From: Spencer, Michael
Sent: Thursday, June 23, 2016 11:18 AM
To: Scarbrough, Thomas; Holahan, Gary; West, Steven; Clark, Theresa
Subject: RE: Backfit Appeal Panel

I am available any time this afternoon (including 3 PM) and Monday at 3 PM.

From: Scarbrough, Thomas
Sent: Thursday, June 23, 2016 11:11 AM
To: Holahan, Gary <Gary.Holahan@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>; West, Steven <Steven.West@nrc.gov>; Clark, Theresa <Theresa.Clark@nrc.gov>
Subject: RE: Backfit Appeal Panel

I am available today at 3 pm, but I am not available Monday afternoon.

Thanks.
Tom

From: Holahan, Gary
Sent: Thursday, June 23, 2016 11:01 AM
To: Spencer, Michael <Michael.Spencer@nrc.gov>; West, Steven <Steven.West@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; Clark, Theresa <Theresa.Clark@nrc.gov>
Subject: RE: Backfit Appeal Panel

Does 2pm or 3pm Monday work better for panel members?

I can be available for either.

Gary

From: Spencer, Michael
Sent: Thursday, June 23, 2016 10:59 AM
To: Holahan, Gary <Gary.Holahan@nrc.gov>
Subject: RE: Backfit Appeal Panel

Gary, I have a conflict. I have been asked to attend another meeting on Monday from 1 to 2:30. Is another time available on Monday?

Michael

-----Original Appointment-----
From: Holahan, Gary

Sent: Thursday, June 23, 2016 10:57 AM
To: West, Steven; Spencer, Michael; Scarbrough, Thomas; Clark, Theresa
Subject: Backfit Appeal Panel
When: Monday, June 27, 2016 1:00 PM-2:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: O 17 H 14

Subject:	Backfit Appeal Panel
Location:	O 17 H 14
Start:	Thu 06/23/2016 3:00 PM
End:	Thu 06/23/2016 4:00 PM
Recurrence:	(none)
Meeting Status:	Accepted
Organizer:	Holahan, Gary
Required Attendees:	West, Steven; Spencer, Michael; Scarbrough, Thomas; Clark, Theresa

From: HOLAHAN, GARY M
Sent: Friday, June 24, 2016 11:11 AM
To: CLARK, THERESA V; WEST, Steven S; SCARBROUGH, THOMAS G; SPENCER, MICHAEL A
Subject: Re: backfit appeal panel

Thanks Theresa, I need to be out of the office 7/7 and 7/8 so one meeting the week of July 4 is Ok.

Gary

On: 24 June 2016 11:04, "CLARK, THERESA V" <Theresa.Clark@nrc.gov> wrote:
Note that Tom is (b)(6) but others appear to be OK for this one.

[FYI didn't schedule for 7/7 as there wasn't a good time for all.]

Subject:	Backfit Panel Meeting
Location:	O 17 H 14
Start:	Tue 06/28/2016 3:00 PM
End:	Tue 06/28/2016 4:00 PM
Recurrence:	(none)
Meeting Status:	Accepted
Organizer:	Holahan, Gary
Required Attendees:	West, Steven; Scarbrough, Thomas; Spencer, Michael; Clark, Theresa

Subject:	backfit appeal panel
Location:	O-16B2
Start:	Thu 06/30/2016 10:00 AM
End:	Thu 06/30/2016 11:00 AM
Recurrence:	(none)
Meeting Status:	Accepted
Organizer:	CLARK, THERESA V
Required Attendees:	HOLAHAN, GARY M; WEST, Steven S; SCARBROUGH, THOMAS G; SPENCER, MICHAEL A

This time looked OK if Steve can get out of his standing meeting. Please note that the room labeling is messed up right now, but I have O-16B2 reserved (I think) as noted in the subject line.

Thanks,
Theresa

From: Scarbrough, Thomas
Sent: Thursday, July 07, 2016 9:57 AM
To: Holahan, Gary; West, Steven; Clark, Theresa; Spencer, Michael
Subject: RE: Memorandum From: V. McCree to G. Holahan re: Charter for Backfit Appeal Review Panel Associated with Byron and Braidwood Compliance with 10 CFR 50.34(B), GDC 15, GDC 21, GDC 29, and the Licensing Basis

OK with me.

Thanks.
Tom

From: Holahan, Gary
Sent: Thursday, July 07, 2016 9:55 AM
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: Fwd: Memorandum From: V. McCree to G. Holahan re: Charter for Backfit Appeal Review Panel Associated with Byron and Braidwood Compliance with 10 CFR 50.34(B), GDC 15, GDC 21, GDC 29, and the Licensing Basis

How about inviting Rich to a panel meeting next week?

Gary

From: "West, Steven" <Steven.West@nrc.gov>
Subject: RE: Memorandum From: V. McCree to G. Holahan re: Charter for Backfit Appeal Review Panel Associated with Byron and Braidwood Compliance with 10 CFR 50.34(B), GDC 15, GDC 21, GDC 29, and the Licensing Basis
Date: 07 July 2016 09:12
To: "Correia, Richard" <Richard.Correia@nrc.gov>
Cc: "Holahan, Gary" <Gary.Holahan@nrc.gov>
The appeal panel is still in the discovery phase. It's highly likely that we'll ask for RES assistance as summarized in my original email, below, but we are not quite ready yet.

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: Correia, Richard
Sent: Thursday, July 07, 2016 7:07 AM
To: West, Steven <Steven.West@nrc.gov>
Subject: RE: Memorandum From: V. McCree to G. Holahan re: Charter for Backfit Appeal Review Panel Associated with Byron and Braidwood Compliance with 10 CFR 50.34(B), GDC 15, GDC 21, GDC 29, and the Licensing Basis

Good morning Steve,

Any updates on this appeal and whether you still want our technical assistance?

Best

Rich

Richard P. Correia, P.E.
Director, Division of Risk Analysis
Office of Nuclear Regulatory Research
U.S. NRC

From: Correia, Richard
Sent: Friday, June 24, 2016 6:38 AM
To: West, Steven <Steven.West@nrc.gov>
Cc: Weber, Michael <Michael.Weber@nrc.gov>; Holahan, Gary <Gary.Holahan@nrc.gov>; Case, Michael <Michael.Case@nrc.gov>; Webber, Kimberly <Kimberly.Webber@nrc.gov>; Thaggard, Mark <Mark.Thaggard@nrc.gov>; Hackett, Edwin <Edwin.Hackett@nrc.gov>
Subject: RE: Memorandum From: V. McCree to G. Holahan re: Charter for Backfit Appeal Review Panel Associated with Byron and Braidwood Compliance with 10 CFR 50.34(B), GDC 15, GDC 21, GDC 29, and the Licensing Basis

Steve,

We will be ready to support your request and look forward to working with you and Gary on this matter.

Best

Rich

Richard P. Correia, P.E.
Director, Division of Risk Analysis
Office of Nuclear Regulatory Research
U.S. NRC

From: West, Steven
Sent: Thursday, June 23, 2016 6:13 PM
To: Correia, Richard <Richard.Correia@nrc.gov>
Cc: Weber, Michael <Michael.Weber@nrc.gov>; Holahan, Gary <Gary.Holahan@nrc.gov>; Case, Michael <Michael.Case@nrc.gov>; Webber, Kimberly <Kimberly.Webber@nrc.gov>; Thaggard, Mark <Mark.Thaggard@nrc.gov>

Subject: FW: Memorandum From: V. McCree to G. Holahan re: Charter for Backfit Appeal Review Panel Associated with Byron and Braidwood Compliance with 10 CFR 50.34(B), GDC 15, GDC 21, GDC 29, and the Licensing Basis

Rich,

Following (and attached) is the information on the backfit appeal I am working on. I appreciate your commitment to support the panel's effort to better understand and characterize the safety and risk significance of the plant configuration. Gary Holahan or I will be in touch after we gather our thoughts and have a better idea about specific objectives and needs. As I mentioned to you, we will probably be looking for some transient analyses and risk assessments (using SPAR models).

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: Holahan, Gary
Sent: Thursday, June 23, 2016 10:44 AM
To: West, Steven <Steven.West@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>
Cc: Clark, Theresa <Theresa.Clark@nrc.gov>
Subject: FW: Memorandum From: V. McCree to G. Holahan re: Charter for Backfit Appeal Review Panel Associated with Byron and Braidwood Compliance with 10 CFR 50.34(B), GDC 15, GDC 21, GDC 29, and the Licensing Basis

Steve,
Tom,
Michael,

As you can see, the EDO has signed the Backfit Appeal Panel Charter. It calls for a final report and recommendation by August 29, 2016. Although I do not expect this task to require anyone's dedicated, full-time attention, I do plan to meet frequently, especially during the planning stage. I suggest meeting this afternoon (3 pm?) or on Monday and Wednesday next week. I suggest that we establishing a regular pattern of meetings for the following weeks. There will also be the need to schedule meetings/discussions with NRR staff and management, Exelon, perhaps NEI (which sent a supporting letter last week), other stakeholders, and perhaps CRGR.

I have identified more than 20 relevant documents (electronic copies of a few attached, including a list of all); and I am having paper copies made. Copies should be available on Monday. The most immediately relevant documents are: the charter, the Exelon appeal letters of 12/8/15 (to NRR) and 6/2/16 (to EDO), and the staff letter of 5/3/16. I have identified numerous issues that I think we may need to pursue, but that can wait for our first meeting.

I will send scheduler requests to check your availability today and next week.

Thanks in advance for your support,

Gary

From: Royer, Deanna
Sent: Thursday, June 23, 2016 10:01 AM
To: Holahan, Gary <Gary.Holahan@nrc.gov>; West, Steven <Steven.West@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>
Cc: RidsNroMailCenter Resource <RidsNroMailCenter.Resource@nrc.gov>; RidsNrrOd Resource <RidsNrrOd.Resource@nrc.gov>; RidsRgn3MailCenter Resource <RidsRgn3MailCenter.Resource@nrc.gov>; RidsOgcMailCenter Resource <RidsOgcMailCenter.Resource@nrc.gov>; RidsEdoMailCenter Resource <RidsEdoMailCenter.Resource@nrc.gov>; Clark, Theresa <Theresa.Clark@nrc.gov>
Subject: Memorandum From: V. McCree to G. Holahan re: Charter for Backfit Appeal Review Panel Associated with Byron and Braidwood Compliance with 10 CFR 50.34(B), GDC 15, GDC 21, GDC 29, and the Licensing Basis

Dated: June 22, 2016

From: V. McCree

Publicly Available in ADAMS

View ADAMS P8 Properties ML16173A311
Open ADAMS P8 Document (Charter for Backfit Appeal Review Panel Associated With Byron and Braidwood Compliance with 10 CFR 50.34(B), GDC 15, GDC 21, GDC 29, and the Licensing Basis)

Thanks,

Deanna Royer
Administrative Assistant to
Fred Miller, Acting Director
Samuel Lee, Acting Deputy Director
Division of Program Management,
Policy Development and Analysis
(301) 415-1207
T-06/F11
Mailstop: T-06/F15

From: Holahan, Gary
Sent: Thursday, July 07, 2016 12:40 PM
To: Clark, Theresa; West, Steven; Scarbrough, Thomas; Spencer, Michael
Subject: Re: Memorandum From: V. McCree to G. Holahan re: Charter for Backfit Appeal Review Panel Associated with Byron and Braidwood Compliance with 10 CFR 50.34(B), GDC 15, GDC 21, GDC 29, and the Licensing Basis

Thanks, Steve and Theresa

On: 07 July 2016 10:19, "Clark, Theresa" <Theresa.Clark@nrc.gov> wrote:

I'll add him to the appointment later today. Thanks!

On: 07 July 2016 10:18, "West, Steven" <Steven.West@nrc.gov> wrote:
Gary,

I am on travel next week, but suggest you invite Rich, even if it is for a preliminary discussion about what the panel is dealing with and the type and level of support we might need to complete our review. This would allow Rich to develop a feel for the RES resources and time needed. Also, our request to RES may also require coordination with/assistance for Mike Case's division. Rich can help with this as well.

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: Holahan, Gary
Sent: Thursday, July 07, 2016 9:55 AM
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: Fwd: Memorandum From: V. McCree to G. Holahan re: Charter for Backfit Appeal Review Panel Associated with Byron and Braidwood Compliance with 10 CFR 50.34(B), GDC 15, GDC 21, GDC 29, and the Licensing Basis

How about inviting Rich to a panel meeting next week?

Gary

From: "West, Steven" <Steven.West@nrc.gov>
Subject: RE: Memorandum From: V. McCree to G. Holahan re: Charter for Backfit Appeal Review Panel Associated with Byron and Braidwood Compliance with 10 CFR 50.34(B), GDC 15, GDC 21, GDC 29, and the Licensing Basis
Date: 07 July 2016 09:12
To: "Correia, Richard" <Richard.Correia@nrc.gov>
Cc: "Holahan, Gary" <Gary.Holahan@nrc.gov>

The appeal panel is still in the discovery phase. It's highly likely that we'll ask for RES assistance as summarized in my original email, below, but we are not quite ready yet.

