitutes compliance.

What was the backfit about?

- Staff’s concern that pressurizer valve failure following water discharge could cause escalation of events to more serious conditions, counter to plant licensing basis (e.g., ANS-51.1/N18.2-1973), predicated on several positions:
 - ASME Code qualification for water relief had not been conducted.
 - Water relief through an unqualified valve will cause it “to stick fully open.”
 - The single-failure criterion in the regulations had also not been applied to the valves.
- 2015 positions differed from those taken for B/B in 2001 and 2004 license amendments.
- The staff determined the 2001/2004 positions were in error and that backfitting was justified under the compliance exception (10 CFR 50.109(a)(4)(i)). The staff directed the licensee to take action to resolve the non-compliance.

What is (some of) the history?

- **1968-1972:** GDCs define AOOs (normal operation to once in plant life events) and Postulated Accidents
- **1970+:** ANS (and Westinghouse) formulate ANS Conditions I (normal), II (frequent), III (infrequent), IV (accident) and non-escalation position for transient analysis
- **1979+:** TMI Action Plan item II.D.1 requires “qualification” by testing of pressurizer valves; EPRI testing showed that valves did not stick open on water discharge; NRC issued safety evaluations for each plant
- **1993:** Westinghouse (NSAL-93-013) identifies analysis problems (no Part 21 or generic NRC action)
- **1996+:** Licensees update FSAR under 10 CFR 50.59 or request license amendments with varying approaches including reanalysis, PORV upgrades, safety valve crediting, etc.
- **2001 and 2004:** Staff issues B/B amendments, including credit for safety valve water discharge
- **2005:** RIS-05-029 observes that PWR analyses include errors (e.g., non-safety PORVs, un-qualified valves)
- **2013:** Staff determined that a proposed RAI on a B/B measurement uncertainty uprate was out of scope (not issued)
- **2015:** Staff issued backfit to B/B

What happened next?

- Staff upheld the backfit on first appeal to NRR.
- EDO agreed with Backfit Appeal Review Panel and overturned the backfit on second appeal.
 - Positions taken by the NRC staff in the 2015 backfit decision represent new and different staff views on how to address pressurizer safety valve performance following water discharge.
 - 2001 and 2004 staff reviews were not in error; though they differ from the current staff approach, they were well-informed and technically founded decisions.
 - The 2015 staff position is a well-intentioned and conservative approach that could provide additional safety margin, but not the basis for a compliance backfit.
 - Very small risk reduction would be expected from the backfit (separate from defense-in-depth considerations).
- NRR is preparing a plan to reassess issues identified in RIS 2005-29 and its draft Revision 1 (due January 2017).

References:

- EDO letter to Exelon on appeal: [ML16243A067](#)
- EDO memo to NRR on appeal: [ML16246A247](#)
- EDO Backfit Appeal Review Panel report: [ML16236A202](#) and [ML16236A208](#) (additional references inside)

From: Clark, Theresa
Sent: Wednesday, November 02, 2016 9:14 AM
To: Cai, June
Subject: RE: Materials for Thurs Quarterly Strategic Alignment meeting

OK. Here's a pre-summary in case you don't hear back from me; I'll send an update if needed. Things are going to be pretty busy for the next few weeks. Thanks.

In the "Safety Spotlight," Theresa Clark provided an overview of the recent EDO decision on the appeal by Exelon of a compliance backfit imposed on Byron and Braidwood in October 2015. The backfit related to the ability of certain pressurizer valves to reseal properly after discharging water in certain scenarios. Theresa shared insights from the EDO decision and Backfit Appeal Review Panel's activities, including the staff's right and responsibility to raise concerns, the importance of evaluating and documenting the resolution of these concerns, and the standard used in the EDO decision for deciding whether a compliance backfit was appropriate. Staff work is ongoing to develop a plan to assess generically the technical issues identified in the backfit, as well as to evaluate guidance and training on backfitting as part of an EDO tasking to the Committee to Review Generic Requirements. Additional references are linked in the handout Theresa provided.

From: Cai, June
Sent: Wednesday, November 02, 2016 7:43 AM
To: Clark, Theresa <Theresa.Clark@nrc.gov>
Subject: RE: Materials for Thurs Quarterly Strategic Alignment meeting

Great, thanks so much.

Yes, I actually do need one other thing...

Within a day or two after the meeting, could you please send me a short summary of your presentation for the meeting summary? The summaries are high level, so just about a short paragraph.

That would be very helpful.

Thanks again

June

From: Clark, Theresa
Sent: Wednesday, November 02, 2016 7:21 AM
To: Cai, June <June.Cai@nrc.gov>
Subject: RE: Materials for Thurs Quarterly Strategic Alignment meeting

June, attached is my handout for tomorrow's meeting. I already made the copies. Please let me know if you need anything else. Thanks for coordinating!

--

Theresa Valentine Clark
Executive Technical Assistant (Reactors)

U.S. Nuclear Regulatory Commission
Theresa.Clark@nrc.gov | 301-415-4048 | O-4H10

From: Cai, June
Sent: Monday, October 31, 2016 7:09 AM
To: Clark, Theresa <Theresa.Clark@nrc.gov>; Schofer, Maria <Maria.Schofer@nrc.gov>; Allwein, Russell <Russell.Allwein@nrc.gov>
Subject: Materials for Thurs Quarterly Strategic Alignment meeting

For the presentation materials:

- 1) Please send me the electronic version by COB Weds, Nov 2. I will upload on the laptop to show in the room and the scheduler for remote participants.
- 2) Please bring 50 hard copies to the meeting. Try to come about 10 minutes early if you can so we can distribute the materials before the meeting starts.

Thanks so much

June

June Cai
Executive Technical Assistant
Office of the Executive Director for Operations
U.S. Nuclear Regulatory Commission
301-415-1771
june.cai@nrc.gov

From: Holahan, Gary
Sent: Wednesday, August 10, 2016 2:43 PM
To: Spencer, Michael; Scarbrough, Thomas; West, Steven; Clark, Theresa
Subject: RE: on IST issue

Thanks, Michael.

Hmmm... thinking. My initial thought is that there may be some safe middle ground, in which we don't define programs and requirements but we make sure that our decisions in this case are not misinterpreted Still thinking.

I'm testing some text to add, possibly, to section 5. We should discuss tomorrow.

Gary

From: Spencer, Michael
Sent: Wednesday, August 10, 2016 2:22 PM
To: Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; Holahan, Gary <Gary.Holahan@nrc.gov>; West, Steven <Steven.West@nrc.gov>; Clark, Theresa <Theresa.Clark@nrc.gov>
Subject: RE: on IST issue

All,

My two cents: After mulling this over a bit, I think we should refrain from interpreting specific provisions of the ASME Code as part of the backfit appeal. So far, we have focused on the arguments made by the staff and licensee on application of the compliance exception. The original backfit cited ASME requirements generally, but the basis for the compliance exception was the non-escalation criterion. And although we have performed additional research, this has been related to the arguments presented by both sides during two rounds of back-and-forth. Further, having come down on the side of the licensee, we have given the staff an opportunity to respond to our draft preliminary findings to ensure the correctness of our proposed recommendation.

Having looked at the ASME provisions cited by Tom and DE, I can see where they might reasonably be interpreted in different ways. The reference to specific ASME provisions, however, was first raised by DE in an interview conducted for the second-level appeal, and now we are discussing IST provisions among the Panel members. The licensee has not had a chance to respond to this, and interpretations of the ASME provisions have the potential to affect numerous licensees. There have been a few occasions in my career where a Board/Commission has made consequential decisions on issues not addressed by the parties. Even though smart people made those decisions, I thought that the decisions would have been better or even different had they been made with input from the parties. Further, our experience has taught me that when interpreting long-standing requirements, it is often necessary to perform substantial research into historical NRC practice.

Given all this, I think discretion is the better part of valor. While we might identify a regulatory issue outside the scope of the backfit that could be explored further, I don't think we should favor a particular interpretation or outcome.

Michael

From: Scarbrough, Thomas
Sent: Wednesday, August 10, 2016 10:46 AM
To: Holahan, Gary <Gary.Holahan@nrc.gov>; West, Steven <Steven.West@nrc.gov>; Clark, Theresa

From: Scarbrough, Thomas

Sent: Wednesday, August 10, 2016 7:54 AM

To: Holahan, Gary <Gary.Holahan@nrc.gov>; West, Steven <Steven.West@nrc.gov>; Clark, Theresa <Theresa.Clark@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>

Subject: RE: on IST issue

Panel,

I reviewed the Byron and Braidwood IST Programs, and the applicable ASME OM Code editions and addenda for each plant, with respect to the PSVs and PORVs. I included these documents (and a summary) in the new S:/References/IST Program folder.

To condense the information to a manageable level, I prepared the attached summary of the IST provisions for PSVs and PORVs for Byron and Braidwood, and extracted the PSV and PORV requirements from the ASME OM Code 2004 Edition through 2006 Addenda that is referenced in the Byron IST Program. The Braidwood IST Program references the ASME OM Code 2001 Edition through the 2003 Addenda, which is essentially the same as the ASME OM Code 2004 Edition through 2006 Addenda for the PSV and PORV IST requirements. While the PSV and PORV provisions in the Braidwood/Byron IST Programs are similar, the Byron IST Program includes additional testing provisions for the PORV block valves beyond the Braidwood IST Program.

In the summary, I highlighted some relevant provisions from the OM Code related to the responsibility of the Owner to assess the operational readiness of the PSVs and PORVs. For example, in Section I-8130, "Liquid Service," in Appendix I, valves are required to be tested with the "normal system operating fluid and temperature for which they are designed." In Section I-1200, "Definitions," in Appendix I, normal system operating conditions (fluid, pressure, temperature) are defined as system fluid, pressure, and temperature during the phase of plant operation for which that system is intended to function.

The term "service conditions" is used for several valve types, but not for PSVs and PORVs, in these OM Code editions and addenda.

I believe that we could clarify the treatment of the PSVs, PORVs, and PORV block valves in the Braidwood/Byron IST Programs in light of the UFSAR revision with a call to Exelon. We also might obtain information on the other items that I included at the end of Appendix C. Otherwise, we could identify these items for future staff consideration in the report.