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: Correia, Richard
Sent: Thursday, July 07, 2016 7:07 AM
To: West, Steven <Steven.West@nrc.gov>
Subject: RE: Memorandum From: V. McCree to G. Holahan re: Charter for Backfit Appeal Review Panel Associated with Byron and Braidwood Compliance with 10 CFR 50.34(B), GDC 15, GDC 21, GDC 29, and the Licensing Basis

Good morning Steve,

Any updates on this appeal and whether you still want our technical assistance?

Best

Rich

Richard P. Correia, P.E.
Director, Division of Risk Analysis
Office of Nuclear Regulatory Research
U.S. NRC

From: Correia, Richard
Sent: Friday, June 24, 2016 6:38 AM
To: West, Steven <Steven.West@nrc.gov>
Cc: Weber, Michael <Michael.Weber@nrc.gov>; Holahan, Gary <Gary.Holahan@nrc.gov>; Case, Michael <Michael.Case@nrc.gov>; Webber, Kimberly <Kimberly.Webber@nrc.gov>; Thaggard, Mark <Mark.Thaggard@nrc.gov>; Hackett, Edwin <Edwin.Hackett@nrc.gov>
Subject: RE: Memorandum From: V. McCree to G. Holahan re: Charter for Backfit Appeal Review Panel Associated with Byron and Braidwood Compliance with 10 CFR 50.34(B), GDC 15, GDC 21, GDC 29, and the Licensing Basis

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Tom,
Michael,

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I will send scheduler requests to check your availability today and next week.

Thanks in advance for your support,

Gary

From: Royer, Deanna
Sent: Thursday, June 23, 2016 10:01 AM
To: Holahan, Gary <Gary.Holahan@nrc.gov>; West, Steven <Steven.West@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>
Cc: RidsNroMailCenter Resource <RidsNroMailCenter.Resource@nrc.gov>; RidsNrrOd Resource <RidsNrrOd.Resource@nrc.gov>; RidsRgn3MailCenter Resource <RidsRgn3MailCenter.Resource@nrc.gov>; RidsOgcMailCenter Resource <RidsOgcMailCenter.Resource@nrc.gov>; RidsEdoMailCenter Resource <RidsEdoMailCenter.Resource@nrc.gov>; Clark, Theresa <Theresa.Clark@nrc.gov>
Subject: Memorandum From: V. McCree to G. Holahan re: Charter for Backfit Appeal Review Panel Associated with Byron and Braidwood Compliance with 10 CFR 50.34(B), GDC 15, GDC 21, GDC 29, and the Licensing Basis

Dated: June 22, 2016

From: V. McCree

Publicly Available in ADAMS

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Thanks,

Deanna Royer
Administrative Assistant to
Fred Miller, Acting Director
Samuel Lee, Acting Deputy Director
Division of Program Management,
Policy Development and Analysis

Steve,

We will be ready to support your request and look forward to working with you and Gary on this matter.

Best

Rich

Richard P. Correia, P.E.
Director, Division of Risk Analysis
Office of Nuclear Regulatory Research
U.S. NRC

From: West, Steven
Sent: Thursday, June 23, 2016 6:13 PM
To: Correia, Richard <Richard.Correia@nrc.gov>
Cc: Weber, Michael <Michael.Weber@nrc.gov>; Holahan, Gary <Gary.Holahan@nrc.gov>; Case, Michael <Michael.Case@nrc.gov>; Webber, Kimberly <Kimberly.Webber@nrc.gov>; Thaggard, Mark <Mark.Thaggard@nrc.gov>
Subject: FW: Memorandum From: V. McCree to G. Holahan re: Charter for Backfit Appeal Review Panel Associated with Byron and Braidwood Compliance with 10 CFR 50.34(B), GDC 15, GDC 21, GDC 29, and the Licensing Basis

Rich,

Following (and attached) is the information on the backfit appeal I am working on. I appreciate your commitment to support the panel's effort to better understand and characterize the safety and risk significance of the plant configuration. Gary Holahan or I will be in touch after we gather our thoughts and have a better idea about specific objectives and needs. As I mentioned to you, we will probably be looking for some transient analyses and risk assessments (using SPAR models).

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: Holahan, Gary
Sent: Thursday, June 23, 2016 10:44 AM
To: West, Steven <Steven.West@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>
Cc: Clark, Theresa <Theresa.Clark@nrc.gov>
Subject: FW: Memorandum From: V. McCree to G. Holahan re: Charter for Backfit Appeal Review Panel Associated with Byron and Braidwood Compliance with 10 CFR 50.34(B), GDC 15, GDC 21, GDC 29, and the Licensing Basis

(301) 415-1207
T-06/F11
Mailstop: T-06/F15

Subject:	backfit appeal panel
Location:	O-16B6
Start:	Tue 07/12/2016 1:00 PM
End:	Tue 07/12/2016 2:00 PM
Recurrence:	(none)
Meeting Status:	Accepted
Organizer:	CLARK, THERESA V
Required Attendees:	HOLAHAN, GARY M; WEST, Steven S; SCARBROUGH, THOMAS G; SPENCER, MICHAEL A

Note that Tom is (b)(6), but others appear to be OK for this one.

[FYI didn't schedule for 7/7 as there wasn't a good time for all.]

From: Correia, Richard
Sent: Thursday, July 07, 2016 12:42 PM
To: Clark, Theresa; Holahan, Gary; West, Steven; Scarbrough, Thomas; Spencer, Michael
Subject: RE: backfit appeal panel

Don't worry about my schedule Theresa. I can easily adjust.

Rich

Richard P. Correia, P.E.
Director, Division of Risk Analysis
Office of Nuclear Regulatory Research
U.S. NRC

-----Original Appointment-----
From: Clark, Theresa
Sent: Thursday, July 07, 2016 12:18 PM
To: Holahan, Gary; West, Steven; Scarbrough, Thomas; Spencer, Michael; Correia, Richard
Subject: backfit appeal panel
When: Thursday, July 14, 2016 10:30 AM-11:30 AM (UTC-05:00) Eastern Time (US & Canada).
Where: O-16B2

Note that Steve will be on travel, but looks good for the rest. I shifted by half an hour so that Rich can join us for the second part (I think he has a meeting till 11).

From: Holahan, Gary
Sent: Wednesday, July 13, 2016 7:37 AM
To: Clark, Theresa; West, Steven
Cc: Scarbrough, Thomas; Spencer, Michael
Subject: RE: CRGR Time Slot

With CRGR members only. We will talk to NRR separately. Best not to get involved in the normal CRGR business with NRR on a specific issue.

Gary

From: Clark, Theresa
Sent: Tuesday, July 12, 2016 6:27 PM
To: Holahan, Gary <Gary.Holahan@nrc.gov>; West, Steven <Steven.West@nrc.gov>
Cc: Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>
Subject: Re: CRGR Time Slot

Meeting is with CRGR only or with the staff who would have come to talk about the RIS? I got confused by the "the staff" below. Either is probably fine (and both may be needed eventually) but different topics.

On: 12 July 2016 18:19, "Holahan, Gary" <Gary.Holahan@nrc.gov> wrote:

Yes, I think it would be good to keep CRGR informed of our efforts and early insights.

Gary

From: West, Steven
Sent: Tuesday, July 12, 2016 6:13 PM
To: Holahan, Gary <Gary.Holahan@nrc.gov>
Subject: Fwd: CRGR Time Slot

Gary,

Want to meet with the staff?

Steve

-------- Original Message --------
From: "Hackett, Edwin" <Edwin.Hackett@nrc.gov>
Date: Tue, July 12, 2016 1:45 PM -0500
To: "West, Steven" <Steven.West@nrc.gov>
CC: "Cupidon, Les" <Les.Cupidon@nrc.gov>, "Difrancesco, Nicholas" <Nicholas.DiFrancesco@nrc.gov>
Subject: CRGR Time Slot

Hi Steve,

Per your previous email, are you and Gary still potentially interested in using the time slot we originally reserved for the CRGR meeting on Rev. 1 of RIS-2005-29? (July 21, 3-5 p.m.)

Ed

From: West, Steven
Sent: Thursday, June 23, 2016 6:00 PM
To: Hackett, Edwin <Edwin.Hackett@nrc.gov>; DiFrancesco, Nicholas <Nicholas.DiFrancesco@nrc.gov>
Cc: Cupidon, Les <Les.Cupidon@nrc.gov>; Moore, Scott <Scott.Moore@nrc.gov>; McDermott, Brian <Brian.McDermott@nrc.gov>; Williamson, Edward <Edward.Williamson@nrc.gov>; Ordaz, Vonna <Vonna.Ordaz@nrc.gov>; Munday, Joel <Joel.Munday@nrc.gov>; Wert, Leonard <Leonard.Wert@nrc.gov>; Holahan, Gary <Gary.Holahan@nrc.gov>; Clark, Theresa <Theresa.Clark@nrc.gov>
Subject: RE: FYI - Backfit Panel Being Formed by OEDO
Importance: High

Ed,

If you haven't heard, I also "volunteered" to serve on the backfit appeal panel. I did not weigh in on your question about the CRGR meeting with the staff pending the appeal panel's kickoff meeting. We met this afternoon.

The panel will also be reviewing the proposed revision to the RIS. During our kickoff meeting, among other things, we discussed coordination of the panel's review with CRGR's review. In the short time available, we did not decide on any specific course of action, but agree that it was worthy of further discussion. Before you change the CRGR's plans or cancel you meeting with the staff, I suggest you touch base with Gary and perhaps, if Gary agrees, come to one of our panel meetings to discuss with the entire appeal panel. One idea floated was that the appeal panel could take the CRGR's time slot with the staff.

Steve

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

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

Edwin M. Hackett
Deputy Director, Office of Nuclear Regulatory Research
USNRC

301-415-1904
edwin.hackett@nrc.gov

Subject:	backfit appeal panel
Location:	O-16B2
Start:	Thu 07/14/2016 10:30 AM
End:	Thu 07/14/2016 11:30 AM
Recurrence:	(none)
Meeting Status:	Accepted
Organizer:	Clark, Theresa
Required Attendees:	HOLAHAN, GARY M; WEST, Steven S; SCARBROUGH, THOMAS G; SPENCER, MICHAEL A; Correia, Richard

Note that Steve will be on travel, but looks good for the rest. I shifted by half an hour so that Rich can join us for the second part (I think he has a meeting till 11).

Subject: Exelon backfit discussion
Location: HQ-OWFN-16B06-12p

Start: Mon 07/18/2016 12:30 PM
End: Mon 07/18/2016 1:30 PM

Recurrence: (none)

Meeting Status: Accepted

Organizer: Clark, Theresa
Required Attendees: McGinty, Tim; DSSCAL Resource; Holahan, Gary; West, Steven; Scarbrough, Thomas; Spencer, Michael

Hi Tim,

Thanks for being willing to meet with the EDO's appeal panel for the Exelon backfit. As we discussed on the phone, you can bring staff if you would like to. However, you may not feel the need at this point—we are intending for this to be a casual conversation about the technical issues that led to the backfit and aren't sending any preparatory materials/questions. If we need further discussions (e.g., with particular staff) after this we can certainly do that.

Also—I know this isn't a great time (and Steve has a potential conflict) but getting another time in the next two weeks was nigh on impossible. Let me know if it is really bad timing for you. Thanks!

Background References:

- Appeal panel charter: ML16173A311
- 6/16/16 NEI letter supporting Exelon backfit appeal to EDO: [attached, not yet in ADAMS]
- 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

2d item is ML16208A008, which is publicly available in ADAMS

All documents listed are publicly available in ADAMS

From: Spencer, Michael
Sent: Monday, July 18, 2016 2:42 PM
To: West, Steven
Subject: Thursday Backfit Panel Meeting

Steve, you mentioned a meeting on Thursday, but no such meeting is on my calendar. If the Thursday meeting is for the backfit panel, could you forward that to me?

Michael

Subject:	Exelon backfit appeal w/ GSM
Location:	EDO-OWFN-16B02-12p
Start:	Tue 07/19/2016 1:00 PM
End:	Tue 07/19/2016 2:00 PM
Recurrence:	(none)
Meeting Status:	Accepted
Organizer:	Clark, Theresa
Required Attendees:	HOLAHAN, GARY M; SCARBROUGH, THOMAS G; WEST, Steven S; SPENCER, MICHAEL A; Mizuno, Geary

Good morning!

As discussed between Margie and Gary, the backfit appeal panel for the Byron/Braidwood PSV/PORV backfit would like to discuss the initial backfit review process with Geary Mizuno. This looks like the only time in the near-term that will work for most. (Steve, I know you have a meeting but am hoping you might be able to reschedule or have Brian cover it.)

I don't believe any prep/questions/materials are needed (just a chat) but others on the panel can correct me.