Thanks.

Tom

From: Holahan, Gary

Sent: Tuesday, August 09, 2016 2:29 PM

To: West, Steven <Steven.West@nrc.gov>; Clark, Theresa <Theresa.Clark@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>

Subject: on IST issue

All,

And...

If we need information from Exelon on the treatment of or discussion of or lack of water discharge in their IST program, maybe we should ask them (call them).

Let's also discuss Thursday,

From: Holahan, Gary
Sent: Tuesday, August 02, 2016 1:50 PM
To: West, Steven; Clark, Theresa; Scarbrough, Thomas; Spencer, Michael
Subject: FW: Exelon Backfit Appeal Panel Preliminary Findings FOR COMMENT - ~~OUO- Pre-decisional - Internal NRC Use Only~~
Attachments: DOC_20160802094203.pdf

fyi

From: Wert, Leonard
Sent: Tuesday, August 02, 2016 10:35 AM
To: Hackett, Edwin
Cc: Holahan, Gary ; Haney, Catherine ; Dudes, Laura
Subject: RE: Exelon Backfit Appeal Panel Preliminary Findings FOR COMMENT - OUO- Pre-decisional - Internal NRC Use Only -

Ed,
Thanks, I think the panel is right on target and this "break through" vs our typical recent approach on the compliance exception is long overdue. Attached above is a pdf of questions I had just based on a rather brief review of the proposed RIS Rev before we suspended the CRGR review pending the appeal review results. The draft appeal panel results address my two primary questions. I also like the way the panel characterizes the 2015 staff positions - "Although they represent well-intentioned staff positions that could provide additional safety margin, they do not provide a basis for a compliance backfit," Nicely stated.

Len

From: Hackett, Edwin
Sent: Tuesday, August 02, 2016 8:14 AM
To: Ordaz, Vonna <Vonna.Ordaz@nrc.gov>; Williamson, Edward <Edward.Williamson@nrc.gov>; Wert, Leonard <Leonard.Wert@nrc.gov>; Moore, Scott <Scott.Moore@nrc.gov>
Cc: West, Steven <Steven.West@nrc.gov>; Mcdermott, Brian <Brian.McDermott@nrc.gov>; Cupidon, Les <Les.Cupidon@nrc.gov>; DiFrancesco, Nicholas <Nicholas.DiFrancesco@nrc.gov>
Subject: FW: Exelon Backfit Appeal Panel Preliminary Findings FOR COMMENT - OUO- Pre-decisional - Internal NRC Use Only -

FYI – Preliminary findings from the backfit appeal panel.

Ed

From: Holahan, Gary
Sent: Monday, August 01, 2016 5:57 PM
To: Dean, Bill <Bill.Dean@nrc.gov>; Lubinski, John <John.Lubinski@nrc.gov>; McGinty, Tim <Tim.McGinty@nrc.gov>; Akstulewicz, Frank <Frank.Akstulewicz@nrc.gov>; Doane, Margaret <Margaret.Doane@nrc.gov>; Mcdermott, Brian <Brian.McDermott@nrc.gov>; Bailey, Marissa <Marissa.Bailey@nrc.gov>
Cc: Hackett, Edwin <Edwin.Hackett@nrc.gov>; West, Steven <Steven.West@nrc.gov>; Clark, Theresa <Theresa.Clark@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>; Evans, Michele <Michele.Evans@nrc.gov>; Williamson, Edward <Edward.Williamson@nrc.gov>; Mizuno, Geary <Geary.Mizuno@nrc.gov>; Shuaibi, Mohammed <Mohammed.Shuaibi@nrc.gov>; Mccree, Victor <Victor.McCree@nrc.gov>; Johnson, Michael

<Michael.Johnson@nrc.gov>; Tracy, Glenn <Glenn.Tracy@nrc.gov>; Gody, Tony <Tony.Gody@nrc.gov>

Subject: Exelon Backfit Appeal Panel Preliminary Findings FOR COMMENT - ODO- Pre-decisional - Internal NRC Use Only

All,

Consistent with the plan we presented last week, attached are the preliminary findings of the Exelon Backfit Appeal Panel. The Summary from the Preliminary Findings is reproduced below. The preliminary findings were discussed briefly with the OEDO for their awareness.

As indicated in our completion plan, the panel would appreciate any comments on, or additions to: the documents cited; their interpretation and intent; or the understanding of the backfit rule compliance exception. Comments would be appreciated by August 9, 2016, but can be accepted as late as August 15, 2016. The panel will also be available for discussion any time before August 15, 2016.

Comments will be reflected or acknowledged in the panel's final report and recommendations to the EDO.

The Preliminary Findings document attached is an internal, pre-decisional document at this time. Both Exelon and NEI declined offers for a public meeting on this issue.

Gary ... for the panel

-Steve West

-Tom Scarborough

-Michael Spencer

-Theresa Clark

In summary:

The NRR 2015 compliance backfit finding (October 9, 2015 letter to Exelon) is predicated on the following positions (emphases added):

- "water relief through a valve that is not qualified for water relief will cause that valve to stick in its fully open position"
- "the licensee ... has not applied the single-failure assumption"
- "nor have they provided ASME water qualification documentation for the PSVs ... the ASME...original Overpressure Protection Report ... inservice test history... including both water and steam tests"

However, none of these positions were "known and established standards of the Commission" in 2001 or 2004 for determining when it was appropriate to assume a failure of PSVs to reseal. In fact, they were not "known and established standards of the Commission" in 2005 or 2006 or 2007.

Moreover, two of these positions do not appear to be "established standards of the Commission" at present, since the call for use of the single failure criterion first appears in proposed 2015 draft Revision 1 to RIS 2005-029, and the call for ASME certification first appears in the Exelon compliance backfit. The panel concludes that the standard in place in 2001 and 2004 and at present is simply that the probability of failure of a Pressurizer Safety Valve (PSV) is sufficiently small, based on well-informed staff engineering judgement, and that the use of the word "qualified" or "qualification" implied only a general demonstration of capability, such as in the EPRI testing done in response to TMI Action Plan Item II.D.1.

The panel concludes that, in 2001 and 2004, the staff was not misinformed nor did it "err" in approving the Byron and Braidwood power uprates ... nor was it in error in approving other similar cases (e.g. Beaver Valley in 2006). The 2015 staff positions taken to support the compliance backfit finding represent new and different staff views on how to address potential PSV failures following water discharge. Although they represent well-

intentioned staff positions that could provide additional safety margin, they do not provide a basis for a compliance backfit.

The panel's findings therefore support the Exelon backfit appeal.

In addition to the specific finding relating to the backfit appeal, the panel believes it is important to acknowledge that water discharge through a PSV not specifically designed for such service is undesirable and should be minimized or avoided as a matter of conservative engineering and prudent operations. The panel concludes this while fully aware that the event sequence being considered appears to be of little safety significance (the panel has requested RES analysis to confirm this belief). Operator training and emergency procedures to terminate the event before pressurizer filling, as well as the use of power-operated relief valves rather than relying solely on PSVs, are clearly preferred, whether they form the facilities' UFSAR licensing basis or not.

The panel has not (at this time) formed any views on whether a backfit on this topic could be justified as "adequate protection" or "cost justified"; or whether a "forward-fit" staff position is appropriate or not.

Non-Responsive Record

George <George.Wilson@nrc.gov>
Cc: Miller, Ed <Ed.Miller@nrc.gov>
Subject: RE: EDO Update

From: EDO Update [mailto:nrc.announcement@nrc.gov]
Sent: Friday, September 16, 2016 12:16 PM
To: Kreuter, Jane <Jane.Kreuter@nrc.gov>
Subject: EDO Update



EDO Update

Friday, September 16, 2016



Greetings!

I want to give you a brief update on a recent decision I made regarding the implementation of our backfit process. This process, which is described in 10 CFR 50.109 (and other analogous processes in our regulations), is meant to ensure that we have an appropriate basis if we need to change the careful, thorough, and technically solid findings we make in licensing nuclear power plants. For example, last week I shared with you some insights about our responsibility to assure adequate protection of public health and safety. This assurance can include the need to impose backfits in accordance with 10 CFR 50.109—as we did, for example, following the accident at Fukushima Dai-ichi.

Yesterday, I issued a final decision that supported a licensee appeal and overturned a backfit imposed by the Office of Nuclear Reactor Regulation (NRR). This backfit was issued in 2015 for the Byron and Braidwood nuclear plants in Illinois. Following our Management Directive 8.4 on backfits, I chartered a panel of senior technical and legal staff to consider the facts in this case and recommend a response. This panel reviewed over a hundred documents related to the plants' licensing basis and the history of the technical issues in question and provided a detailed report.

The technical issue in this backfit is discussed in the panel's report. My decision was centered on the regulatory and legal issue of whether the "compliance exception" to the backfit rule's requirement to conduct a backfit analysis was properly applied. In short, the staff needed to show that the initial approvals had been based on a mistake or omission, not that the interpretation of what was acceptable changed over time.

After considering both the panel's report and discussions I had with NRR staff who contributed to the backfit, I determined that the positions taken in the backfit were new or modified interpretations of what constitutes compliance in

addressing potential pressurizer safety valve failures following water discharge, and did not provide a basis for a compliance backfit.

I recognize that we need to fully understand and disposition the technical concerns that underlie this backfit for the larger group of licensees to which they apply. Therefore, I have referred these technical issues to NRR for further assessment and have asked that a plan be provided within 120 days.

Although I decided to support the licensee's appeal in this case, I am proud to know that our people take seriously the responsibility for assuring public health and safety and are willing to pursue backfits, when appropriate. I encourage the staff to continue to raise issues of potential safety significance, adequate protection, and compliance.

A handwritten signature in black ink, appearing to read "Vic", with a long, sweeping flourish above the letters.