Thanks,
Theresa

From: Clark, Theresa
Sent: Thursday, July 14, 2016 4:58 PM
To: Holahan, Gary; West, Steven; Scarbrough, Thomas; Spencer, Michael
Subject: RE: Meeting with NRR

agree

From: Holahan, Gary
Sent: Thursday, July 14, 2016 4:57 PM
To: Clark, Theresa <Theresa.Clark@nrc.gov>; West, Steven <Steven.West@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>
Subject: RE: Meeting with NRR

No, that might look too demanding...

From: Clark, Theresa
Sent: Thursday, July 14, 2016 4:55 PM
To: Holahan, Gary <Gary.Holahan@nrc.gov>; West, Steven <Steven.West@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>
Subject: RE: Meeting with NRR

Thanks, do you want me to include them in the appointment / share with him?

From: Holahan, Gary
Sent: Thursday, July 14, 2016 4:52 PM
To: Clark, Theresa <Theresa.Clark@nrc.gov>; West, Steven <Steven.West@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>
Subject: RE: Meeting with NRR

Yes, please set up the meeting. I read Tom's questions and think a discussion around them (not a formal "please respond to the following...") will be good.

Gary

From: Clark, Theresa
Sent: Thursday, July 14, 2016 4:50 PM
To: Holahan, Gary <Gary.Holahan@nrc.gov>; West, Steven <Steven.West@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>
Subject: RE: Meeting with NRR

Not yet—I was about to schedule but was going to ask if you wanted me to do that before we had the list of questions settled.

From: Holahan, Gary
Sent: Thursday, July 14, 2016 4:49 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: Meeting with NRR

All,

Do we have a meeting NRR (Tim McGinty) set up yet? I don't want our CRGR discussion to get too far ahead of an NRR meeting.

Gary

From: Holahan, Gary
Sent: Tuesday, July 19, 2016 3:33 PM
To: Spencer, Michael
Cc: West, Steven; Clark, Theresa; Scarbrough, Thomas
Subject: RE: Exelon Backfit Appeal

Yes, I'm about to add it to the references also…

From: Spencer, Michael
Sent: Tuesday, July 19, 2016 3:30 PM
To: Holahan, Gary <Gary.Holahan@nrc.gov>
Cc: West, Steven <Steven.West@nrc.gov>; Clark, Theresa <Theresa.Clark@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>
Subject: RE: Exelon Backfit Appeal

Gary, could you forward this to us? Michael

From: Holahan, Gary
Sent: Tuesday, July 19, 2016 3:27 PM
To: Gody, Tony <Tony.Gody@nrc.gov>
Cc: 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: RE: Exelon Backfit Appeal

Tony,

Thanks for the document… very relevant to the backfit appeal panel effort. Although the panel has not made any final decisions yet, we did meet with NRR management yesterday and asked the "why did NRR not pursue a generic issue resolution?" question.

We'll keep you informed of the recommendation we forward to the EDO.

Thanks again,

Gary

From: Gody, Tony
Sent: Tuesday, July 19, 2016 8:51 AM
To: Holahan, Gary <Gary.Holahan@nrc.gov>
Subject: Exelon Backfit Appeal

Gary,

I understand that this email is unsolicited and you do not have to act on the attached information. I am providing this memorandum to you for your consideration if you deem it appropriate.

Tony Gody, Director
Division of Reactor Safety
Region II

(404) 997-4600

U.S.NRC

Protecting People and the Environment

From: West, Steven
Sent: Tuesday, July 19, 2016 5:36 PM
To: Holahan, Gary; Clark, Theresa; Scarbrough, Thomas; Spencer, Michael
Subject: RE: Exelon Backfit Appeal

I'd say this is definitely relevant information and germane to our review.

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: Holahan, Gary
Sent: Tuesday, July 19, 2016 3:34 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: FW: Exelon Backfit Appeal

From: Gody, Tony
Sent: Tuesday, July 19, 2016 8:51 AM
To: Holahan, Gary <Gary.Holahan@nrc.gov>
Subject: Exelon Backfit Appeal

Gary,

I understand that this email is unsolicited and you do not have to act on the attached information. I am providing this memorandum to you for your consideration if you deem it appropriate.

Tony Gody, Director
Division of Reactor Safety
Region II
(404) 997-4600

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

Subject:	Exelon backfit appeal discussion with NRR/DE
Location:	O-16B2
Start:	Wed 07/20/2016 12:30 PM
End:	Wed 07/20/2016 1:30 PM
Recurrence:	(none)
Meeting Status:	Accepted
Organizer:	Clark, Theresa
Required Attendees:	Holahan, Gary; West, Steven; Scarbrough, Thomas; Spencer, Michael; Lubinski, John; Alley, David; Billerbeck, John

Hi all,

As noted by email, following their meeting with DSS earlier today, the EDO-level appeal panel for the Exelon backfit (Byron/Braidwood PORV/PSV) would like to meet with DE management/staff for an informal discussion of your review role in the 2015 backfit letter and associated inputs.

I know this isn't a perfect time for everyone so I appreciate your patience and willingness to meet. Thanks so much!

Theresa

Subject: Canceled: backfit appeal panel
Location: O-16B2

Start: Wed 07/20/2016 1:00 PM
End: Wed 07/20/2016 2:00 PM
Show Time As: Free

Recurrence: (none)

Meeting Status: Not yet responded

Organizer: Clark, Theresa

Importance: High

** cancelling just the old appointment – NRR/DE appointment stands, and we'll have the room till 2 if we need it **

From: Holahan, Gary
Sent: Wednesday, July 20, 2016 11:24 AM
To: West, Steven; Clark, Theresa; Scarbrough, Thomas; Spencer, Michael
Subject: Panel meeting with ...

All,

I know scheduling meetings is difficult. However, I have been thinking that a meeting with Frank Akstulewicz would be appropriate. He was the responsible manager (and last staff member still here) who supposedly made the "mistake". I'm not even sure that he knows that NRR has declared that the 2001 (and 2004) safety evaluations were "mistakes".

Even if we don't learn anything new, it doesn't seem fair not to hear from Frank... and think about what it might mean if he actually agreed that he (and staff) made a mistake!

Think about it so we can discuss at 12:30 today.

Gary

Subject:	Confirmed: CRGR Formal Review of Review of RIS 2005-29, Rev. 1 "Anticipated Transients That Could Develop Into More Serious Events"
Location:	HQ-TWFN-02B01-ACRS Room
Start:	Thu 07/21/2016 3:00 PM
End:	Thu 07/21/2016 5:00 PM
Recurrence:	(none)
Meeting Status:	Accepted
Organizer:	Cupidon, Les
Required Attendees:	Cupidon, Les; Munday, Joel; Mcdermott, Brian; Williamson, Edward; Wert, Leonard; Ordaz, Vonna; West, Steven; Hackett, Edwin; Mensah, Tanya; Whitman, Jennifer; Oesterle, Eric; Stuchell, Sheldon; Garmoe, Alex; Difrancesco, Nicholas; Mcginty, Tim; Taylor, Robert
Optional Attendees:	Borromeo, Joshua; DSSCAL Resource; Spencer, Michael; Clark, Theresa

When: Thu, Jul 21, 2016, 3:00 PM
Where: T-2B1 (ACRS Room)
--
I have cancelled the June 16th date. We will meet in the ACRS conference room T2B1.

From: Spencer, Michael
Sent: Thursday, July 21, 2016 4:13 PM
To: Holahan, Gary; Clark, Theresa
Subject: Our records do not show an SRM for SECY-77-439. NFM

Michael

From: Scarbrough, Thomas
Sent: Monday, July 25, 2016 3:00 PM
To: Holahan, Gary; West, Steven; Clark, Theresa; Spencer, Michael
Subject: RE: safety valves

I will be there.

Thanks.
Tom

From: Holahan, Gary
Sent: Monday, July 25, 2016 2:36 PM
To: Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; West, Steven <Steven.West@nrc.gov>; Clark, Theresa <Theresa.Clark@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>
Subject: RE: safety valves

We should talk... tomorrow at 2pm

From: Scarbrough, Thomas
Sent: Monday, July 25, 2016 12:56 PM
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: safety valves

If the NRC staff accepts the justification provided by a licensee that a safety valve will not stick open, then the a stuck-open safety valve would be counted as the single failure in the accident analysis. Therefore, the licensee would not be required to assume another failure (such as losing one ECCS train). This was the result of the staff position for the Byron/Braidwood Stretch Power Uprate that the safety valve would not stick open based on the EPRI test data.

In the backfit decision, the staff is taking the position that a stuck-open safety valve can only be counted as the single failure if the valve is qualified per the ASME BPV Code (which would include liquid service certification). Otherwise, the safety valve is assumed to stick open as a consequential failure caused by water relief.

In answer to your question, the capability of a safety valve to reseat under liquid service needs to be justified by the licensee for a stuck-open safety valve to be counted as the single failure in the accident analysis.

Thanks.
Tom

From: Holahan, Gary
Sent: Monday, July 25, 2016 12:18 PM
To: Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; West, Steven <Steven.West@nrc.gov>; Clark, Theresa <Theresa.Clark@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>
Subject: RE: safety valves

Thanks, Tom. Closer, understand that the "could" means "would have to be considered as a single failure (not a consequential failure)". Are you also saying that a stuck-open SV "is a legitimate single failure" or "would

need to be justified as a single failure" or "is not usually assumed as a single failure" or "there's no standard assumption"?

I think the answer will get s very close to a final position,

Gary

From: Scarbrough, Thomas
Sent: Monday, July 25, 2016 11:18 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: safety valves

Gary,

I used the phrase "could be considered a single failure" because the NRC staff made this finding (at least implicitly) as part of its review of the Byron/Braidwood Stretch Power Uprate. The staff at that time assumed that the safety valves would reseat with liquid service. Therefore, the staff would have considered the failure of a safety valve to reseat to be the single failure in an accident analysis.

Thanks.
Tom

From: Holahan, Gary
Sent: Monday, July 25, 2016 11:01 AM
To: Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; West, Steven <Steven.West@nrc.gov>; Clark, Theresa <Theresa.Clark@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>
Subject: RE: safety valves

Thanks Tom. Very helpful.

One sentence confused me [3rd sentence of the last paragraph]:

"*In the case of a safety valve, I believe that the failure to reclose could be considered a single failure if the NRC staff accepted the justification provided by the licensee that the valve will reliably reseat.*"

I understand the rest of the paragraph and the "Therefore…", but the *"could be considered a single failure"* has me confused.

Gary

From: Scarbrough, Thomas
Sent: Monday, July 25, 2016 10:16 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: safety valves

Gary,

I agree that the vendor and ASME documents do not provide specific discussion regarding the potential for safety valves to stick open. However, the design and qualification of a safety valve must include its ability to reliably reclose. For example, the Crosby Engineering Handbook includes specific references to reclosing and

A passive failure in a fluid system means a breach in the fluid pressure boundary or a mechanical failure which adversely affects a flow path. Examples include the failure of a simple check valve to move to its correct position when required, the leakage of fluid from failed components, such as pipes and valves--particularly through a failed seal at a valve or pump--or line blockage. Motor-operated valves which have the source of power locked out are allowed to be treated as passive components.

In the study of passive failures it is current practice to assume fluid leakage owing to gross failure of a pump or valve seal during the long term cooling mode following a LOCA (24 hours or greater after the event) but not pipe breaks. No other passive failures are required to be assumed because it is judged that compounding of probabilities associated with other types of passive failures, following the pipe break associated with a LOCA, results in probabilities sufficiently small that they can be reasonably discounted without substantially affecting overall systems reliability.

It should be noted that components important to safety are designed to withstand hazardous events such as earthquakes. Nevertheless, in keeping with the defense in depth approach, the staff does consider the effects of certain passive failures (e.g., check valve failure, medium or high energy pipe failure, valve stem or bonnet failure) as potential accident initiating events.

Thus, the NRC staff allows check valves to be assumed to be passive components in certain instances under the Single Failure Criterion described in SECY-77-439.

With respect to squib valves, the NRC staff raised concerns during AP1000 vendor inspections regarding the potential for squib valves to open inadvertently. In response, Westinghouse has included blocking features to avoid inadvertent opening of squib valves. AP1000 DCD Tier 2, Section 15.6.1 includes inadvertent opening of Stage 1 ADS valves (MOVs), but not Stage 4 ADS valves (squib valves). Therefore, the inadvertent opening of the ADS squib valves would be an example where this potential would be considered a single failure.

In summary, the NRC staff allows some components to be assumed to be passive in evaluating single failures as described in SECY-77-439. I believe that the reference to "under development" in 10 CFR Part 50, Appendix A, allows the NRC staff to make a case-by-case decision for a single failure assumption for a passive fluid component, and whether a "known and established standard" can be considered to exist regarding the performance of that component. In the case of a safety valve, I believe that the failure to reclose could be considered a single failure if the NRC staff accepted the justification provided by the licensee that the valve will reliably reseat. The staff accepted the EPRI testing program for this justification for Byron and Braidwood during the Stretch Power Uprate review based on its evaluation of the EPRI test data without mandating that the safety valves be certified for liquid service by ASME and the National Board. Further, we have found a wide range of justification accepted by the NRC staff for the "qualification" of safety and relief valves for liquid service in license amendments for other nuclear power plants. Therefore, I do not consider a specific "known and established standard" has been applied by the NRC staff in evaluating the acceptability of safety and relief valves to perform with liquid service. Nevertheless, I believe that licensees should avoid water relief through safety valves because they were not originally intended for this service, and the testing program performed by EPRI was limited in the sample size of valves tested and their range of service conditions.