Victor McCree, EDO

From: Zobler, Marian
Sent: Monday, September 12, 2016 10:57 AM
To: Clark, Theresa
Cc: Doane, Margaret; Mayberry, Theresa; Jones, Bradley; Williamson, Edward; Averbach, Andrew
Subject: RE: URGENT REQUEST: OGC review of letter to Exelon
Attachments: EDO Letter Responding to Exeleon Backfit Appeal OGC.docx

Theresa,

OGC has reviewed and is providing an "NLO" on the letter, please note one proposed edit in the attached.

If you have any questions, please feel free to contact me.

Marian

Marian L. Zobler
Associate General Counsel



From: Clark, Theresa
Sent: Friday, September 09, 2016 3:09 PM
To: RidsOgcMailCenter Resource <RidsOgcMailCenter.Resource@nrc.gov>
Cc: Doane, Margaret <Margaret.Doane@nrc.gov>; Jones, Bradley <Bradley.Jones@nrc.gov>; Holahan, Gary <Gary.Holahan@nrc.gov>; Mayberry, Theresa <Theresa.Mayberry@nrc.gov>
Subject: URGENT REQUEST: OGC review of letter to Exelon
Importance: High

Hi there!

I just spoke with Margie, and she said that OGC would be able to review the below-linked letter on short turnaround. Several people in OGC have already reviewed the underlying staff panel recommendation/report that are referenced in the letter, so I am hoping that will facilitate things. If we could receive NLO (or comments) by **Monday 9/12** that would be fantastic. Please let me know if you need any further information.

[View ADAMS P8 Properties ML16243A067](#)
[Open ADAMS P8 Document \(09/XX/16 Letter to Exelon from Victor McCree\)](#)

--

J. Bradley Fewell
Senior Vice President Regulatory Affairs
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: RESPONSE TO APPEAL OF BACKFIT IMPOSED ON BRAIDWOOD AND
BYRON STATIONS REGARDING COMPLIANCE WITH 10 CFR 50.34(b),
GDC 15, GDC 21, GDC 29, AND THE LICENSING BASIS

Dear Mr. Fewell:

This letter responds to your June 2, 2016, letter (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16154A254). In that letter, you requested a second-level appeal of the subject backfit, which was issued by the U.S. Nuclear Regulatory Commission (NRC) staff in a letter dated October 9, 2015 (ADAMS Accession No. ML14225A871).

In response to your request and in accordance with the U.S. Nuclear Regulatory Commission (NRC) Management Directive 8.4, "Management of Facility-specific Backfitting and Information Collection," I appointed several senior NRC staff and managers to constitute a Backfit Appeal Review Panel to review your appeal of the staff's determination that a backfit was necessary at Braidwood Station, Units 1 and 2, and Byron Station, Units 1 and 2, as well as the staff's application of the compliance backfit exception provided in Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.109 (the "Backfit Rule").

Commented [MAS1]: Already defined.

The panel undertook a detailed review of the relevant information at issue, that is, information pertinent to the performance of pressurizer safety valves and their treatment during accident analyses which support licensing decisions. The panel also reviewed the compliance exception to the Backfit Rule and re-affirmed that the compliance exception is intended to address failures to meet known and established Commission standards because of omission or mistake of fact. New or modified interpretations of what constitutes compliance therefore do not fall within the exception. The panel documented its review and evaluation of the technical and legal issues in a report enclosed with its memorandum to me. The panel's memorandum and report are publicly available via ADAMS Accession Nos. ML16236A202 and ML16236A208, respectively.

I have reviewed the panel's report, their recommendations, and their response to questions I posed when establishing the panel. In addition, I met with the panel and Office of Nuclear Reactor Regulation management to assure that this issue has been given thorough, technically sound, and legally well-founded consideration.

J. Fewell

-2-

Based on my review and discussions, I agree with the panel's conclusion that positions taken by the NRC staff in the 2015 backfit decision represent new and different staff views on how to address pressurizer safety valve performance following water discharge. Although these staff positions are conservative approaches that could provide additional safety margin, they do not provide an appropriate basis for a compliance backfit. In the absence of an assumed failure of the pressurizer safety valve to reseal, the concerns articulated in the backfit related to event classification, event escalation, and compliance with 10 CFR 50.34(b) and General Design Criteria 15, 21, and 29 are no longer at issue.

Sincerely,

Victor M. McCree
Executive Director
for Operations

Docket Nos. STN 50-456, STN 50-457,
STN 50-454, and STN 50-455

cc: Listserv

J. Fewell

-2-

Based on my review and discussions, I agree with the panel's conclusion that positions taken by the NRC staff in the 2015 backfit decision represent new and different staff views on how to address pressurizer safety valve performance following water discharge. Although these staff positions are conservative approaches that could provide additional safety margin, they do not provide an appropriate basis for a compliance backfit. In the absence of an assumed failure of the pressurizer safety valve to reseal, the concerns articulated in the backfit related to event classification, event escalation, and compliance with 10 CFR 50.34(b) and General Design Criteria 15, 21, and 29 are no longer at issue.

Sincerely,

Victor M. McCree
Executive Director
for Operations

Docket Nos. STN 50-456, STN 50-457,
STN 50-454, and STN 50-455

cc: Listserv

DISTRIBUTION: OEDO-16-00585

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ADAMS Accession No.: ML16243A067

OFFICE	OEDO	OGC	OEDO	OEDO
NAME	GHolahan		MJohnson	VMcCree
DATE	08/31/16	09/ /16	08/31/16	09/ /16

OFFICIAL RECORD COPY

From: Scarbrough, Thomas
Sent: Wednesday, August 10, 2016 7:54 AM
To: Holahan, Gary; West, Steven; Clark, Theresa; Spencer, Michael
Subject: RE: on IST issue
Attachments: Braidwood-Byron PSV-PORV IST Provisions (Scarbrough).docx

Panel,

I reviewed the Byron and Braidwood IST Programs, and the applicable ASME OM Code editions and addenda for each plant, with respect to the PSVs and PORVs. I included these documents (and a summary) in the new S:/References/IST Program folder.

To condense the information to a manageable level, I prepared the attached summary of the IST provisions for PSVs and PORVs for Byron and Braidwood, and extracted the PSV and PORV requirements from the ASME OM Code 2004 Edition through 2006 Addenda that is referenced in the Byron IST Program. The Braidwood IST Program references the ASME OM Code 2001 Edition through the 2003 Addenda, which is essentially the same as the ASME OM Code 2004 Edition through 2006 Addenda for the PSV and PORV IST requirements. While the PSV and PORV provisions in the Braidwood/Byron IST Programs are similar, the Byron IST Program includes additional testing provisions for the PORV block valves beyond the Braidwood IST Program.

In the summary, I highlighted some relevant provisions from the OM Code related to the responsibility of the Owner to assess the operational readiness of the PSVs and PORVs. For example, in Section I-8130, "Liquid Service," in Appendix I, valves are required to be tested with the "normal system operating fluid and temperature for which they are designed." In Section I-1200, "Definitions," in Appendix I, normal system operating conditions (fluid, pressure, temperature) are defined as system fluid, pressure, and temperature during the phase of plant operation for which that system is intended to function.

The term "service conditions" is used for several valve types, but not for PSVs and PORVs, in these OM Code editions and addenda.

I believe that we could clarify the treatment of the PSVs, PORVs, and PORV block valves in the Braidwood/Byron IST Programs in light of the UFSAR revision with a call to Exelon. We also might obtain information on the other items that I included at the end of Appendix C. Otherwise, we could identify these items for future staff consideration in the report.

Thanks.
Tom

From: Holahan, Gary
Sent: Tuesday, August 09, 2016 2:29 PM
To: West, Steven <Steven.West@nrc.gov>; Clark, Theresa <Theresa.Clark@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>
Subject: on IST issue

All,

And...

T. Scarbrough
August 10, 2016

**Braidwood/Byron Inservice Testing Provisions
for Pressurizer Safety Valves (PSVs) and Power-Operated Relief Valves (PORVs)**

Byron Station, Units 1 and 2

Fourth Ten-Year IST Program submitted July 21, 2016, references ASME OM Code 2004 Edition through 2006 Addenda

Byron IST Program specifies:

PORV - fail safe test closed (cold shutdown); stroke-time exercise open and closed (cold shutdown); and position indication test (2 years).

PORV Block Valve- exercise open and closed (2 years); position indication test (JOG schedule); and OMN-1 open and closed test (JOG schedule).

PSV – Relief Valve Test (5 years); and position indication test (2 years). The IST Program references Appendix I to the OM Code for Relief Valve Test.

ASME OM Code 2004 Edition and OMA-2005 and OMB-2006

ISTA-1100 Scope

Section IST establishes the requirements for preservice and inservice testing and examination of certain components to assess their operational readiness in light-water reactor nuclear power plants. It identifies the components subject to test or examination, responsibilities, methods, intervals, parameters to be measured and evaluated, criteria for evaluating the results, corrective action, personnel qualification, and record keeping. These requirements apply to

(a) pumps and valves that are required to perform a specific function in shutting down a reactor to the safe shutdown condition, in maintaining the safe shutdown condition, or in mitigating the consequences of an accident

(b) pressure relief devices that protect systems or portions of systems that perform one or more of these three functions

(c) dynamic restraints (snubbers) used in systems that perform one or more of these three functions, or to ensure the integrity of the reactor coolant pressure boundary

ISTA-1500 Owner's Responsibilities

The responsibilities of the Owner of the nuclear power plant shall include the following:

(a) determination of the appropriate Code Class for each component of the plant, identification of the system boundaries for each class of components subject to test or examination, and the components exempt from testing or examination requirements

(b) design and arrangement of system components to include allowance for adequate access and clearances for conduct of the tests and examinations

(c) preparation of plans and schedules

(d) preparation of written test and examination instructions and procedures

- (e) qualification of personnel who perform and evaluate examinations and tests in accordance with the Owner's quality assurance program
- (f) performance of required tests and examinations
- (g) recording of required test and examination results that provide a basis for evaluation and facilitate comparison with the results of subsequent tests or examinations
- (h) evaluation of tests and examination results
- (i) maintenance of adequate test and examination records such as test and examination data and description of procedures used
- (j) retention of all test and examination records for the service lifetime of the component or system
- (k) documentation of a quality assurance program in accordance with either of the following:
 - (1) Title 10, Code of Federal Regulations, Part 50
 - (2) ASME NQA-1, Parts II and III

ISTA-2000 Definitions

inservice test: test to assess the operational readiness of a system, structure, or component after first electrical generation by nuclear heat.

operational readiness: the ability of a component to perform its specified functions.

overpressure protection: the means by which components are protected from overpressure by the use of pressure relieving devices or other design provisions as required by the BPV Code, Section III, or other applicable construction codes.

valves, active: valves that are required to change obturator position to accomplish a specific function in shutting down a reactor to the safe shutdown condition, maintaining the safe shutdown condition, or mitigating the consequences of an accident.