Thanks.
Tom

From: Holahan, Gary
Sent: Thursday, July 21, 2016 10:54 AM
To: Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; West, Steven <Steven.West@nrc.gov>; Clark, Theresa <Theresa.Clark@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>
Subject: safety valves

Tom,

reseating of its pressure relief valves. In addition, ASME Standard QME-1-2007 as accepted in RG 1.100 (Revision 3) defines a pressure relief assembly as follows:

> *pressure relief valve assembly:* a valve assembly that is designed to open to prevent a rise of internal fluid pressure, in excess of a specified value, and re-close.

Mandatory Appendix I, "Qualification Specification for Active Valves," in ASME QME-1-2007 in Section QV-I8000 states in item (h) that the specification must include blowdown (difference between set point pressure and reseating pressure).

Section QV-7660, "Functional Qualification," for safety and relief valves in ASME QME-1-2007 states that functional qualification for pressure relief valve assemblies shall be as delineated in ASME BPV Code, Section III, Subsections NB, NC, or ND 7000.

Subsection NB-7000 in ASME BPV Code (2007 Edition) addresses the reclosing of safety valves in various paragraphs. For example, item (k) in NB-7220, "Content of Report," in NB-7200, "Overpressure Protection Report," requires that the report shall include consideration of set pressure and blowdown limitations, taking into account opening pressure tolerances and overpressure of the pressure relief device. In addition, NB-7512.3, "Blowdown," for safety valve operating requirements specifies that the safety valves shall be adjusted to close after blowing down to a pressure not lower than 95% of the set pressure unless a different percentage is specified in the design specification and the basis is covered in the Overpressure Protection Report.

Therefore, the design and qualification of a safety valve include its ability to reclose reliably to be able to satisfy its blowdown requirements.

Until the TMI-2 accident, I do not believe that there was much concern regarding safety and relief valves sticking open. It was assumed that the simple spring-loaded design of safety valves provided reasonable assurance that this valve design was not subject to a significant concern regarding failure to reclose. In response to the TMI-2 accident, NUREG-0737 included "qualification" requirements to provide confidence that safety and relief valves would not stick open under various steam and liquid conditions. However, NUREG-0737 did not require that safety and relief valves be "certified" for all service conditions. The EPRI testing program in response to NUREG-0737 was limited in its extent of testing, but did confirm that a generic problem did not exist regarding safety and relief valves sticking open under various conditions.

SRP Section 15.6.1 (2007), "Inadvertent Opening of a PWR Pressurizer Pressure Relief Valve or a BWR Pressure Relief Valve," provides a requirement to evaluate an inadvertent opening of a PWR safety valve. SRP 15.6.1 states that a pressure relief valve, as defined in ANSI B95.1-1972, is a device designed to reclose and prevent further fluid flow after normal conditions are restored. The SRP section does not provide details regarding the assumption for the safety valve to stick open. However, AP1000 DCD Tier 2, Section 15.6.1, states that the "inadvertent opening of a pressurizer safety valve can only be postulated due to a mechanical failure." The AP1000 accident analysis assumes that the safety valve remains open throughout the event.

Check valves are considered passive components in some instances (such as system design) and active components in other instances (such as the IST Program). NUREG-1482 (Revision 2) states in Section 4.1 that

> SECY-77-439, "Single Failure Criterion," dated August 17, 1977, which was referenced in several plants' licensing bases, discusses the failure of a check valve to move to its correct position as a passive failure; however, this does not correspond to the issue of "active" versus "passive" for the purpose of IST.

In Section 2, SECY-77-439 (ADAMS No. ML060260236) states the following:

> D. Passive Failure in a Fluid System

This is your area... but I did check the Byron and Braidwood UFSAR and the Crosby Engineering Handbook (both added to the References). Neither speaks to safety valve re-closure as a "protection function" or even as a requirement (for either liquid or stream relief). Safety valves are clearly designed to re-close (as opposed to rupture disks and other "non-reclosure" devices), but the Code and designer requirements seem to be limited to set-points and capacities.

Could it be that "failure to close" for a simple spring-loaded safety valve to considered a "passive failure" like pipe ruptures (or a valve bonnet rupture)? ... and therefore not required or addressed in safety analyses? Are there other components or functions that we just don't address as potential single failures or consequential failures because they are considered so unlikely? Check valves?

The introduction says (in a footnote),

Single failures of passive components in electric systems should be assumed in designing against a single failure. The conditions under which a single failure of a passive component in a fluid system should be considered in designing the system against a single failure are under development.

Does "under development" sound like a "known and established standard of the Commission?"

Could the answer be related to definition of and practice on "consequential failures"? Is "not designed for" or "not certified to" the standard? Or is "not expected to function" or "not assured to function" or "not demonstrated to" the standard? Or is there no standard?

Maybe the Panel shouldn't need to be working on such fundamental issues, but there doesn't seem to be an answers for such questions...

Gary

Subject:	Exelon backfit appeal w/ FMA
Location:	T-6F34
Start:	Tue 07/26/2016 2:00 PM
End:	Tue 07/26/2016 3:00 PM
Recurrence:	(none)
Meeting Status:	Accepted
Organizer:	Clark, Theresa
Required Attendees:	Akstulewicz, Frank; Holahan, Gary; WEST, Steven S; SPENCER, MICHAEL A; SCARBROUGH, THOMAS G

Hi all,

As noted by email, the EDO-level appeal panel for the Exelon backfit (Byron/Braidwood PORV/PSV) would like to meet with Frank for an informal discussion of his recollection of the original 2001 stretch power uprate that is brought up in the context of the appeal.

I know this isn't a perfect time for everyone (I think it'll be Gary, Michael, and me only with Frank) so I appreciate everyone's flexibility). Thanks so much!

Theresa

Subject: backfit appeal panel
Location: O-16B6

Start: Wed 07/27/2016 2:00 PM
End: Wed 07/27/2016 3:00 PM

Recurrence: (none)

Meeting Status: Accepted

Organizer: CLARK, THERESA V
Required Attendees: HOLAHAN, GARY M; WEST, Steven S; SCARBROUGH, THOMAS G; SPENCER, MICHAEL A

I think Steve and Tom are both out, but blocking for Gary and Michael anyway.

[FYI, only meeting this week given two all-day Commission meetings on 7/26 and 7/28.]

From: Holahan, Gary
Sent: Friday, July 29, 2016 3:00 PM
To: Scarbrough, Thomas; Spencer, Michael; Clark, Theresa; West, Steven
Subject: RE: A New attempt at "Crisp"

Thank you, Tom

From: Scarbrough, Thomas
Sent: Friday, July 29, 2016 2:59 PM
To: Spencer, Michael <Michael.Spencer@nrc.gov>; Clark, Theresa <Theresa.Clark@nrc.gov>; Holahan, Gary <Gary.Holahan@nrc.gov>; West, Steven <Steven.West@nrc.gov>
Subject: RE: A New attempt at "Crisp"

I am fine with the latest version.

Thanks.
Tom

From: Spencer, Michael
Sent: Friday, July 29, 2016 1:14 PM
To: Clark, Theresa <Theresa.Clark@nrc.gov>; Holahan, Gary <Gary.Holahan@nrc.gov>; West, Steven <Steven.West@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>
Subject: RE: A New attempt at "Crisp"

I'm happy with the document. No more comments.

From: Clark, Theresa
Sent: Friday, July 29, 2016 1:09 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: A New attempt at "Crisp"

I added that sentence in...

From: Spencer, Michael
Sent: Friday, July 29, 2016 12:16 PM
To: Holahan, Gary <Gary.Holahan@nrc.gov>; Clark, Theresa <Theresa.Clark@nrc.gov>; West, Steven <Steven.West@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>
Subject: RE: A New attempt at "Crisp"

I very much like the addition, but now I see some tension with the following sentence in the first paragraph: "The Panel concludes that in 2001 and 2004 there was no known and established standard of the Commission relating to the potential of pressurizer safety valves (PSVs) to fail following water discharge during Inadvertent Operation of Emergency Core Cooling System (ECCS) events."

Perhaps we could replace the sentence in the first paragraph with a sentence based on your addition, something like: "The panel concludes that in 2001, 2004, and at present, the known and established standard of the Commission is that the probability of failure of pressurizer safety valves (PSVs) following water

discharge during Inadvertent Operation of Emergency Core Cooling System (ECCS) should be sufficiently small based on well-informed staff engineering judgment."

Michael

From: Holahan, Gary
Sent: Friday, July 29, 2016 11:52 AM
To: Spencer, Michael <Michael.Spencer@nrc.gov>; Clark, Theresa <Theresa.Clark@nrc.gov>; West, Steven <Steven.West@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>
Subject: RE: A New attempt at "Crisp"

I agree. Re-formatting and recent comments all look very good. I accepted all and added one.

Please see the latest version in Report folder ... attempting to articulate current standard as:

... The panel concludes that the standard, for not assuming valve failure, in place in 2001, 2004 and at present is simply that the probability of failure of 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.

From: Spencer, Michael
Sent: Friday, July 29, 2016 10:49 AM
To: Clark, Theresa <Theresa.Clark@nrc.gov>; West, Steven <Steven.West@nrc.gov>; Holahan, Gary <Gary.Holahan@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>
Subject: RE: A New attempt at "Crisp"

Great job. I really like how the reformatting organizes the various points. My only comment is: on the last page there should be a space between the paragraph starting "Moreover" and the paragraph starting "The panel concludes."

Michael

From: Clark, Theresa
Sent: Friday, July 29, 2016 10:37 AM
To: West, Steven <Steven.West@nrc.gov>; Holahan, Gary <Gary.Holahan@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>
Subject: RE: A New attempt at "Crisp"

I edited/reformatted somewhat and incorporated Steve's comments. I don't think I made any substantive changes (especially that Tom would have an issue with, since he is away from his computer for most of the day) but thought some formatting might help it read better.

You may wish to view the attached in "No Markup" mode on the "Review" tab so it doesn't look messy. I already accepted all of the formatting changes.

Gary, I know you are working a version too. This one is also in the S: drive.

From: West, Steven
Sent: Friday, July 29, 2016 10:32 AM
To: Holahan, Gary <Gary.Holahan@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; Clark, Theresa

<Theresa.Clark@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>
Subject: RE: A New attempt at "Crisp"

Gary,

Nice! See my attached markup for a few corrections and suggestions.

We don't need to address it in the Crisp document, but I suggest we talk about if and how we should address the staff's apparent failure to treat this issue generically in accordance with its procedures.

Steve

-------- Original Message --------
From: "Holahan, Gary" <Gary.Holahan@nrc.gov>
Date: Fri, July 29, 2016 8:16 AM -0500
To: "Scarbrough, Thomas" <Thomas.Scarbrough@nrc.gov>, "West, Steven" <Steven.West@nrc.gov>, "Clark, Theresa" <Theresa.Clark@nrc.gov>, "Spencer, Michael" <Michael.Spencer@nrc.gov>
Subject: RE: A New attempt at "Crisp"

Thanks Tom, got it.

From: Scarbrough, Thomas
Sent: Friday, July 29, 2016 7:08 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: A New attempt at "Crisp"

I am fine with the crisp summary.

We could add another sentence at the end of the Beaver Valley 2006 paragraph to identify the wide-spread reference to the EPRI program, such as:

In addition, the panel found general references to EPRI and vendor testing for the capability of SVs and PORVs in license amendments for other nuclear power plants.

I see a few minor typographical edits (such as use of SV and PSV), but I am sure that Theresa will identify those items.

Thanks.
Tom

From: Holahan, Gary
Sent: Thursday, July 28, 2016 5:01 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: A New attempt at "Crisp"

Steve,
Tom,
Michael,
Theresa,

Please see attached. I have cut the 4-pager in half to make it a "crisp" summary of preliminary findings for OEDO, NRR, and OGC.

The longer write-ups look like good input to the final report.

Please review and comment.

Gary

From: Holahan, Gary
Sent: Friday, July 29, 2016 3:51 PM
To: West, Steven; Clark, Theresa; Scarbrough, Thomas; Spencer, Michael
Subject: Preliminary Findings

Panel,

Thanks to all outstanding (preliminary) effort. I plan on delivering the 7/29/16 3pm version to Vic, Mike, and Glenn on Monday morning.

… And then deliver it to NRR and OGC on Tuesday, if we don't get OEDO comments.

Gary

From: Johnson, Michael
Sent: Sunday, July 31, 2016 9:10 AM
To: Holahan, Gary; Mccree, Victor; Tracy, Glenn; Dean, Bill; Lubinski, John; Mcginty, Tim; Akstulewicz, Frank; Doane, Margaret
Cc: Hackett, Edwin; West, Steven; Clark, Theresa; Scarbrough, Thomas; Spencer, Michael; Evans, Michele; Mcdermott, Brian; Williamson, Edward; Mizuno, Geary; Shuaibi, Mohammed
Subject: RE: Preliminary Findings of the Exelon Backfit Panel - ~~OUO- Pre-decisional - Internal NRC Use Only~~ -

Thanks Gary.

From: Holahan, Gary
Sent: Friday, July 29, 2016 1:58 PM
To: Mccree, Victor <Victor.McCree@nrc.gov>; Johnson, Michael <Michael.Johnson@nrc.gov>; Tracy, Glenn <Glenn.Tracy@nrc.gov>; 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>
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>; Mcdermott, Brian <Brian.McDermott@nrc.gov>; Williamson, Edward <Edward.Williamson@nrc.gov>; Mizuno, Geary <Geary.Mizuno@nrc.gov>; Shuaibi, Mohammed <Mohammed.Shuaibi@nrc.gov>
Subject: Preliminary Findings of the Exelon Backfit Panel - ~~OUO- Pre-decisional - Internal NRC Use Only~~
Importance: High

Vic,
Margie,
Mike,
Glenn,
Bill,
John,
Tim,
Frank,

Based on a review of more than 50 documents (covering a period from 1971 to the present), and discussions with OGC staff, NRR staff , former NRR staff, and the CRGR, the Exelon Backfit Panel has developed Preliminary findings that it believes should be shared with NRC internal stakeholders.

Here is the Exelon Backfit Panel's roll-out plan for completing its work:

8/1/16 Provide Preliminary Findings to OEDO for information and feedback on scope and depth-of-review and other expectations
8/2/16 Provide Preliminary Findings to NRR (and former NRR staff) and OGC for completeness and accuracy …"fact checking"
8/9/16 Collect any comments
819/16 RES provides insights on risk and safety significance
8/19/16 Prepare Draft final Report with findings, response to questions, and recommendations.

8/29/16 Provide final Report to EDO

The Panel will be available for discussion of any issues or concerns during the weeks of 8/1/16 and 8/8/16.

Gary

From: Holahan, Gary
Sent: Thursday, August 04, 2016 4:07 PM
To: Spencer, Michael; West, Steven; Scarbrough, Thomas; Clark, Theresa
Subject: RE: Things to review

Very good,
Thanks,
Yes we need RES for Q5

All,

Please work hard while I'm of tomorrow,

Gary

From: Spencer, Michael
Sent: Thursday, August 04, 2016 4:02 PM
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: RE: Things to review

I have provided comments on the cover memo, which is saved on the S:drive. I suggest that we include brief responses to the 5 questions the EDO asked us. I have copied the questions and suggested brief responses to the first four of them (based in large part on discussion already developed). Presumably, we need to wait on RES to answer the 5th question.

Michael

From: Holahan, Gary
Sent: Wednesday, August 03, 2016 4:58 PM
To: West, Steven <Steven.West@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; Clark, Theresa <Theresa.Clark@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>
Subject: Things to review

Steve,
Tom,
Michael,
Theresa,

I have taken the Preliminary Findings document and incorporated it into a "Discussion" section. I added text to make it read like a report (no changes to findings or conclusions). Please review at Reports / Backfit Appeal Report 2016 08 03 2pm.

Next I will start on the Enclosures (and the sections referring to them).

I have also drafted (first draft...) a memo to Vic presenting the report. Please review at Reports / Cover memo Backfit Appeal Panel 2016 08 03 2pm.

Gary

P.S. I told Vic that I promoted you to team member, so he won't be surprise to see your name on the cover memo.

From: Holahan, Gary
Sent: Monday, August 08, 2016 12:59 PM
To: West, Steven; Spencer, Michael; Clark, Theresa; Scarbrough, Thomas
Subject: RE: backfit appeal panel meeting

I have not heard that NRR is ready to withdraw the backfit. I'm expecting technical comments.

I have not heard any requests for a meeting either.

If they do have comments, we should consider having a meeting with them (whether they ask or not).

Gary

From: West, Steven
Sent: Monday, August 08, 2016 12:45 PM
To: Spencer, Michael <Michael.Spencer@nrc.gov>; Clark, Theresa <Theresa.Clark@nrc.gov>; Holahan, Gary <Gary.Holahan@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>
Subject: RE: backfit appeal panel meeting

That's an interesting question. Presumably, if that were to happen, we would still document the results of our review? (I heard through the grapevine that NRR was preparing comments, but nothing about the nature of those comments.)

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: Spencer, Michael
Sent: Monday, August 08, 2016 12:42 PM
To: Clark, Theresa <Theresa.Clark@nrc.gov>; Holahan, Gary <Gary.Holahan@nrc.gov>; West, Steven <Steven.West@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>
Subject: RE: backfit appeal panel meeting

Is there any hint as to whether NRR will withdraw the backfit?

From: Clark, Theresa
Sent: Monday, August 08, 2016 12:33 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: backfit appeal panel meeting

I'll see what I can find. August 10 was looking messy when I checked over the weekend.

I think there might be a few items from the report to discuss even in the absence of comments. NRR said this morning we'd have them tomorrow or Wednesday.

From: Spencer, Michael
Sent: Monday, August 08, 2016 12:31 PM
To: Clark, Theresa <Theresa.Clark@nrc.gov>; Holahan, Gary <Gary.Holahan@nrc.gov>; West, Steven <Steven.West@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>
Subject: RE: backfit appeal panel meeting

We had requested comments by tomorrow. Unless we have already received NRR's comments, then it might be better to meet on August 10 so we could discuss any comments we receive tomorrow.

Michael

-----Original Appointment-----
From: Clark, Theresa
Sent: Saturday, August 06, 2016 11:23 PM
To: Clark, Theresa; Holahan, Gary; West, Steven; Spencer, Michael; Scarbrough, Thomas
Subject: backfit appeal panel meeting
When: Tuesday, August 09, 2016 11:00 AM-12:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: HQ-OWFN-11B02-12p

Just realized we didn't have any more meetings scheduled!

T

From: Holahan, Gary
Sent: Monday, August 08, 2016 1:11 PM
To: West, Steven; Clark, Theresa; Scarbrough, Thomas; Spencer, Michael
Subject: RE: Things to review

Now that there is a "clean" Saturday version to work from (thanks, Theresa), I think further review and comment is OK.

Gary

From: West, Steven
Sent: Monday, August 08, 2016 1:03 PM
To: Holahan, Gary <Gary.Holahan@nrc.gov>; Clark, Theresa <Theresa.Clark@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>
Subject: RE: Things to review

Would it be better for us to hold off commenting until after you complete your current review and revision?

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: Holahan, Gary
Sent: Monday, August 08, 2016 10:34 AM
To: Clark, Theresa <Theresa.Clark@nrc.gov>; West, Steven <Steven.West@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>
Subject: RE: Things to review

Theresa,

Thank you. The report looks great. I'm re-reading and fillig in the blanks and references as I go.

Gary

From: Clark, Theresa
Sent: Saturday, August 06, 2016 11:27 PM
To: Holahan, Gary <Gary.Holahan@nrc.gov>; West, Steven <Steven.West@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>
Subject: RE: Things to review

Note: The blackened out texxt actually is pink highlighting in the original. The highlighted words are "pink highlights."

Gentlemen,

We're really getting there. I took the files prepared to date (memo including Michael's comments, Gary's report file, and Tom's enclosures file) and created two clean files that have been formatted, edited, and otherwise prettified and such. I added some comments in the margin where I wasn't quite sure about things. Yellow highlights are for references that will need to (eventually) be put into a single format with a single list at the end—my next big project, I think. [redacted] are inserts for the future.

- S:\Backfit-Appeal\Report\cover memo (clean as of 2016 08 06 11pm).docx
- S:\Backfit-Appeal\Report\Backfit Appeal Panel Report (clean as of 2016 08 06 11pm).docx

Just because it looks all nice doesn't mean it's done (or that my edits were necessarily correct—note that we can do a compare to the last version if needed, since I accepted all of the messy changes). But, like I said, getting there. I just set up a meeting for Tuesday since we didn't have any more on the calendar, and I can set more thereafter as needed.

Thanks!

--
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 03, 2016 4:58 PM
To: West, Steven <Steven.West@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; Clark, Theresa <Theresa.Clark@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>
Subject: Things to review

Steve,
Tom,
Michael,
Theresa,

I have taken the Preliminary Findings document and incorporated it into a "Discussion" section. I added text to make it read like a report (no changes to findings or conclusions). Please review at Reports / Backfit Appeal Report 2016 08 03 2pm.

Next I will start on the Enclosures (and the sections referring to them).

I have also drafted (first draft...) a memo to Vic presenting the report. Please review at Reports / Cover memo Backfit Appeal Panel 2016 08 03 2pm.

Gary

Subject:	backfit appeal panel meeting
Location:	HQ-OWFN-11B02-12p
Start:	Tue 08/09/2016 11:00 AM
End:	Tue 08/09/2016 12:00 PM
Recurrence:	(none)
Meeting Status:	Accepted
Organizer:	Clark, Theresa
Required Attendees:	Holahan, Gary; West, Steven; Spencer, Michael; Scarbrough, Thomas

Just realized we didn't have any more meetings scheduled!

T

Subject: backfit appeal panel
Location: HQ-OWFN 16B06-12p

Start: Thu 08/11/2016 12:00 PM
End: Thu 08/11/2016 1:00 PM

Recurrence: (none)

Meeting Status: Accepted

Organizer: Clark, Theresa
Required Attendees: Holahan, Gary; West, Steven; Scarbrough, Thomas; Spencer, Michael

This is just a placeholder. I'm fully aware that meetings at noon are inhumane. I just don't see another option if we do want to meet Thursday. More to come ☺.

Theresa

From: Clark, Theresa
Sent: Thursday, August 11, 2016 1:16 PM
To: Holahan, Gary
Cc: West, Steven; Scarbrough, Thomas; Spencer, Michael
Subject: Re: REQUEST: backfit appeal panel meeting w/ Vic

That was the intent of my "Mike may also wish to attend." He is free at the suggested time so I'll make sure Patti includes. Thanks!

On: 11 August 2016 13:14, "Holahan, Gary" <Gary.Holahan@nrc.gov> wrote:
How about inviting Mike Johnson?

From: Clark, Theresa
Sent: Thursday, August 11, 2016 1:04 PM
To: Sprogeris, Patricia <Patricia.Sprogeris@nrc.gov>
Cc: Holahan, Gary <Gary.Holahan@nrc.gov>; West, Steven <Steven.West@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>
Subject: REQUEST: backfit appeal panel meeting w/ Vic

Patti,

Can you please arrange a meeting for the backfit appeal panel (Gary Holahan, Steve West, Tom Scarbrough, and Michael Spencer) with Vic? Mike may also wish to attend. The week of August 22 would be ideal, perhaps 11am 8/24 for half an hour if Gary and Steve can make that work (others are free). Otherwise, please work your magic to find a time. Thanks!

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

From: West, Steven
Sent: Thursday, August 11, 2016 6:24 PM
To: Holahan, Gary; Correia, Richard; Scarbrough, Thomas; Spencer, Michael; Clark, Theresa
Cc: Weber, Michael; Hackett, Edwin; Thaggard, Mark; Coyne, Kevin
Subject: RE: Memorandum From: V. McCree to G. Holahan re: Charter for Backfit Appeal Review Panel Associated with Byron and Braidwood Compliance with 10 CFR 50.34(B), GDC 15, GDC 21, GDC 29, and the Licensing Basis

Looks like good airplane reading for me next week!

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: Holahan, Gary
Sent: Thursday, August 11, 2016 6:21 PM
To: West, Steven <Steven.West@nrc.gov>; Correia, Richard <Richard.Correia@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>; Clark, Theresa <Theresa.Clark@nrc.gov>
Cc: Weber, Michael <Michael.Weber@nrc.gov>; Hackett, Edwin <Edwin.Hackett@nrc.gov>; Thaggard, Mark <Mark.Thaggard@nrc.gov>; Coyne, Kevin <Kevin.Coyne@nrc.gov>
Subject: RE: Memorandum From: V. McCree to G. Holahan re: Charter for Backfit Appeal Review Panel Associated with Byron and Braidwood Compliance with 10 CFR 50.34(B), GDC 15, GDC 21, GDC 29, and the Licensing Basis

Thanks from me also, Rich.

Looks like we will be studying the report for a while.

Gary

From: West, Steven
Sent: Thursday, August 11, 2016 6:12 PM
To: Correia, Richard <Richard.Correia@nrc.gov>; Holahan, Gary <Gary.Holahan@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>; Clark, Theresa <Theresa.Clark@nrc.gov>
Cc: Weber, Michael <Michael.Weber@nrc.gov>; Hackett, Edwin <Edwin.Hackett@nrc.gov>; Thaggard, Mark <Mark.Thaggard@nrc.gov>; Coyne, Kevin <Kevin.Coyne@nrc.gov>
Subject: RE: Memorandum From: V. McCree to G. Holahan re: Charter for Backfit Appeal Review Panel Associated with Byron and Braidwood Compliance with 10 CFR 50.34(B), GDC 15, GDC 21, GDC 29, and the Licensing Basis

Thanks, Rich. This helps answer an important question and will be very helpful to the panel. Please pass on my sincere thanks to all of the contributors.