ISTC-1200 Exemptions

Category A and Category B safety and relief valves are excluded from the requirements of ISTC-3700, Valve Position Verification and ISTC-3500, Valve Testing Requirements.

ISTC-1400 Owner's Responsibility

In addition to the requirements of ISTA-1500, it is the Owner's responsibility to

- (a) include in the plant design all necessary instrumentation, test connections, flow instruments, or any other provisions that are required to fully comply with the requirements of this Subsection.
- (b) categorize (see ISTC-1300), and list in the plant records (see ISTC-9000) each valve to be tested in accordance with the rules of this Subsection, including Owner-specified acceptance criteria. The Owner shall specify test conditions.
- (c) ensure that the application, method, and capability of each nonintrusive technique is qualified.

ISTC-2000 Supplemental Definitions

power-operated relief valve (PORV): a power-operated valve that can perform a pressure-relieving function and is remotely actuated by either a signal from a pressure sensing

device or a control switch. A power-operated relief valve is not capacity certified under ASME Section III overpressure protection requirements.

ISTC-5000 SPECIFIC TESTING REQUIREMENTS

ISTC-5100 Power-Operated Valves (POVs)

All valves shall be tested in accordance with the applicable requirements of ISTC-3000, and as identified below, except for power-operated control valves that only have a fail-safe safety function. For power-operated control valves that only have a fail-safe safety function, the requirements for valve stroke-time measurement testing, the associated stroke time test acceptance criteria, and any corrective actions that would result from stroke-time testing need not be met. For these valves, all other applicable requirements of ISTC-3000, and as identified below, shall be met.

ISTC-5110 Power-Operated Relief Valves (PORVs).

Power-operated relief valves shall meet the requirements of ISTC-5100 for the specific Category B valve type and ISTC-5240 for Category C valves.

ISTC-5111 Valve Testing Requirements

(a) Testing shall be performed in the following sequence or concurrently. If testing in the following sequence is impractical, it may be performed out of sequence, and a justification shall be documented in the record of tests for each test or in the test plan:

- (1) leakage testing
- (2) stroke testing
- (3) position indication testing

(b) The pressure-sensing device shall be calibrated in accordance with the Owner's quality assurance program.

ISTC-5112 Leak Testing. Seat tightness of the PORV shall be verified by leak testing in accordance with the requirements of Mandatory Appendix I.

ISTC-5113 Valve Stroke Testing

(a) Active valves shall have their stroke times measured when exercised in accordance with ISTC-3500.

(b) The limiting value(s) of full-stroke time of each valve shall be specified by the Owner.

(c) The stroke time of all valves shall be measured to at least the nearest second.

(d) Any abnormality or erratic action shall be recorded (see ISTC-9120) and an evaluation shall be made regarding need for corrective action.

(e) Stroke testing shall be performed during normal operating conditions for temperature and pressure if practicable.

ISTC-5114 Stroke Test Acceptance Criteria.

Test results shall be compared to the reference values established in accordance with ISTC-3300, ISTC-3310, or ISTC-3320.

- (a) Valves with reference stroke times of greater than 10 sec shall exhibit no more than 125% change in stroke time when compared to the reference value.
- (b) Valves with reference stroke times of less than or equal to 10 sec shall exhibit no more than 150% change in stroke time when compared to the reference value.
- (c) Valves that stroke in less than 2 sec may be exempted from ISTC-5114(b). In such cases the maximum limiting stroke time shall be 2 sec.

ISTC-5115 Corrective Action

- (a) If a valve fails the applicable leak test acceptance criteria, to exhibit the required change of obturator position or exceeds the limiting values of full-stroke time [see ISTC-5113(b)], the valve shall be immediately declared inoperable.
- (b) Valves with measured stroke times that do not meet the acceptance criteria of ISTC-5114 shall be immediately retested or declared inoperable. If the valve is retested and the second set of data also does not meet the acceptance criteria, the data shall be analyzed within 96 hr to verify that the new stroke time represents acceptable valve operation, or the valve shall be declared inoperable. If the second set of data meets the acceptance criteria, the cause of the initial deviation shall be analyzed and the results documented in the record of tests (see ISTC-9120).
- (c) Valves declared inoperable may be repaired, replaced, or the data may be analyzed to determine the cause of the deviation and the valve shown to be operating acceptably.
- (d) Valve operability based upon analysis shall have the results of the analysis recorded in the record of tests (see ISTC-9120).
- (e) Before returning a repaired or replacement valve to service, a test demonstrating satisfactory operation shall be performed.

ISTC-5240 Safety and Relief Valves. Safety and relief valves shall meet the inservice test requirements of Mandatory Appendix I.

MANDATORY APPENDIX I

Inservice Testing of Pressure Relief Devices in Light-Water Reactor Nuclear Power Plants

I-1000 GENERAL REQUIREMENTS

I-1100 Applicability

The requirements of this Appendix apply to certain pressure relief devices (included in Section III of the ASME Boiler and Pressure Vessel Code, hereafter known as the BPV Code).

I-1120 Limitations

- (a) The requirements of this Appendix recognize differences between the installed operating conditions and the conditions under which a pressure relief device may be tested. For a specific pressure relief device design, if the parameter to be tested is dependent on conditions not specifically addressed by these requirements, the installed operating condition and the test condition shall be comparable, or proven correlations shall be applied.
- (b) The requirements of this Appendix apply only to pressure relief devices required for overpressure protection.
- (c) The requirements of this Appendix are not intended to demonstrate conformance to design specification requirements.

(d) The requirements of this Appendix are not intended to verify or demonstrate all aspects of pressure relief device operation.

I-1200 Definitions

normal system operating conditions (fluid, pressure, temperature): system fluid, pressure, and temperature during the phase of plant operation for which that system is intended to function.

overpressure protection: the means by which components are protected from overpressure by the use of pressure relieving devices or other design provisions as required by the BPV Code, Section III, or other applicable construction codes.

power-actuated relief valve: a relief valve in which the major relieving device is combined with and controlled by a device requiring an external source of energy.

I-1300 Guiding Principles

I-1310 General

(a) *Operation and Maintenance Instructions.* Complete operation and maintenance instructions shall be available for each device. This Appendix shall be supplemented by these operating and maintenance instructions.

(b) *Valve Testing Frequency.* A frequency for valve testing is required by this Appendix to provide assurance of the valve operational readiness.

(c) *Valve Disassembly.* This Appendix does not require valves or accessories to be disassembled or removed from their installed position.

(d) *Visual Examination.* Visual examinations shall be performed in accordance with the Owner's examination procedures and shall be documented.

(e) *Acceptance Criteria.* The Owner, based upon system and valve design basics or technical specification, shall establish and document acceptance criteria for tests required by this Appendix.

I-1320 Test Frequencies, Class 1 Pressure Relief Valves

(a) *5-Year Test Interval.* Class 1 pressure relief valves shall be tested at least once every 5 years, starting with initial electric power generation. No maximum limit is specified for the number of valves to be tested within each interval; however, a minimum of 20% of the valves from each valve group shall be tested within any 24-month interval. This 20% shall consist of valves that have not been tested during the current 5-year interval, if they exist. The test interval for any individual valve shall not exceed 5 years.

(b) *Replacement With Pretested Valves.* The Owner may satisfy testing requirements by installing pretested valves to replace valves that have been in service, provided that:

(1) for replacement of a partial complement of valves, the valves removed from service shall be tested prior to resumption of electric power generation; or

(2) for replacement of a full complement of valves, the valves removed from service shall be tested within 12 months of removal from the system.

(c) *Requirements for Testing Additional Valves.* Additional valves shall be tested in accordance with the following requirements:

(1) For each valve tested for which the as-found set-pressure (first test actuation) exceeds the greater of either the \pm tolerance limit of the Owner-established set-pressure acceptance criteria

of I-1310(e) or $\pm 3\%$ of valve nameplate set-pressure, two additional valves shall be tested from the same valve group.

(2) If the as-found set-pressure of any of the additional valves tested in accordance with I-1320(c)(1) exceeds the criteria noted therein, then all remaining valves of that same valve group shall be tested.

(3) The Owner shall evaluate the cause and effect of valves that fail to comply with the set-pressure acceptance criteria established in I-1320(c)(1) or the Owner established acceptance criteria for other required tests, such as the acceptance of auxiliary actuating devices, compliance with Owner's seat tightness criteria, etc. Based upon this evaluation, the Owner shall determine the need for testing in addition to the minimum tests specified in I-1320(c) to address any generic concerns that could apply to valves in the same or other valve groups.

I-6000 PRESSURIZED WATER REACTORS (PWR) — INTRODUCTION

I-7000, I-8000, and I-9000 define the requirements for performance testing of pressure relief devices for pressurized water reactor nuclear power plants. The valves subject to examinations and tests are categorized. Responsibilities, examination methods, examination techniques, test methods, examination and test frequencies, records, and maintenance requirements are defined. Replacement valves of the same valve group shall be tested to the requirements of I-7100 and I-7400. Replacement valves not of the same valve group previously used shall be tested to the requirements of I-7100 and I-7200.