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: Correia, Richard
Sent: Thursday, August 11, 2016 5:54 PM
To: Holahan, Gary <Gary.Holahan@nrc.gov>; West, Steven <Steven.West@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>; Clark, Theresa <Theresa.Clark@nrc.gov>
Cc: Weber, Michael <Michael.Weber@nrc.gov>; Hackett, Edwin <Edwin.Hackett@nrc.gov>; Thaggard, Mark <Mark.Thaggard@nrc.gov>; Coyne, Kevin <Kevin.Coyne@nrc.gov>
Subject: Memorandum From: V. McCree to G. Holahan re: Charter for Backfit Appeal Review Panel Associated with Byron and Braidwood Compliance with 10 CFR 50.34(B), GDC 15, GDC 21, GDC 29, and the Licensing Basis
Importance: High

Gary et al.,

The attached risk assessment report addresses the Byron/Braidwood backit issue. The conclusion is that the maximum benefit from a potential backfit remedy would provide a very small reduction in risk (i.e., less than 1E-06/year). It should be noted that the analysis contained in the report was narrowly focused on the backfit question under review by the Appeal Review Board and is intended to provide additional context and insights to the Board. As such, other applications of this information may not be appropriate unless this limitation is recognized.

Please let me know if you need any additional information or if you would like a briefing.

Regards

Rich

Richard P. Correia, P.E.
Director, Division of Risk Analysis
Office of Nuclear Regulatory Research
U.S. NRC

From: Correia, Richard
Sent: Friday, August 12, 2016 9:33 AM
To: West, Steven; Holahan, Gary; Scarbrough, Thomas; Spencer, Michael; Clark, Theresa
Cc: Weber, Michael; Hackett, Edwin; Thaggard, Mark; Coyne, Kevin
Subject: Re: Memorandum From: V. McCree to G. Holahan re: Charter for Backfit Appeal Review Panel Associated with Byron and Braidwood Compliance with 10 CFR 50.34(B), GDC 15, GDC 21, GDC 29, and the Licensing Basis

You are most welcome Steve and thanks for the opportunity. Very interesting analysis. We need to do more to support decisions like this. I will pass on thanks to all.best

Rich

Richard Correia, P.E.
Director, Division of Risk Analysis
Office of Nuclear Regulatory Research
US NRC

On: 11 August 2016 18:11, "West, Steven" <Steven.West@nrc.gov> wrote:
Thanks, Rich. This helps answer an important question and will be very helpful to the panel. Please pass on my sincere thanks to all of the contributors.

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: Correia, Richard
Sent: Thursday, August 11, 2016 5:54 PM
To: Holahan, Gary <Gary.Holahan@nrc.gov>; West, Steven <Steven.West@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>; Clark, Theresa <Theresa.Clark@nrc.gov>
Cc: Weber, Michael <Michael.Weber@nrc.gov>; Hackett, Edwin <Edwin.Hackett@nrc.gov>; Thaggard, Mark <Mark.Thaggard@nrc.gov>; Coyne, Kevin <Kevin.Coyne@nrc.gov>
Subject: Memorandum From: V. McCree to G. Holahan re: Charter for Backfit Appeal Review Panel Associated with Byron and Braidwood Compliance with 10 CFR 50.34(B), GDC 15, GDC 21, GDC 29, and the Licensing Basis
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Regards

Rich

Richard P. Correia, P.E.
Director, Division of Risk Analysis
Office of Nuclear Regulatory Research
U.S. NRC

From: Correia, Richard
Sent: Friday, August 12, 2016 9:34 AM
To: Holahan, Gary; West, Steven; Scarbrough, Thomas; Spencer, Michael; Clark, Theresa
Cc: Weber, Michael; Hackett, Edwin; Thaggard, Mark; Coyne, Kevin
Subject: Re: Memorandum From: V. McCree to G. Holahan re: Charter for Backfit Appeal Review Panel Associated with Byron and Braidwood Compliance with 10 CFR 50.34(B), GDC 15, GDC 21, GDC 29, and the Licensing Basis

Your welcome Gary and please let us know if we can support in any way

Rich

Richard Correia, P.E.
Director, Division of Risk Analysis
Office of Nuclear Regulatory Research
US NRC

On: 11 August 2016 18:20, "Holahan, Gary" <Gary.Holahan@nrc.gov> wrote:
Thanks from me also, Rich.

Looks like we will be studying the report for a while.

Gary

From: West, Steven
Sent: Thursday, August 11, 2016 6:12 PM
To: Correia, Richard <Richard.Correia@nrc.gov>; Holahan, Gary <Gary.Holahan@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>; Clark, Theresa <Theresa.Clark@nrc.gov>
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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: Correia, Richard
Sent: Thursday, August 11, 2016 5:54 PM
To: Holahan, Gary <Gary.Holahan@nrc.gov>; West, Steven <Steven.West@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>; Clark, Theresa <Theresa.Clark@nrc.gov>
Cc: Weber, Michael <Michael.Weber@nrc.gov>; Hackett, Edwin <Edwin.Hackett@nrc.gov>; Thaggard, Mark <Mark.Thaggard@nrc.gov>; Coyne, Kevin <Kevin.Coyne@nrc.gov>
Subject: Memorandum From: V. McCree to G. Holahan re: Charter for Backfit Appeal Review Panel Associated with Byron and Braidwood Compliance with 10 CFR 50.34(B), GDC 15, GDC 21, GDC 29, and the Licensing Basis
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Gary et al.,

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Please let me know if you need any additional information or if you would like a briefing.

Regards

Rich

Richard P. Correia, P.E.
Director, Division of Risk Analysis
Office of Nuclear Regulatory Research
U.S. NRC

Subject: backfit appeal panel meeting
Location: EDO-OWFN-17H14-14p

Start: Wed 08/17/2016 8:30 AM
End: Wed 08/17/2016 10:00 AM

Recurrence: (none)

Meeting Status: Accepted

Organizer: Clark, Theresa
Required Attendees: Holahan, Gary; West, Steven; Scarbrough, Thomas; Spencer, Michael

Steve's conference session is Tuesday, 10:30-12:00, so I'm hoping this time will work out well. Steve, if you give me a number, we can call you.

I'm guessing this meeting will focus on comment response, discussion of the RES input, and other final items.

Thanks,
Theresa

From: Holahan, Gary
Sent: Wednesday, August 17, 2016 1:42 PM
To: West, Steven; Clark, Theresa
Cc: Scarbrough, Thomas; Spencer, Michael
Subject: RE: Panel report comments

Thanks, Steve.

-----Original Message-----
From: West, Steven
Sent: Wednesday, August 17, 2016 11:47 AM
To: Clark, Theresa <Theresa.Clark@nrc.gov>
Cc: Holahan, Gary <Gary.Holahan@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>; West, Steven <Steven.West@nrc.gov>
Subject: Panel report comments

I'm going to send my comments in chunks. Here are my comments on section 1 and a proposal for a new section 2.

Steve

From: Holahan, Gary
Sent: Wednesday, August 17, 2016 2:45 PM
To: Clark, Theresa; Spencer, Michael; West, Steven; Scarbrough, Thomas
Subject: RE: Containment Contamination Argument

Excellent stuff

From: Clark, Theresa
Sent: Wednesday, August 17, 2016 2:01 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: Containment Contamination Argument

Search of FSAR stuff... see red for most interesting. Sorry this is sort of stream of consciousness at the moment.

Re standard conformance:

Braidwood 2004 FSAR submittal, but most pages dated December 2002: ML051660219

- P. 15.5-3, Section 15.5.1.2 on IOECCS: "American Nuclear Society standard 51.1/N18.2-1973 (Reference 2) describes example 15 of a condition II event as a "minor reactor coolant system leak which would not prevent orderly reactor shutdown and cooldown assuming makeup is provided by normal makeup systems only." In Reference 2, normal makeup systems are defined as those systems normally used to maintain reactor coolant inventory under respective conditions of startup, hot standby, power operation, or cooldown, using onsite power. Since the cause of the water relief is the ECCS flow, the magnitude of the leak will be less than or equivalent to that of the ECCS (i.e., operation of the ECCS maintains RCS inventory during the postulated event and establishes the magnitude of the subject leak). Therefore, the above example of a Condition II event is met."
- P. A1.77-1 (dated December 1992): N18.2 is mentioned in a discussion of RG 1.77 and control rod ejection accidents (that they are a faulted condition as defined in N18.2).
- P. 15.0-13, Section 15.0.8 on plant systems and components for accident mitigation: "In determining which systems are necessary to mitigate the effects of these postulated events, the classification system of ANSI-N18.2-1973 is utilized."
- P. 15.4-13, Section 15.4.3.1 on RCCA misoperation: "Thus, consistent with the philosophy and format of ANSI N18.2, the event is classified as a Condition III event. By definition "Condition III occurrences include incidents, any one of which may occur during the lifetime of a particular plant," and "shall not cause more than a small fraction of fuel elements in the reactor to be damaged..""

Braidwood 2000 FSAR is only on CD in the File Center, so I can go get it.

Re 50.59s:

Braidwood 2002 50.59 report (ML023610638) – publicly available

- Part 1 of 2, p.129-130 of PDF, effective date 7/11/00: UFSAR change package #DRP 8-190 to the Byron/Braidwood UFSAR revised the description in Chapter 15, Section 15.5.1 "Inadvertent Operation of Emergency Core Cooling System During Power Operations" to remove statements that operator action will be taken to manually open the Pressurizer Power Operated Relief Valves (PORVs). The transient description will be revised to indicate that if the Pressurizer PORVs are not available, the Pressurizer Safety Relief Valves (PSRVs) will lift to relieve pressure initially releasing steam followed by subcooled water. The existing discussion of the Pressurizer Overfill case will be deleted.

- Part 2 of 2, p.105-106 of PDF, dated 2002: UFSAR Change Package #DRP 9-075 revises the evaluation methodology for the Loss Of Offsite Power (LOOP) event (UFSAR Section 15.2.6) to incorporate water relief through the Pressurizer Safety Valves. This DRP is applicable to Byron and Braidwood Stations Units 1 and 2. ... An additional evaluation was performed that concluded the Safety Valves will not be damaged by the water relief (Westinghouse letter LTR-SEE-01-287). ... This activity is not considered a departure from a method of evaluation described in the UFSAR because the new methodology (Water relief through the Pressurizer Safety Valves) has been approved by the NRC for a similar event for Byron and Braidwood Stations as part of the Power Uprate Safety Evaluation Report.

Parallel Byron 2003 50.59 report (ML031631016) – publicly available

- p.120-121, effective date 12/22/00: This purpose of this UFSAR change was to revise the description in Chapter 15 Section 15.5.1, "Inadvertent Operation of Emergency Core Cooling System During Power Operations", to remove statements that operator action will be taken to manually open the pressurizer power operated relief valves (PORVs). The transient description is revised to indicate that if the pressurizer PORVs are not available to open to relieve pressure then the pressurizer safety relief valves (PSRVs) will lift to relieve pressure initially releasing steam followed by subcooled water to mitigate the pressurizer overfill portion of the transient. The effect of the proposed activity will be an updated licensing basis and an updated operations procedure that will reflect the updated licensing basis. ... Utilizing the relief valves may result in some degradation and the possibility that the valves may not fully reseat. The probability of the relief valves failing open due to water service application was previously evaluated in the SER for NUREG-0737, Item II.D.1. Thus, the change is bounded by the previously evaluated SER and does not increase the probability of occurrence or the consequences of an accident or a malfunction of equipment important to safety. ... For analysis purposes, the PORVs are assumed to not be available for mitigation of the inadvertent operation of ECCS during power operation accident. However, current Technical Specifications requires that "Each PORV and associated block valve shall be OPERABLE" during Modes 1, 2, and 3 (LCO 3.4.11)."
- p.136-137, effective date 7/11/00: same topic as 1st Braidwood item
- p.161-162, dated in 2002: same topic as 2nd Braidwood item

My earlier notes from 50.59s on microfiche – I can go print – these were from the timeframe when PORVs were going to be credited.

- 3/18/94 - (78728:302) change M6-1/2-88-003 – safety-related power to safety-related relays for PORVs to enable manual control during a loss of offsite power
- 3/31/97 (92355:157) – draft revision package 6-013 – reanalysis of IOECCS, conservative analysis of overfill scenario, remains isolable when ECCS terminated, PORVs allow relief and prevent pressurizer from filling (1 PORV adequate); DNB limits met; water through safeties precluded by relief through PORVs
- 3/31/99 - (A7530:247) change 6G-98-0167 – changes to TRM Section 3.4 on Reactor Coolant Systems, justification for automatic PORV actuation to mitigate pressurizer overfill during spurious SI at power

Other documents I came across:

- 2004 version of Technical Requirements Manual (similar format to TS but not part of license) has TLCO 3.4.d saying one PORV must be unisolated and capable of responding in automatic, or the plant must shut down in 72 hours. (ML051660238, p.151 of PDF) – Same in 2014 submittal (ML14363A504)
- 2004 version of TS bases talks about PORVs and PSVs in the discussion of pressurizer pressure limits (ML051660226, p.35-36), then says this on p.181: "The Pressurizer Water Level-High trip Function provides a backup signal for the Pressurizer Pressure-High trip and also provides protection against water relief through the pressurizer safety valves. These valves are designed to pass steam in order to achieve their design energy removal rate. A reactor trip is actuated prior to the pressurizer becoming water solid." The pressurizer and PSV/PORV specific items start on p.385 of the PDF.