I-7000 PWR PRESSURE RELIEF DEVICE TESTING

I-7100 Testing Before Initial Installation

I-7110 Class 1 Safety Valves. Tests shall be performed in the following sequence, or manufacturer's production tests may be accepted for I-7110(b), (c), and (d), provided the valve passes visual examination in accordance with the Owner's examination procedures:

- (a) visual examination
- (b) set-pressure determination
- (c) testing of accessories [see I-7310(d), (e), and (f)]
- (d) determination of compliance with the Owner's seat tightness criteria

I-7120 Class 1 Power Actuated Relief Valves. Tests shall be performed in the following sequence, or manufacturer's production tests may be accepted for I-7120(b), (c), and (d), provided the valve passes visual examination in accordance with the Owner's examination procedures:

- (a) visual examination
- (b) determination of functional capability
- (c) testing of accessories [see I-7320(d) and (e)]
- (d) determination of compliance with the Owner's seat tightness criteria

I-7200 Testing Before Initial Electric Power Generation

I-7210 Class 1 Safety Valves. Within 6 months before initial reactor criticality, each valve shall have its set-pressure verified. Set-pressure verification shall be determined by pressurizing the system up to the valve set-pressure and opening the valve, or the valve may be tested at or below normal system operating pressures with an assist device.

I-7220 Class 1 Power-Actuated Relief Valves. After installation, each valve shall be remotely actuated at normal system operating pressure to verify open and close capability.

I-7300 Periodic Testing

Periodic testing of all pressure relief devices is required. No maintenance, adjustment, disassembly, or other activity that could affect "as-found" set-pressure or seat tightness data is permitted before testing. Control ring adjustments are permitted per I-8110(g) and I-8120(g). Test frequencies are specified in I-1320, I-1330, I-1340, I-1350, I-1360, I-1370, I-1380, and I-1390. When on-line testing is performed to satisfy periodic testing requirements, visual examination may be performed out of sequence.

I-7310 Class 1 Safety Valves. Tests before maintenance or set-pressure adjustment, or both, shall be performed for I-7310(a), (b), and (c) in sequence. The remaining shall be performed after maintenance or set-pressure adjustment:

- (a) visual examination
- (b) seat tightness determination, if practicable
- (c) set-pressure determination
- (d) determination of operation and electrical characteristics of bellows alarm switch
- (e) verification of the integrity of the balancing device on balanced valves
- (f) determination of operation and electrical characteristics of position indicators
- (g) determination of compliance with Owner's seat tightness criteria

I-7320 Class 1 Power Actuated Relief Valves. Tests before maintenance shall be performed for I-7320(a), (b), and (c) in sequence. The remaining shall be performed after maintenance or set-pressure adjustment:

- (a) visual examination
- (b) seat tightness determination, if practicable
- (c) set-pressure determination
- (d) verification of the integrity of the balancing device on balanced valves
- (e) determination of operation and electrical characteristics of position indicators
- (f) determination of compliance with the Owner's seat tightness criteria

I-7400 Disposition After Testing or Maintenance

I-7410 Class 1 Safety Valves

- (a) Valves and accessories that comply with their respective acceptance criteria for the tests specified may be returned to service without further testing.
- (b) Valves and accessories that do not comply with their respective acceptance criteria shall be adjusted, refurbished, or replaced in accordance with written procedures. Valves shall be adjusted to meet the acceptance criteria of I-1310(e).
- (c) Refurbished equipment shall be subjected to test(s) specified in I-7310, as applicable. If disassembly includes valve disk (main) components, then valve disk stroke capability shall be verified by mechanical examination or tests.
- (d) Valves and accessories that do not comply with their respective criteria, whether the problem is associated with the component, the system, or associated equipment, shall be evaluated to determine the ability of the valve to perform its intended function until the next testing interval or maintenance opportunity. Corrective actions shall be taken, as appropriate, to ensure valve operability.

I-7420 Class 1 Power-Actuated Relief Valves

- (a) Valves and accessories that comply with their respective acceptance criteria for the tests specified may be returned to service without further testing.
- (b) Valves that do not comply with their respective acceptance criteria shall be adjusted, refurbished, or replaced in accordance with written procedure. Valves shall be adjusted to meet the acceptance criteria of I-1310(e).
- (c) Refurbished equipment shall be subjected to test(s) specified in I-7320, as applicable. If disassembly includes valve disk (main) components, then valve disk stroke capability shall be verified by mechanical examination or tests.
- (d) Valves and accessories that do not comply with their respective acceptance criteria, whether the problem is associated with the component, the system, or associated equipment, shall be evaluated to determine the ability of the valve to perform its intended function until the next testing interval or maintenance opportunity. Corrective actions shall be taken, as appropriate, to ensure valve operability.

I-8000 PWR TEST METHODS

I-8100 Set-Pressure Testing

I-8110 Steam Service

- (a) *Test Media.* Valves designed to operate on steam, including safety valves designed for saturated steam service that are installed on a water-filled loop seal, shall be set-pressure tested with saturated steam. Alternative compressible fluids may be used as the test media if correlation data between the alternative fluid and steam has been established. The requirements of I-8300 shall apply for testing with alternative test media.
- (b) *Accumulator Volume.* The volume of the accumulator drum and the pressure source flow rate shall be sufficient to determine the valve set-pressure. Valves may have their lifts restricted during set-pressure testing.
- (c) *Assist Devices.* Assist devices may be used for set-pressure testing, provided the accuracy complies with the requirements of I-1400.
- (d) *Thermal Equilibrium.* Ambient temperature and test media temperature shall be established and valve thermal equilibrium confirmed before starting set-pressure testing. The valve shall be considered at thermal equilibrium only when the valve body temperature has stabilized and does not change more than 10°F (5.5°C) in 30 min as measured directly or determined by correlation from other valve temperature measurements. Valves insulated in service shall be insulated in a like manner during testing. Verification of thermal equilibrium is not required for valves that are tested at ambient temperature using a test medium at ambient temperature.
- (e) *Ambient Temperature.* The ambient temperature of the operating environment shall be simulated during the set-pressure test. If the effect of ambient temperature on set-pressure can be established for a particular valve type, then the valve may be set-pressure tested using an ambient temperature different from the operating ambient temperature. Correlations between the operating and testing ambient temperatures shall comply with the requirements of I-8320 and I-8330.
- (f) *Superimposed Back Pressure*
 - (1) Consideration of variable or constant back pressure in set-pressure setting is not required for balanced pressure relief valves, if the back pressure does not exceed 50% of the valve set-pressure. However, the set-pressure shall consider the effects of bonnet pressure when the bonnet vent is piped to a pressure or vacuum discharge other than atmospheric.

(2) Constant superimposed back pressure in setpressure setting shall be considered for nonbalanced pressure relief valves when the back pressure exceeds 1% of the set-pressure. For conventional nonbalanced valves with constant superimposed back pressure, the required set-pressure shall be calculated by subtracting the superimposed back pressure from the stamped setpressure.

(g) *Control Rings.* Adjustment of control rings to ensure valve action is permitted. For set-pressure acceptance testing, control ring positions shall not be altered between successive openings. Adjusted control rings shall be returned to their proper operating position prior to return to service, as documented by the Owner.

(h) *Time Between Valve Openings.* A minimum of 5 min shall elapse between successive openings.

(i) *Number of Tests.* The number of openings at setpressure shall be sufficient to demonstrate satisfactory repeatability with a minimum of two consecutive openings within acceptance criteria. Any subsequent opening at the same set point adjustment shall be within acceptance criteria.

I-8130 Liquid Service

(a) *Test Media.* Valves shall be tested with the normal system operating fluid and temperature for which they are designed. Alternative liquids and different temperatures may be used, provided the requirements of I-8300 are met.

(b) *Accumulator Volume.* There is no requirement for minimum accumulator volume; however, the pressure tap for determining set-pressure shall be located at the valve inlet.

(c) *Assist Devices.* Assist devices to determine set-pressure are not recommended for liquid service pressure relief valves.

(d) *Thermal Equilibrium.* Ambient temperature and test media temperature shall be established and valve thermal equilibrium confirmed before starting set-pressure testing. The valve shall be considered at thermal equilibrium only when the valve body temperature has stabilized and does not change more than 10°F (5.5°C) in 30 min as measured directly or determined by correlation from other valve temperature measurements. Valves insulated in service shall be insulated in a like manner during testing. Verification of thermal equilibrium is not required for valves that are tested at ambient temperature using a test medium at ambient temperature.

(e) *Ambient Temperature.* The ambient temperature of the operating environment shall be simulated during the set-pressure test. If the effect of ambient temperature on set-pressure can be established for a particular valve type, then the valve may be set-pressure tested using an ambient temperature different from the operating ambient temperature. Correlations between the operating and testing ambient temperatures shall comply with the requirements of I-8320 and I-8330.

(f) Superimposed Back Pressure

(1) Consideration of variable or constant back pressure in set-pressure setting is not required for balanced pressure relief valves, if the back pressure does not exceed 50% of the valve set-pressure. However, the setpressure shall consider the effects of bonnet pressure when the bonnet vent is piped to a pressure or vacuum discharge other than atmospheric.

(2) Constant superimposed back pressure in setpressure setting shall be considered for nonbalanced pressure relief valves when the back pressure exceeds 1% of the set-pressure. For conventional nonbalanced valves with constant superimposed back pressure, the required set-pressure shall be calculated by subtracting the superimposed back pressure from the stamped setpressure.

(g) *Time Between Valve Openings.* A minimum of 5 min shall elapse between successive openings.

(h) Number of Tests. The number of openings at set pressure shall be sufficient to demonstrate satisfactory repeatability with a minimum of two consecutive openings within acceptance criteria. Unless otherwise stated in the test procedure, valve opening pressure shall be that inlet pressure when a continuous, unbroken stream of liquid is emanating from the valve outlet.

I-8200 Seat Tightness Testing

Seat tightness testing shall be performed in accordance with the Owner's valve test procedure. Consideration shall be given to test media, temperature stability, and ambient temperature, as required in I-8100. Seat tightness testing shall be performed using the same fluid used for set-pressure testing, except as provided by I-8300.