From: Spencer, Michael
Sent: Wednesday, August 17, 2016 11:21 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: Containment Contamination Argument

All,

Section 3.1.2.2 of the 2015 Backfit states:

> The licensee has not addressed the questions of how long it would take to clean up a contaminated containment, and whether the time required for completing the cleanup effort and repairing or replacing any damaged PSVs could be long enough to delay the plant's return to operation beyond the short period that is implied in the UFSAR, Chapter 15.5.1.3, definition of Condition II events.

Therefore, the "short period" standard is "implied" in UFSAR Section 15.5.1.3. The Backfit doesn't mention any specific revision of the UFSAR, so I assume it is the current one. This makes sense because it is the current FSAR revision that is currently applicable to the licensee. The Backfit doesn't raise the issue of an inappropriate 50.59 change, and if there were such an inappropriate change, this would be an enforcement matter, not a backfit matter. Therefore, although we discussed the 2000 FSAR, I looked at the 2015 FSAR.

I looked at the 2015 UFSAR for Byron and Braidwood. We talked about the 2000 version, but on further reflection, I think the 2015 version is the one to examine because the ANS standard is not a requirement and could only be a current applicable standard for Byron and Braidwood to the extent discussed in the latest FSAR. The existing or appropriateness of previous 50.59 changes is a separate matter.

Looking at the 2015 FSAR, I found no evidence in Chapter 1 (which has an incorporated by reference (IBR) section) or in Chapter 15 that the ANS standard is IBR'd. Even so, it is possible that somewhere in the 758 page Chapter 15, there is a statement along the lines of "Activity X is accomplished in accordance with the ANS standard," which would import the portions of the ANS standard applicable to Activity X. Still, the Backfit doesn't reference the ANBS standard directly, but instead references FSAR Section 15.5.1.3. That FSAR section in its entirety is as follows:

> 15.5.1.3 Radiological Consequences
>
> There are only minimal radiological consequences associated with inadvertent ECCS operation. The reactor trip causes a turbine trip and heat is removed from the secondary system through the steam generator power relief valves or safety valves. Since no fuel damage is postulated to occur for this transient, the radiological consequences associated with an atmospheric steam release from this event would be less severe than the steamline break event analyzed in Subsection 15.1.5.3.
>
> Water relief from the pressurizer PORVs and safeties may result in overpressurization of the pressurizer relief tank (PRT), breaching the rupture disk and spilling contaminated fluid into containment. The radiological releases (offsite doses) resulting from breaking the PRT rupture disk are limited by isolation of the containment.

Maybe engineers can read more into this than I can, but I see nothing implied here that implies a short period for the plant's return to operation.

Michael

Michael Spencer
Senior Attorney
U.S. Nuclear Regulatory Commission
Office of the General Counsel
Office: O15-A18

Mail Stop: O16-F3
Washington, DC 20555-0001
Phone: 301-287-9115
Fax: 301-415-3725
Michael.Spencer@nrc.gov

From: Scarbrough, Thomas
Sent: Thursday, August 18, 2016 11:15 AM
To: Holahan, Gary
Cc: West, Steven; Spencer, Michael; Clark, Theresa
Subject: RE: THE REPORT

Gary,

This afternoon, I plan to send to the Panel a markup of the report incorporating my assignments from yesterday's meeting.

Thanks.
Tom

From: Holahan, Gary
Sent: Thursday, August 18, 2016 11:11 AM
To: Clark, Theresa <Theresa.Clark@nrc.gov>
Cc: West, Steven <Steven.West@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>
Subject: THE REPORT

Theresa,

I'm OK with Steve's edits.

Can we discuss exactly what pieces are needed to get to a final-final report?

Gary

From: Clark, Theresa
Sent: Thursday, August 18, 2016 6:37 PM
To: Spencer, Michael
Subject: Re: 2016 Backfit Panel Tom discussion of NRR issues 2016 08 18 Gary MAS.docx

Thanks, I'll feed them in tomorrow.

On: 18 August 2016 18:30, "Spencer, Michael" <Michael.Spencer@nrc.gov> wrote:
My comments on top of Gary's.

From: Clark, Theresa
Sent: Friday, August 19, 2016 12:44 PM
To: Spencer, Michael
Subject: RE: I'm out of the document

Thanks! I'm headed back in...

From: Spencer, Michael
Sent: Friday, August 19, 2016 12:40 PM
To: Clark, Theresa <Theresa.Clark@nrc.gov>
Subject: I'm out of the document

From: Holahan, Gary
Sent: Friday, August 19, 2016 4:36 PM
To: Clark, Theresa; West, Steven; Scarbrough, Thomas; Spencer, Michael
Subject: Re: current memo/report files

Thanks Theresa... I'm following the edits. Looks like it getting very close. I'm just seeing a few words I'd like to edit... or think about

Gary

On: 19 August 2016 15:29, "Clark, Theresa" <Theresa.Clark@nrc.gov> wrote:

Hi all – I'm still working through the report file (made it to the pink highlight on p.29) but I know Steve wanted to bring a copy on the plane so I'm sending them now just in case. Before you (likely) start work on Monday, you'll have updated versions of the files that should be good for final comments and informal concurrence. We'll do formal concurrence and signature next week.

These versions include everyone's edits/comments, combined with my editing. The most significant changes I made were some restructuring in 3.12 (former 2.12) and the addition of a new short section 2 per Steve's suggestion. I didn't track them because the tracking was getting out of hand, and at this point we might do best to do a clean read anyway. (I can construct compare files if anyone really wants them.)

Thanks! More to come!

--

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 19, 2016 5:22 PM
To: Spencer, Michael; Holahan, Gary; West, Steven; Scarbrough, Thomas
Subject: Re: Backfit Appeal Panel Report (MASTER) - 2016-08-19 MAS.docx

Thanks much. I'll incorporate and resend.

On: 19 August 2016 17:16, "Spencer, Michael" <Michael.Spencer@nrc.gov> wrote:
I have some comments through appendix A on the latest version distributed this afternoon. I think we are getting pretty close.

Michael

From: Clark, Theresa
Sent: Sunday, August 21, 2016 8:17 AM
To: West, Steven; Holahan, Gary; Scarbrough, Thomas; Spencer, Michael
Subject: Re: REVIEW: informal concurrence version of panel report

Thanks much. Looking forward to your comments.

Agree that it'll probably be public... That's one of my remaining concerns, the few non-public documents we referenced. We can discuss next week.

When does business close on a Sunday? ;)

On: 21 August 2016 07:20, "West, Steven" <Steven.West@nrc.gov> wrote:
Thanks Theresa. I've been reviewing Friday's version. About 80 percent completed. I have some corrections and editorial suggestions. I expect to be done by COB today. I think I'll also have a recommended addition to the memo re RIS 2005-29 and it's revision. I'll send to all when completed.

Did we decide that we don't need to address why the previous appeal review panel got this wrong?

From the UWC and NSIAC meetings last week, there is heightened industry interest in where we are going to come out on this. We should plan on our report being made publicly available.

Steve

-------- Original Message --------
From: "Clark, Theresa" <Theresa.Clark@nrc.gov>
Date: Sun, August 21, 2016 12:06 AM -0400
To: "Holahan, Gary" <Gary.Holahan@nrc.gov>, "West, Steven" <Steven.West@nrc.gov>, "Scarbrough, Thomas" <Thomas.Scarbrough@nrc.gov>, "Spencer, Michael" <Michael.Spencer@nrc.gov>
Subject: REVIEW: informal concurrence version of panel report

Hi all—attached are the cover memo (no change since the last version, I think) and report (both clean and with changes tracked to the last version I sent—not since the beginning). I incorporated the edits that Michael sent Friday.

I recommend that you guys read these and send any remaining edits/comments by mid-day Tuesday—consider this informal concurrence. Then I can give another look before we have the meeting with Vic. Shortly thereafter I assume we would be able to sign an official copy. (Somewhere in there I will ask Patti to make a concurrence package.)

Thanks!

--
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: Sunday, August 21, 2016 9:02 PM
To: West, Steven; Holahan, Gary
Cc: Spencer, Michael; Scarbrough, Thomas
Subject: Re: My comments on Friday's clean master

I'll set something up in the morning (and incorporate your comments). Tuesday should work.

On: 21 August 2016 19:35, "West, Steven" <Steven.West@nrc.gov> wrote:
Any thoughts on meeting again before Wed?

From: Holahan, Gary
Sent: Monday, August 22, 2016 7:17 PM
To: Spencer, Michael; West, Steven; Scarbrough, Thomas; Clark, Theresa
Subject: RE: Backfit Appeal Panel Report (MASTER) - 2016-08-22 R2 - MAS

I just added my comments to Tom's.

Gary

From: Spencer, Michael
Sent: Monday, August 22, 2016 6:19 PM
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: Backfit Appeal Panel Report (MASTER) - 2016-08-22 R2 - MAS

All, attached are my comments on the document Theresa emailed out 20 minutes ago. I incorporated all of Steve's/Tom's/Theresa's edits, so any edits in the attached are mine.

Michael

From: Clark, Theresa
Sent: Tuesday, August 23, 2016 7:04 AM
To: Spencer, Michael; Holahan, Gary; West, Steven; Scarbrough, Thomas
Subject: RE: Backfit Appeal Panel Report (MASTER) - 2016-08-22 R2 - MAS

Thanks—I got all of these in the master and will bring copies (including any other edits sent in the next couple of hours) to our meeting for discussion.

From: Spencer, Michael
Sent: Monday, August 22, 2016 6:19 PM
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: Backfit Appeal Panel Report (MASTER) - 2016-08-22 R2 - MAS

All, attached are my comments on the document Theresa emailed out 20 minutes ago. I incorporated all of Steve's/Tom's/Theresa's edits, so any edits in the attached are mine.

Michael

From: Clark, Theresa
Sent: Tuesday, August 23, 2016 9:25 AM
To: West, Steven
Cc: Holahan, Gary; Scarbrough, Thomas; Spencer, Michael
Subject: RE: Comments on NRR appeal review

Thanks much—got these in, and working on another item just discussed with Gary (we'll talk about it at 10:00). Also finishing some cleanup items. I have the abbreviations done ☺.

From: West, Steven
Sent: Tuesday, August 23, 2016 8:02 AM
To: Clark, Theresa <Theresa.Clark@nrc.gov>
Cc: Holahan, Gary <Gary.Holahan@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>
Subject: Comments on NRR appeal review

Theresa,

This version includes the changes I added to try to address my comment about the NRR appeal review. These changes are on pages 2 through 5. What I don't know is if the NRR review panel's report is publically available or not. If not, we may not want to mention it in this report as I suggested. And, if we don't mention it, we would need to revise some of my language to only refer to the letter back to the licensee.

Steve

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

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

Subject:	backfit appeal panel meeting
Location:	EDO-OWFN-17H14-14p
Start:	Tue 08/23/2016 10:00 AM
End:	Tue 08/23/2016 11:00 AM
Recurrence:	(none)
Meeting Status:	Accepted
Organizer:	Clark, Theresa
Required Attendees:	Holahan, Gary; West, Steven; Scarbrough, Thomas; Spencer, Michael

As discussed via email, to prep for the meeting with Vic and understand any other remaining items.

From: Clark, Theresa
Sent: Tuesday, August 23, 2016 1:05 PM
To: Spencer, Michael
Subject: Re: Spencer Comments on Backfit Appeal Report References - 8-23-16.docx

Thank you! I appreciate the extra set of eyes.

On: 23 August 2016 13:03, "Spencer, Michael" <Michael.Spencer@nrc.gov> wrote:
Theresa, I did a typo review of the references and abbreviations and have a few comments, attached, on the references.

Michael

Subject: Backfit Appeal Panel Meeting
Location: O-17B4

Start: Wed 08/24/2016 11:00 AM
End: Wed 08/24/2016 11:30 AM

Recurrence: (none)

Meeting Status: Accepted

Organizer: Holahan, Gary
Required Attendees: West, Steven; Scarbrough, Thomas; Spencer, Michael; McCree, Victor; Clark, Theresa
Optional Attendees: Johnson, Michael; ConferenceRoomO17B4 Resource

Scheduled by Psprogeris 8/11/16

POC: Theresa Clark

REQUEST: backfit appeal panel ...