I-8210 Inlet Pressure. The inlet pressure for seat leak testing shall be in accordance with one of the following:

- (a)* maximum system operating pressure
- (b)* 90% of spring setting or 5 psig (34 kPa) below spring setting for valves having a spring set-pressure less than 50 psig (344 kPa)
- (c)* pressure established in Owner's valve test procedure

I-8220 Acceptable Seat-Tightness Testing Methods.

Table I-8220-1 provides acceptable methods. Other methods may be determined by the Owner.

I-8230 Acceptance Criteria for Seat Leakage Testing.

Either the original valve equipment design specification acceptance criteria or acceptance criteria established by the Owner in the valve test procedure shall be used for valve seat leakage acceptance criteria.

I-9000 PWR RECORDS AND RECORD KEEPING

I-9100 Requirements

The Owner shall maintain a record that shall include the following for each valve covered by this Appendix:

- (a)* the manufacturer and manufacturer's model and serial number, or other identifiers
- (b)* a copy or summary of the manufacturer's acceptance test report, if available
- (c)* preservice test results

I-9200 Record of Tests

In addition to the requirements of ISTA-9230, if testing is performed in accordance with I-8300, a copy of the alternate test media correlation, test procedure, and documentation of results of test performed to verify the adequacy of the alternate test media shall be maintained.

I-9300 Record of Modification and Corrective Action

In addition to the requirements of ISTA-9240, the following requirements shall be met:

- (a)* The Owner shall document all modifications made to or corrective actions taken that affect the set-pressure of pressure relief devices or valves. The documentation shall also include any recommendations or modifications suggested by the manufacturer. Modification or corrective action, as outlined, shall be recorded and maintained for the period of time as outlined in the Owner's technical specifications.

(b) Any device modification or adjustment that affects nameplate data shall be recorded on a data sheet. The modification or adjustment shall be made in accordance with the manufacturer's published information or shall have the concurrence of the manufacturer. An additional nameplate, not bearing a Code symbol stamp, shall be installed to reflect the new data and reference to records maintained by the Owner outlining the modification.

Braidwood Units 1 and 2 Station

Third Ten-Year IST Interval submitted July 27, 2009, references ASME OM Code 2001 Edition through 2003 Addenda

Braidwood IST Program specifies:

PORV - fail safe test closed (refueling outage); stroke-time exercise open and closed (refueling outage; and position indication test (2 years).

PORV Block Valve- exercise open and closed (quarterly); and position indication test (2 years).

PSV – Relief Valve Test (5 years); and position indication test (2 years). The IST Program references Appendix I to the OM Code for Relief Valve Test.

ASME OM Code 2001 through 2003 Addenda

Provisions in ASME OM Code 2001 through 2003 Addenda are essentially the same as the ASME OM Code 2004 through 2006 Addenda with respect to PSVs and PORVs.

From: Spencer, Michael
Sent: Tuesday, July 12, 2016 5:12 PM
To: Clark, Theresa
Subject: RE: Is this really a backfit

Theresa,

I went over the original backfit letter again, and I see where you are coming from. However, the staff probably saw its action as requiring a modification of or addition to the facility design, which does fit within the 50.109(a) definition of a backfit. The backfit letter claims that the FSAR discussion is deficient (does not meet 50.34(b)), and Section 3.4 states, "The NRC staff's current conclusion that Braidwood and Byron's design bases do not comply with GDCs 15, 21, and 29, and 10 CFR 50.34(b), differs from a previous NRC position on the acceptability of the design bases for these plants as documented in the SE for an increase in reactor power (Reference 1)." If the design bases are deficient, they must be modified or supplemented to make them sufficient, which is a design change. This is an inference because, as you say, the letter is not clear on the precise actions demanded of the licensee.

Michael

From: West, Steven
Sent: Thursday, July 07, 2016 4:14 PM
To: Cupidon, Les; Hackett, Edwin
Cc: Difrancesco, Nicholas; Holahan, Gary; Clark, Theresa
Subject: RE: Some CRGR Follow-up

Les,

Just to be clear, for RIS 2005-29, the staff requested CRGR review of the RIS and the CRGR decided not to review it? What was documented in the annual report?

Steve

Steven West, Deputy Director
Office of Nuclear Security and Incident Response
U.S. Nuclear Regulatory Commission

301-287-3734
Steven.West@nrc.gov

From: Cupidon, Les
Sent: Thursday, July 07, 2016 12:10 PM
To: Hackett, Edwin <Edwin.Hackett@nrc.gov>
Cc: Difrancesco, Nicholas <Nicholas.DiFrancesco@nrc.gov>; Holahan, Gary <Gary.Holahan@nrc.gov>; West, Steven <Steven.West@nrc.gov>; Clark, Theresa <Theresa.Clark@nrc.gov>
Subject: RE: Some CRGR Follow-up

Ed,

Below are the search results on the following items:

- **RIS-2005-29:** On September 2, 2005, the CRGR waived RIS 2005-29, "Anticipated Transients That Could Develop Into More Serious Events" (ADAMS Accession No. ML051890212). In the past, there were no emailed documentation to track the comments made during the review. Instead we routinely used the CRGR annual report to document the final decision for reviews of RISs.
- **NRR Review Standard RS-01 on Extended Power Upgrades (2003):** I have not found any information in the CRGR records regarding reviews of this Review Standard. This may be in part to the fact that per the current CRGR charter, Review Standards are not in the cope of CRGR review.
- **New Reactor SRP Updates from 2007:** I have not found any documented CRGR review of New Reactor SRP updates since 2007 to this date. This is mainly because, according to the current CRGR charter, the staff is not required to have CRGR review any SRPs if it does not contain any new staff positions.

Thanks

Les

From: Hackett, Edwin

Sent: Tuesday, July 05, 2016 9:54 AM

To: Cupidon, Les <Les.Cupidon@nrc.gov>

Cc: DiFrancesco, Nicholas <Nicholas.DiFrancesco@nrc.gov>; Holahan, Gary <Gary.Holahan@nrc.gov>; West, Steven <Steven.West@nrc.gov>; Clark, Theresa <Theresa.Clark@nrc.gov>

Subject: Some CRGR Follow-up

Hi Les,

Welcome Back!

In coordinating with the Exelon Backfit appeal panel that Gary leads, it would be helpful if you could review the past CRGR record regarding the following:

- RIS-2005-29
- NRR Review Standard RS-01 on Extended Power Uprates (2003)
- New Reactor SRP Updates from 2007

Did the Committee conduct reviews on these and, if so, what were the outcomes?

Gary/Steve – Let us know if there is anything else that comes to mind that would be helpful to the review.

Thanks,

Ed

Edwin M. Hackett

Deputy Director, Office of Nuclear Regulatory Research

USNRC

301-415-1904

edwin.hackett@nrc.gov

From: Spencer, Michael
Sent: Thursday, July 28, 2016 8:45 AM
To: West, Steven; Scarbrough, Thomas; Holahan, Gary; Clark, Theresa
Subject: RE: DRAFT Preliminary Findings July 27 2016 - tvC MAS.docx

We did, RIS-99-01, but neither it nor the other pre-2005 documents I could find have the following clear prohibition found in the 2009 and 2015 revisions of MD 8.18:

RISs may NOT— (c) • provide guidance for the implementation of rules and regulations, (i) • provide guidance to NRC staff on regulatory or technical matters, and (ii) • be used in lieu of other established agency products. (iii)

The statements in the pre-2005 documents are more ambiguous. For example, the 2004 NRR LIC-503 says:

Regulatory Issue Summary. A regulatory issue summary is an informational document that is used to communicate with the nuclear industry on a broad spectrum of matters having generic applicability. It does not involve a request for action or information unless the request is strictly voluntary. Listed below are examples of ways in which a regulatory issue summary may be used:

- ☐ Document NRC endorsement of industry-developed resolutions to issues.
- ☐ Document NRC endorsement of industry guidance on technical or regulatory matters.
- ☐ Provide the status of staff interaction with the nuclear industry on a matter.
- ☐ Request the voluntary participation of licensees in staff-sponsored pilot programs.
- ☐ Inform licensees of opportunities for regulatory relief.
- ☐ Announce staff technical or policy positions on matters that have not been broadly communicated to the nuclear industry or are not fully understood.
- ☐ Provide guidance to licensees on regulatory matters, such as, the scope and detail of information that should be provided in licensing applications to facilitate staff review.
- ☐ Announce the issuance and availability of regulatory documents (topical reports, NUREG-type documents and memoranda documenting the closeout of Generic Safety Issues).
- ☐ Request the voluntary submittal of information which will assist the NRC in the administration of the regulatory process.
- ☐ Announce changes in regulatory practices that could impact licensees.
- ☐ Announce changes in agency practices that could impact licensees.

The highlighted language might be read broadly without the prohibitions in the current MD. Nonetheless, in this case, perhaps the most powerful statement about the purported limitations of the RIS comes from the RIS itself, which states that no comment was requested on the RIS because it was informational and “does not depart from current regulatory requirements and practice.”

Michael

From: West, Steven
Sent: Wednesday, July 27, 2016 7:10 PM
To: Spencer, Michael <Michael.Spencer@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; Holahan, Gary <Gary.Holahan@nrc.gov>; Clark, Theresa <Theresa.Clark@nrc.gov>
Subject: RE: DRAFT Preliminary Findings July 27 2016 - tvC MAS.docx

Sorry I missed the discussion. I seem to recall that we issued a RIS, or maybe an information notice, to explain the RIS and other changes to our generic communications process after we invented the RIS.

Steve

----- Original Message -----

From: "Spencer, Michael" <Michael.Spencer@nrc.gov>

Date: Wed, July 27, 2016 3:59 PM -0500

To: "Scarbrough, Thomas" <Thomas.Scarbrough@nrc.gov>, "Holahan, Gary" <Gary.Holahan@nrc.gov>, "Clark, Theresa" <Theresa.Clark@nrc.gov>, "West, Steven" <Steven.West@nrc.gov>

Subject: RE: DRAFT Preliminary Findings July 27 2016 - tvx MAS.docx

Finding earlier versions of MD 8.18 and other relevant documents in ADAMS was difficult. Finally having found them and reviewed them, I was not able to do exactly what we discussed in today's meeting because the guidance on RIS scope in 2005 was not as clear as it is now, and one might have interpreted it as allowing a RIS to establish new interpretations. I also looked at NRR LIC-503 from 11/29/2004, and it also did not clearly limit the scope of RISs. However, based on the content of the original RIS, I added the following sentence to the Report: Also, when RIS 2005-29 was originally issued, the staff stated that it did not publish the RIS in the *Federal Register* for comment because "this RIS is informational and pertains to a NRC staff position that does not depart from current regulatory requirements and practice."