From: Clark, Theresa
Sent: Thursday, August 11, 2016 1:04 PM
To: Sprogeris, Patricia
Cc: Holahan, Gary; West, Steven; Scarbrough, Thomas; Spencer, Michael
Subject: REQUEST: backfit appeal panel meeting w/ Vic

Patti,

Can you please arrange a meeting for the backfit appeal panel (Gary Holahan, Steve West, Tom Scarbrough, and Michael Spencer) with Vic? Mike may also wish to attend. The week of August 22 would be ideal, perhaps 11am 8/24 for half an hour if Gary and Steve can make that work (others are free). Otherwise, please work your magic to find a time. Thanks!

--

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

From: Sprogeris, Patricia
Sent: Wednesday, August 24, 2016 1:43 PM
Cc: Holahan, Gary; West, Steven; Scarbrough, Thomas; Spencer, Michael; Clark, Theresa
Subject: FW: Backfit Appeal Review Panel Findings Associated with Byron & Braidwood

I am so sorry, I forgot to put the cc's in before hitting send. The package has been dispatched per below.

Thank you, Patti

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

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

This package, and the five documents listed below, which are its contents, are publicly available in ADAMS:

ML16243A067
ML16236A202
ML16236A208
ML16214A199
ML16173A311

From: Scarbrough, Thomas
Sent: Thursday, September 08, 2016 6:27 AM
To: Holahan, Gary; West, Steven; Clark, Theresa; Spencer, Michael
Subject: RE: NRR Perspectives OEDO Backfit Panel Findings.docx - Sent from (b)(6)

Thanks.
Tom

From: Holahan, Gary
Sent: Wednesday, September 07, 2016 11:11 PM
To: West, Steven <Steven.West@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; Clark, Theresa <Theresa.Clark@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>
Subject: Fwd: NRR Perspectives OEDO Backfit Panel Findings.docx - Sent from MaaS360

FYI let's wait for Vic's direction before any further review or interaction with NRR.

I feel good about the review we did and the report too,.

Gary

From: "McCree, Victor" <Victor.McCree@nrc.gov>
Subject: Re: NRR Perspectives OEDO Backfit Panel Findings.docx - Sent from (b)(6)
Date: 07 September 2016 18:57
To: "Holahan, Gary" <Gary.Holahan@nrc.gov>

Thanks Gary. Please (re)encourage addressees to not share this response further. As you know, I did not solicit NRR's most recent response and, while I will acknowledge it in my final decision, I want to ensure we remain in process (to the extent practical)

Vic
On: 07 September 2016 16:33, "Holahan, Gary" <Gary.Holahan@nrc.gov> wrote:

Vic,

You may find this useful.

Attached are Tom Scarborough's written responses/answers to the latest NRR e-mail on the panel's report. They have only been shared with the panel... not NRR. Both Steve West and I agree that Tom has done a good job in providing responses and context.

Although you have not asked the panel to review or respond to NRR's comments, and we have not done so formally, you may find Tom's thoughts useful.

If we can provide any additional support to your review of the report, please let me know.

Gary

From: Scarbrough, Thomas
Sent: Wednesday, September 07, 2016 2:48 PM
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: NRR Perspectives OEDO Backfit Panel Findings.docx - Sent from (b)(6)

For your consideration, attached is my brief response to the specific items in the NRR Perspectives document.

Thanks.
Tom

From: Holahan, Gary
Sent: Tuesday, September 06, 2016 8:46 AM
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: RE: NRR Perspectives OEDO Backfit Panel Findings.docx - Sent from (b)(6)

Thanks, Steve. We will keep you informed if anything happens. I do agree with you... we don't need to be right about everything, NRR does!

From: West, Steven
Sent: Tuesday, September 06, 2016 8:39 AM
To: Holahan, Gary <Gary.Holahan@nrc.gov>; Clark, Theresa <Theresa.Clark@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>
Subject: Re: NRR Perspectives OEDO Backfit Panel Findings.docx - Sent from (b)(6)

I'm (b)(6) and not available. Please proceed without me. I remain comfortable with our review, our conclusions and our recommendations. A few thoughts:

A surprisingly weak and uninspired defense of the backfit. An equally humdrum critique of the Panel's review and conclusions.

It may be better for Michael to address this, but it seems to me that one need find only one fatal flaw with the backfit to overturn it. The
staff's argument that it considered numerous issues (as did the Panel) doesn't diminish the Panel's findings.

The staff and the panel seem to agree that not everything (guidance, interpretations, safety evaluations, etc.) has been clearly and consistently established and documented over time. We seem to differ on how new interpretations should be promulgated.

The backfit and the two staff responses to the Panel's review confirm the need for additional backfitting guidance and training.

Steve

-------- Original Message --------
From: "Holahan, Gary" <Gary.Holahan@nrc.gov>
Date: Fri, September 02, 2016 12:04 PM -0500
To: "Clark, Theresa" <Theresa.Clark@nrc.gov>, "West, Steven" <Steven.West@nrc.gov>, "Scarbrough, Thomas" <Thomas.Scarbrough@nrc.gov>, "Spencer, Michael" <Michael.Spencer@nrc.gov>
CC: Michael Johnson (b)(6) "McCree, Victor" <Victor.McCree@nrc.gov>, "Tracy, Glenn" <Glenn.Tracy@nrc.gov>

Subject: Re: NRR Perspectives OEDO Backfit Panel Findings.docx - Sent from (b)(6)

I agree. I think the ultimate decision is up to the EDO. Both the panel and NRR owe him a clear picture of what agreeing with NRR or the panel means. Let's discuss early next week

Gary

On: 02 September 2016 12:06, "Clark, Theresa" <Theresa.Clark@nrc.gov> wrote:

FYI. I believe most of this was in the previous set of comments. I don't see a lot related to the backfit standard and how these have been applied in the past or to B/B.

Begin Forwarded Message:

> **From:** "Dean, Bill" <Bill.Dean@nrc.gov>
> **Subject:** NRR Perspectives OEDO Backfit Panel Findings.docx - Sent from (b)(6)
> **Date:** 02 September 2016 11:20
> **To:** "Vic.McCree@nrc.gov" <Vic.McCree@nrc.gov>, "Johnson, Michael" <Michael.Johnson@nrc.gov>
> **Cc:** "Holahan, Gary" <Gary.Holahan@nrc.gov>, "Clark, Theresa" <Theresa.Clark@nrc.gov>, "McDermott, Brian" <Brian.McDermott@nrc.gov>, "Evans, Michele" <Michele.Evans@nrc.gov>, "Lubinski, John" <John.Lubinski@nrc.gov>, "Ross-Lee, MaryJane" <MaryJane.Ross-Lee@nrc.gov>, "Taylor, Robert" <Robert.Taylor@nrc.gov>

Vic and Mike
Appreciate the opportunity to share with you NRR's perspective related to the appeal panel's recommendations. Look forward to discussing with you after your vacation - hope it is an enjoyable one.

From: West, Steven
Sent: Thursday, September 15, 2016 10:20 AM
To: Clark, Theresa; Holahan, Gary; Scarbrough, Thomas; Spencer, Michael
Subject: RE: backfit appeal documents signed

Thank you for sharing, Theresa. Vic's safety and values messages in his memo to Bill are especially nice.

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: Clark, Theresa
Sent: Thursday, September 15, 2016 10:00 AM
To: Holahan, Gary <Gary.Holahan@nrc.gov>; West, Steven <Steven.West@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>
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

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: Banks, Eleasah
Sent: Friday, September 16, 2016 8:17 AM
To: RidsNrrMailCenter Resource; RidsOgcMailCenter Resource; RidsNroMailCenter Resource; RidsResPmdaMail Resource; RidsResOd Resource; RidsNmssOd Resource; RidsRgn1MailCenter Resource; RidsRgn2MailCenter Resource; RidsRgn3MailCenter Resource; RidsRgn4MailCenter Resource; RidsNrrDorlLpl3-2 Resource; RidsNrrPMByron Resource; RidsNrrPMBraidwood Resource; RidsNrrDss Resource; RidsNrrDe Resource; RidsNrrDpr Resource; RidsNrrDorl Resource; Garmoe, Alex; Keene, Todd; Gody, Tony; Gendelman, Adam; Mizuno, Beth; Correia, Richard; West, Khadijah; Bailey, Marissa; Scarbrough, Thomas; Spencer, Michael; Clark, Theresa
Subject: Appeal of Backfit Imposed in Braidwood and Byron Stations (To: William Dean, From: Victor McCree)

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)

Publicly available in ADAMS

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: Banks, Eleasah
Sent: Friday, September 16, 2016 9:07 AM
To: RidsNrrMailCenter Resource; RidsOgcMailCenter Resource; RidsNroMailCenter Resource; RidsResPmdaMail Resource; RidsResOd Resource; RidsNmssOd Resource; RidsRgn1MailCenter Resource; RidsRgn2MailCenter Resource; RidsRgn3MailCenter Resource; RidsRgn4MailCenter Resource; RidsNrrDorlLpl3-2 Resource; RidsNrrPMByron Resource; RidsNrrPMBraidwood Resource; RidsNrrDss Resource; RidsNrrDe Resource; RidsNrrDpr Resource; RidsNrrDorl Resource; Garmoe, Alex; Keene, Todd; Gody, Tony; Gendelman, Adam; Mizuno, Beth; Correia, Richard; West, Khadijah; Bailey, Marissa; Scarbrough, Thomas; Spencer, Michael; Clark, Theresa
Subject: Backfit Appeal Review Panel Findings (Byron and Braidwood)

Date: September 15, 2016

Memorandum To: J. Bradley

From: Victor M. McCree

Subject: Backfit Appeal Review Panel Findings (Byron and Braidwood)

View ADAMS P8 Properties ML16236A198
Open ADAMS P8 Package (Backfit Appeal Review Panel Findings (Byron and Braidwood))

This package, and the following documents, which are its contents, are publicly available in ADAMS:

ML16243A067
ML16236A202
ML16236A208
ML16214A199
ML16173A311

From: Holahan, Gary
Sent: Thursday, July 14, 2016 9:09 AM
To: Spencer, Michael; Clark, Theresa
Cc: West, Steven; Scarbrough, Thomas
Subject: RE: Backfit panel Meeting

Very good, thank you… I'm bringing a copy to the panel meeting!

From: Spencer, Michael
Sent: Thursday, July 14, 2016 9:00 AM
To: Holahan, Gary <Gary.Holahan@nrc.gov>; Clark, Theresa <Theresa.Clark@nrc.gov>
Cc: West, Steven <Steven.West@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>
Subject: RE: Backfit panel Meeting

Let me state this in writing to make it clearer and elaborate somewhat on my discussion with Theresa.

(b)(5)

Michael

From: Holahan, Gary
Sent: Thursday, July 14, 2016 8:03 AM
To: Clark, Theresa <Theresa.Clark@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>
Cc: West, Steven <Steven.West@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>
Subject: RE: Backfit panel Meeting

excellent

From: Clark, Theresa
Sent: Thursday, July 14, 2016 7:45 AM
To: Holahan, Gary <Gary.Holahan@nrc.gov>; Spencer, Michael <Michael.Spencer@nrc.gov>
Cc: West, Steven <Steven.West@nrc.gov>; Scarbrough, Thomas <Thomas.Scarbrough@nrc.gov>
Subject: Re: Backfit panel Meeting

Michael and I discussed this the other day so I know he's ready for it :).

On: 14 July 2016 07:42, "Holahan, Gary" <Gary.Holahan@nrc.gov> wrote:
Michael,

(b)(5)

Gary

From: Holahan, Gary
Sent: Wednesday, August 10, 2016 10:59 AM
To: Spencer, Michael; West, Steven; Scarbrough, Thomas; Clark, Theresa
Subject: RE: Exelon Backfit Appeal Panel Preliminary Findings FOR COMMENT - ~~OUO- Pre-decisional - Internal NRC Use Only -~~

OK, got it.

Thanks. Michael

From: Spencer, Michael
Sent: Wednesday, August 10, 2016 10:23 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: FW: Exelon Backfit Appeal Panel Preliminary Findings FOR COMMENT - ~~OUO- Pre-decisional - Internal NRC Use Only -~~

OGC's reactor and materials rulemaking (RMR) division has provided its input on the draft preliminary findings. See email below.

Michael

From: Spencer, Mary
Sent: Wednesday, August 10, 2016 10:19 AM
To: Spencer, Michael <Michael.Spencer@nrc.gov>
Cc: Mizuno, Geary <Geary.Mizuno@nrc.gov>; Campbell, Tison <Tison.Campbell@nrc.gov>; Jones, Bradley <Bradley.Jones@nrc.gov>; Benowitz, Howard <Howard.Benowitz@nrc.gov>; Gendelman, Adam <Adam.Gendelman@nrc.gov>
Subject: RE: Exelon Backfit Appeal Panel Preliminary Findings FOR COMMENT - ~~OUO- Pre-decisional - Internal NRC Use Only -~~

Michael,

(b)(5)

Thanks,
Mary

Mary B. Spencer
Assistant General Counsel for
Reactors and Materials Rulemakings
Office of the General Counsel
US Nuclear Regulatory Commission

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 - ~~OUO- 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 sited; 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 last 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 reseat. 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.