Thus, although one might argue that RISs could have had a broader scope in 2005, the staff explicitly limited the intended scope of RIS-2005-29, possibly so it wouldn't have to publish the document in the Federal Register for comment.

I have updated the 3 PM version that Tom placed in the Report folder. I also updated some of my earlier comments based on discussion at today's meeting. I have closed the document, so it should be open for editing by others.

One more thing, Tom added a sentence stating, "RIS 2005-29 and its draft supplement do not discuss water relief certification requirements in the ASME BPV Code." I just want to point out that I looked at the original RIS again, and there is one place where it seems to be suggesting that safety-related qualification was necessary. This is the following paragraph on page 2: "Since 1993, when this NSAL was issued, most of the affected Westinghouse plants have modified their licensing basis analyses, usually via the Title 10 of the Code of Federal Regulations (10 CFR) Section 50.59 process, to credit the operation of either the PORVs or the pressurizer safety valves without first qualifying them as safety-related systems capable of relieving water. The licensing bases of the remaining Westinghouse plants and certain, affected non-Westinghouse PWRs still do not address the nonescalation criterion."

Michael

From: Scarbrough, Thomas

Sent: Wednesday, July 27, 2016 3:25 PM

To: Holahan, Gary <Gary.Holahan@nrc.gov>; Clark, Theresa <Theresa.Clark@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>; West, Steven <Steven.West@nrc.gov>

Subject: RE: DRAFT Preliminary Findings July 27 2016 - tvx MAS.docx

Based on our discussion today, I have updated the "3 pm version" of the Draft Preliminary Findings and placed it in the S:/Backfit Appeal/Report folder.

Also, I included the Beaver Valley EPU 2006 Letter and SER in the S:/Backfit Appeal/References folder. The following is the concurrence chain:

OFFICE LPLI-1/PM LPLI-1/LA AFPB/BC CSG/BC CPNB/BC EQVA/BC CVIB/BC
NAME TColburn SLittle SWeerakody* LLund* TChan* DThatcher* MMitchell*
DATE 7/13/06 7/13/06 06/09/05 09/08/05 08/03/05 11/15/05 12/28/05

OFFICE EEEB/BC AADB/BC IHPB/BC(A) ACVB/BC APLA/BC ACVB/BC SBPB/BC
NAME RJenkins* MKotzas* SKlementowicz* RDennig* MRubin* RDennig* DSolorio*
DATE 01/05/06 01/13/06 01/18/06 02/01/06 02/28/06 03/01/06 03/09/06
OFFICE EEMB/BC EICB/BC REBB/BC IOLB/BC SPWB/BC SPWB/BC TechEd
NAME KManoly* AHowe* RFranovich* NO'Keefe* JNakoski* JNakoski* HChang
DATE 03/10/06 03/15/06 03/15/06 03/22/06 04/04/06 04/13/06 06/26/06
OFFICE OGC LPLI-1/BC DORL/D NRR/D
NAME JMoore RLaufer CHaney JDyer
DATE 07/12/06 07/17/06 07/18/06 7/19/06

Thanks.
Tom

From: Holahan, Gary
Sent: Wednesday, July 27, 2016 12:55 PM
To: Clark, Theresa <Theresa.Clark@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>; West, Steven <Steven.West@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>
Subject: RE: DRAFT Preliminary Findings July 27 2016 - tvC MAS.docx

Let's use the 2pm meeting to try to finalize the Preliminary Finding

From: Clark, Theresa
Sent: Wednesday, July 27, 2016 12:41 PM
To: Spencer, Michael <Michael.Spencer@nrc.gov>; Holahan, Gary <Gary.Holahan@nrc.gov>; West, Steven <Steven.West@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>
Subject: Re: DRAFT Preliminary Findings July 27 2016 - tvC MAS.docx

Something to discuss if we do meet at 2 :)

On: 27 July 2016 12:02, "Spencer, Michael" <Michael.Spencer@nrc.gov> wrote:
Another thought. Should we address this new ASME Code argument that has surfaced in discussions with DE Staff? It seems like we should for completeness, and if we don't, we will probably get that back as a comment.

From: Spencer, Michael
Sent: Wednesday, July 27, 2016 11:11 AM
To: Holahan, Gary <Gary.Holahan@nrc.gov>; West, Steven <Steven.West@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; Clark, Theresa <Theresa.Clark@nrc.gov>
Subject: DRAFT Preliminary Findings July 27 2016 - tvC MAS.docx

I made comments on top of Theresa's.

From: McCree, Victor
Sent: Monday, September 12, 2016 6:22 PM
To: Holahan, Gary; Clark, Theresa
Subject: FW: Search Results for EDO Overturning the Staff Denial to a Licensee's Backfit Appeal

See below.

From: Cupidon, Les
Sent: Monday, September 12, 2016 4:39 PM
To: Hackett, Edwin <Edwin.Hackett@nrc.gov>; McCree, Victor <Victor.McCree@nrc.gov>; Johnson, Michael <Michael.Johnson@nrc.gov>
Cc: Weber, Michael <Michael.Weber@nrc.gov>; Tracy, Glenn <Glenn.Tracy@nrc.gov>
Subject: RE: Search Results for EDO Overturning the Staff Denial to a Licensee's Backfit Appeal

Vic,

After performing an ADAMS search and looking into the ADAMS Backfit Facility-specific folder I have identified various e-mail exchanges that pertain to backfitting. The majority of these e-mails are exchanges between the staff. Few are between the staff and the industry.

With regards to Section I.E.2 in MD 8.4, the rest of the paragraphs states,

Except as noted, ADAMS shall be the single repository of all the backfit decisionmaking, including the outcome of any licensee backfit appeals, as well as cross-references to all the communications issued or received by NRC staff with respect to a facility-specific backfit. All the above-mentioned records shall be managed in accordance with the applicable agency policy and procedures.

It was envisioned that any documents (including e-mails) that had a bearing on the decisionmaking process regarding backfitting would be considered as input into ADAMS (specifically, the Backfit Facility-specific folder). This of course did not preclude other document managing requirements that required the staff to place e-mails into ADAMS. Our focus was that for tracking and for historical purposes, future staff would be able to open the Backfit Facility-specific folder and follow the trail from beginning to end (the final disposition regarding a facility-specific backfit).

The statement, "cross-references to all the communications issued or received by NRC staff" was referring to communication items (including e-mails) sent (mainly) to and from industry, or between the staff as it pertained to the trail for the backfitting decision and as is relevant. We were not focusing on e-mail exchanges between the staff that merely discussed the issue, but on those that were directly related to the backfit decision.

It is recognized that the question regarding what document is related to the decisionmaking process is subject to interpretation. Therefore, the following direction was provided for staff to enter document into ADAMS as prescribed by agency policy.

All the above-mentioned records shall be managed in accordance with the applicable agency policy and procedures.

Please contact me if you have any further questions (301-613-1971 [WAH P#]).

Thanks
Les

From: Cupidon, Les
Sent: Monday, September 12, 2016 8:43 AM
To: Hackett, Edwin <Edwin.Hackett@nrc.gov>; McCree, Victor <Victor.McCree@nrc.gov>; Johnson, Michael <Michael.Johnson@nrc.gov>
Cc: Weber, Michael <Michael.Weber@nrc.gov>; Tracy, Glenn <Glenn.Tracy@nrc.gov>
Subject: RE: Search Results for EDO Overturning the Staff Denial to a Licensee's Backfit Appeal

Vic,

I am working on this question and will provide an answer to you by COB today.

Thanks
Les

From: Hackett, Edwin
Sent: Friday, September 09, 2016 3:51 PM
To: McCree, Victor <Victor.McCree@nrc.gov>; Cupidon, Les <Les.Cupidon@nrc.gov>; Johnson, Michael <Michael.Johnson@nrc.gov>
Cc: Weber, Michael <Michael.Weber@nrc.gov>; Tracy, Glenn <Glenn.Tracy@nrc.gov>
Subject: RE: Search Results for EDO Overturning the Staff Denial to a Licensee's Backfit Appeal

Thanks Vic – we will follow-up by Monday.

Ed

From: McCree, Victor
Sent: Friday, September 09, 2016 3:42 PM
To: Hackett, Edwin <Edwin.Hackett@nrc.gov>; Cupidon, Les <Les.Cupidon@nrc.gov>; Johnson, Michael <Michael.Johnson@nrc.gov>
Cc: Weber, Michael <Michael.Weber@nrc.gov>; Tracy, Glenn <Glenn.Tracy@nrc.gov>
Subject: Re: Search Results for EDO Overturning the Staff Denial to a Licensee's Backfit Appeal

Thanks Ed.

I don't want to split hairs or create a new expectation, but while Section I.E.1 of DH 8.4 refers to "Records," Section I.E.2 refers to "All backfit-related information...." Perhaps Les can shed light on whether there was an intent to expand beyond OARs those Backfit appeal documents to be captured in ADAMS.

Vic
On: 09 September 2016 15:33, "Hackett, Edwin" <Edwin.Hackett@nrc.gov> wrote:

Hi Vic,

Les is out today on CWS. I took a look at the two MD's – 8.4 on Facility Specific Backfitting and 3.53 on Records Management. The portion of MD3.53 that applies (I believe) is 3.53 D2:

Record Status (a)

Documentary materials are records when they meet the following two conditions:

They are made or received by an agency of the United States Government under Federal law or in connection with the transaction of agency business. (i)

They are preserved or are appropriate for preservation as evidence of agency organization and activities or because of the value of the information they contain. (ii)

To the extent that the emails meet these tests, they would be considered Federal Records. I am certainly not the expert in this area, but the above is similar to what we have done for record retention in DPO reviews.

Les should have additional insights regarding past practice when he is able to weigh-in.

Hope this helps.

Have a great weekend!

Ed

From: McCree, Victor

Sent: Friday, September 09, 2016 8:42 AM

To: Cupidon, Les <Les.Cupidon@nrc.gov>; Johnson, Michael <Michael.Johnson@nrc.gov>

Cc: Weber, Michael <Michael.Weber@nrc.gov>; Hackett, Edwin <Edwin.Hackett@nrc.gov>

Subject: Re: Search Results for EDO Overturning the Staff Denial to a Licensee's Backfit Appeal

Les,

Thanks again for researching this matter. I have another question for you:

Does the guidance on record keeping in Section I.E.2 of DH 8.4 include internal emails? Specifically, does the requirement to enter "All backfit-related information..." in ADAMS include internal emails exchanged among staff in the course of an appeal review?

Note that my intent is to remain consistent with past practice, NOT create a new precedent.

Thanks, in advance, for your help.

Vic

On: 30 August 2016 11:52, "Cupidon, Les" <Les.Cupidon@nrc.gov> wrote:

Michael,

Per your request to identify instances of the EDO overturning of a staff denial of a plant specific backfit appeal. In my search I have not found any instance of the EDO overturning the office denial of a backfit appeal. However, I am providing you with two office level reversals for consideration. They are concerning the following backfit appeals, (1) Farley: regarding work schedule backfit compliance related to work schedules (attached, "Panel...") and (2) Oconee, McGuire, and Catawba: regarding containment integrated leakage rate testing (attached, "Oconee..."). With regards to the office director actions, once the staff actions has been determine not to be supported by agency regulatory guidance, the office director informs the licensee regarding the determination with the supporting basis.

Furthermore, it appears in the instance of an office level appeal being overturned a follow up action involved subsequent dissemination of the panel determination to the relevant regions by memorandum (attached "Results...").

It appears that based on the results of the ADAMS research for precedence of EDO overturning the staff denial of a backfit appeal and the recent Byron/Braidwood backfit appeal panel results, we may be in new territory.

In conclusion, it appears there has been very limited overturns in the office level appeal and none in the EDO level appeal.

I wanted to get this to you soon, although I am still waiting for staff to respond back to me regarding a 2001 Maine Yankee security plan related backfit appeal. The document trail stops abruptly in ADAMS in a January 2002 memo to the utility regarding plans to respond back with the Office Director's determination. I suspect it will not be of interest since the backfit appeal was at the office level. I will close the loop with you soon as I know how this appeal ended.

Please let me know if you need further information.

Thanks
Les

From: Akstulewicz, Frank
Sent: Thursday, July 21, 2016 9:18 AM
To: Clark, Theresa
Cc: Holahan, Gary
Subject: RE: REQUEST: meeting with Exelon backfit appeal panel

As I understand it , the question here goes back 15 yrs... I need to at least look at the SE to see if I even remember the issue... not even sure what the question of the backfit appeal is.

I could at least propose Tuesday at 2pm...

Does that work??

From: Clark, Theresa
Sent: Wednesday, July 20, 2016 4:17 PM
To: Akstulewicz, Frank <Frank.Akstulewicz@nrc.gov>
Cc: Holahan, Gary <Gary.Holahan@nrc.gov>
Subject: REQUEST: meeting with Exelon backfit appeal panel

Hi Frank! The EDO appeal panel for the Exelon backfit appeal (Byron/Braidwood PSV/PORV issue) would like to speak with you if possible, since your branch contributed a key input to the 2001 stretch power uprate safety evaluation that is now being considered as part of the backfit. Scheduling time with folks on the panel has been challenging so I'm seeing if there are any spots on your calendar that aren't quite as booked as they appear. In particular I'm looking at 4pm tomorrow (you're shown as booked but 3 of the 4 panel members are available) or 3pm Monday (you have a tentative appointment from 3:15-3:45). 1pm Monday or 2pm Tuesday might also work but I'm selfishly avoiding those because of conflicts I have.

Please let me know if you're willing to take some time with the panel. Thanks so much!

Background References:

- Appeal panel charter: [ML16173A311](#)
- 6/2/16 Exelon backfit appeal to EDO: [ML16154A254](#)
- 5/3/16 NRR backfit appeal decision: [ML16095A204](#)
- 12/8/2015 Exelon backfit appeal to NRR: [ML15342A112](#)
- 10/9/2015 NRC backfit letter: [ML14225A871](#)
- 8/26/04 pressurizer safety valve setpoint safety evaluation: [ML042250531](#)
- 5/4/01 stretch power uprate safety evaluation: [ML033040016](#)
- 3/15/01 SRXB input to stretch power uprate safety evaluation: [ML010740316](#)

All documents are publicly available in ADAMS.

Theresa Valentine Clark
Executive Technical Assistant (Reactors)
U.S. Nuclear Regulatory Commission
Theresa.Clark@nrc.gov | 301-415-4048 | O-16E22

From: Holahan, Gary
Sent: Wednesday, August 17, 2016 5:40 PM
To: Wolf, Carolyn
Cc: Dean, Bill; Wertz, Trent
Subject: RE: Potential due outs from yesterday's briefing with Andy Zach (Aug 9, 2016)

Carolyn,

I'm not aware of any "1977 policy statement on EPRI backfit." In fact I'm quite sure there is no such thing. ERPI never was a licensee, so there couldn't be an ERPI backfit.

I'm working on the appeal of an Exelon compliance backfit (2015) for the EDO, and we have referenced a 1977 SECY paper (SECY-77-439). It's not a policy statement and it doesn't mention EPRI. So it hard to see how it fits the request.

The SECY paper is available in ADAMS, ML060260236, but I have no idea if it fits the request, since I have no background or context.

SECY-77-8439 is publicly available in ADAMS as ML060260236.

I would like to be more helpful, but that's all I can offer unless you can get me more information,

Gary

From: Wolf, Carolyn
Sent: Wednesday, August 17, 2016 4:39 PM
To: Holahan, Gary <Gary.Holahan@nrc.gov>
Subject: RE: Potential due outs from yesterday's briefing with Andy Zach (Aug 9, 2016)

Gary,

Are you familiar with the document that Bill Dean is referring to in the email below? We committed to sending it to a congressional staffer, but I am unsure of what document we are to send. Thanks for the help.

Carolyn K. Wolf (formerly Carolyn Kahler)
Congressional Affairs Officer
U.S. Nuclear Regulatory Commission
Location: OWFN-3E9
Phone: 301-415-8492
Cell: (b)(6)
Email: carolyn.wolf@nrc.gov

From: Wertz, Trent
Sent: Wednesday, August 17, 2016 10:11 AM
To: Wolf, Carolyn <Carolyn.Wolf@nrc.gov>
Subject: FW: Potential due outs from yesterday's briefing with Andy Zach (Aug 9, 2016)

Carolyn,

See below. You should check with Gary to see if he can point you to the document.

Trent

From: Dean, Bill

Sent: Tuesday, August 16, 2016 5:34 PM

To: Wertz, Trent <Trent.Wertz@nrc.gov>

Subject: Re: Potential due outs from yesterday's briefing with Andy Zach (Aug 9, 2016)

It is a document that Gary holahan is referring to as part of the backfit appeal and that we address in our response.

On: 16 August 2016 15:12, "Wertz, Trent" <Trent.Wertz@nrc.gov> wrote:

Bill,

See below. I spoke to Carolyn about this. There is no 1977 policy statement on an EPRI Backfit (at least not in the Commission documents on the website). Did she misinterpret the conversation or misunderstand what was being discussed? Any light you can shed on this would be helpful.

Hope you're enjoying the conference.

Trent

From: Wolf, Carolyn

Sent: Monday, August 15, 2016 11:48 AM

To: Wertz, Trent <Trent.Wertz@nrc.gov>

Subject: Re: Potential due outs from yesterday's briefing with Andy Zach (Aug 9, 2016)

Do you know anyone in the office who might know the ML number? Or have a hard copy of it? I'm not sure what the policy statement actually is. Thanks for some direction!

On: 15 August 2016 10:52, "Wertz, Trent" <Trent.Wertz@nrc.gov> wrote:

I do not. I did a couple of searches in ADAMS for it and did not have any luck.

From: Wolf, Carolyn

Sent: Friday, August 12, 2016 3:18 PM

To: Wertz, Trent <Trent.Wertz@nrc.gov>

Cc: Mahoney, Michael <Michael.Mahoney@nrc.gov>

Subject: RE: Potential due outs from yesterday's briefing with Andy Zach (Aug 9, 2016)

Trent,

Do you happen to have the ML number for the 1977 policy statement on EPRI backfit? I'm not finding it on the NRC website.

Carolyn K. Wolf (formerly Carolyn Kahler)

Congressional Affairs Officer

U.S. Nuclear Regulatory Commission

Location: OWFN-3B9

Phone: 301-415-8492
Cell: (b)(6)
Email: carolyn.wolf@nrc.gov

From: Dean, Bill
Sent: Wednesday, August 10, 2016 10:15 PM
To: Wolf, Carolyn <Carolyn.Wolf@nrc.gov>
Cc: Colgary, James <James.Colgary@nrc.gov>; Dacus, Eugene <Eugene.Dacus@nrc.gov>; Hackett, Edwin <Edwin.Hackett@nrc.gov>
Subject: Re: Potential due outs from yesterday's briefing with Andy Zach (Aug 9, 2016)

Looks fine. Ed Hackett of RES can help on the meeting.

On: 10 August 2016 18:12, "Wolf, Carolyn" <Carolyn.Wolf@nrc.gov> wrote:
Bill,

Thank you so much for meeting with Andy Zach yesterday. Great briefing. I've created a small list of potential due outs that I captured. Let me know if you think that there are any items that do not belong on the list or if there is anything I should add. Thanks!

NRR

- Provide the 1977 policy statement on EPRI backfit
- Send information on the September 13 (?) CRGR meeting

Carolyn K. Wolf (formerly Carolyn Kahler)
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