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Hardies, Robert

From: Kirk, Mark *MS*
Sent: Friday, January 11, 2013 11:51 AM
To: Kirk, Mark; Hardies, Robert; Fairbanks, Carolyn; Poehler, Jeffrey; Rosenberg, Stacey; Csontos, Aladar; Stevens, Gary; Tregoning, Robert; Davis, Robert; Nove, Carol
Cc: Hiser, Allen; Pham, Bo; (b)(6)
Subject: RE: Development of NRC Staff Consensus Approach following Doel/Tihange Discoveries

Dear Colleagues –

Attached please find a table of topics that I would recommend as being part of our plans moving forward for our discussions of next week. Most of the topics listed can at this stage be pursued in parallel. Some topics will require contractor support and/or requests for assistance (i.e., user needs) ... so if these are identified by the group as being part of the consensus plan attention will be needed to get the needed documentation and funding in place.

I look forward to our discussions on Monday.

Best

mark



2013-01-11 kirk
suggestions on...

-----Original Appointment-----

From: Kirk, Mark *MS*
Sent: Thursday, January 03, 2013 9:21 AM
To: Kirk, Mark; Hardies, Robert; Fairbanks, Carolyn; Poehler, Jeffrey; Rosenberg, Stacey; Csontos, Aladar; Stevens, Gary; Tregoning, Robert; Davis, Robert; Nove, Carol
Cc: Hiser, Allen; Pham, Bo
Subject: Development of NRC Staff Consensus Approach following Doel/Tihange Discoveries
When: Monday, January 14, 2013 12:30 PM-4:00 PM (GMT-05:00) Eastern Time (US & Canada).
Where: HQ-OWFN-10B06-12p

Dear Colleagues –

This is a follow-up to Bob Hardies' e-mail dated 20th December (copied to the bottom of this scheduler for your convenience. To assist Bob (as he is quite busy) I have worked with him to develop an objective and an agenda for the meeting he proposed (see highlight in his e-mail). The objective and the agenda are below our signatures. *Please note that if you wish to make suggestions as part of agenda item #2 you have an action to undertake prior to the meeting.*

I realize this meeting goes later in the day than some of us would like (myself included), but it is the only time I could find between the meeting in Belgium next week and the expected date of the FANC recommendation for restart or not (15th January) on which we can meet. With 1.5 weeks of notice I hope we can all make the adjustments needed to attend (or plan to attend remotely).

Thanks,

Mark & Bob

Objective of Meeting: Develop NRC Staff consensus approach to ensuring the continued operating integrity of USA RPVs in view of recent discoveries at Doel 3 and Tihange 2 in Belgium.

Agenda:

1. **Synopsis of January 2013 Belgium meeting.** Bob, Mark, Carol (5 minutes each)
2. **Proposals for Path Forward for USA plants.** Everyone who wants to express their views may do so here. If you want to participate you must provide a written synopsis to all other attendees in advance. Synopsis should be 1 page or less. You will have 10 minutes at the meeting to present your ideas to the group.
3. **Group discussion / negotiation of the objective and elements of a consensus plan.** 1 hour
4. **Summary of consensus plan and actions moving forward.** 30 minutes

From: Hardies, Robert

Sent: Thursday, December 20, 2012 8:48 AM

To: Fairbanks, Carolyn; Rosenberg, Stacey; Kirk, Mark; Stevens, Gary; Nove, Carol; Csontos, Aladar; Poehler, Jeffrey; Davis, Robert

Subject: Doel 3 plans and proposed actions

Just to bring everyone up to date:

Recent events:

- Electrabel published their safety case and associated documents; we have reviewed it.
- Mark Kirk participated in expert review panel
- ASN visited NRC to discuss materials issues
- Gary and Jeff provided feedback to FANC for their prospective working groups. The feedback was positive.

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Future actions that are planned

- NRO may intervene in receipt inspection of new vessels to see if they are affected.
- Carolyn will update the Comm plan to reflect the possible or probable permanent shut down of Doel and Tihange (be prepared for questions from stakeholders)
- Carolyn will finish the draft information notice
- Mark and I will travel to FANC for the Jan 7-8 closeout/summary meeting

- Stacey and I will attempt to get on the LT schedule before Jan 15 to indicate that FANC is likely not to approve restart and to propose a contingency for generic communications to require plants to review records (one complication is that it will not be possible to get on the calendar since there are no LT meetings between the FANC review meeting and the 15th).
- FANC will announce decision (expected January 15)
- Industry will discuss the activity to perform a PFM analysis on the January 15 materials industry exec/NRC management phone call
- FANC will publically release the Electrabel analyses, reports and findings, and the recommendations of the internal, external, international and expert review groups in mid-late January, we expect.
- We have scheduled a public meeting with industry (to permit all of our stakeholders the opportunity to learn) to discuss industry and NRC proposed actions.
- Farther out, we will receive the industry analysis for review
- We will review the industry analysis

Other things we need to do:

- We need to get together and strategize what our short, intermediate and long term activities should be. With holidays and travel, the only dates that seem to be available where most of us are here are Jan 11 and Jan 14. I will send out a scheduler.
- Our current primary approach is to rely on the excellent technical evaluation of Doel and Tihange, and our prior engineering understanding of laminar flaws and our acceptance of the ASME Code to provide us reasonable assurance that U.S. plants do not have a safety issue. As an added tangible activity, industry is performing an analysis, we are holding a public meeting, and we are issuing an information notice. We may also want to have plants review their original records and/or perform a zero degree exam on their forgings.

Robert Hardies
 Senior Level Advisor for Materials Engineering
 Division of Engineering
 Office of Nuclear Reactor Regulation
 U.S. Nuclear Regulatory Commission

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Major Element	Sub Element
Communication	Publish Information notice
Communication	Public meeting on 5 March 2013 to define actions for NRC and industry
Documentation	Assemble records from potentially affected plants
Documentation	Assess records relative to metallurgical screening criteria
Documentation	Identify RPVs requiring (a) no attention, (b) short term attention, (c) long term attention
Metallurgy	Determine what, if any, screening criteria can be constructed to assess the probability of quasi-laminar indications occurring in operating RPVs based on existing records
Metallurgy	Recommend what bounds can be placed on the size and extent of quasi-laminar cracking for the USA fleet based on available information
Inspection	Design inspection tools to detect the defects defined by structural integrity assessment
Inspection	Qualify inspection tools to detect the defects defined by structural integrity assessment
Structural Integrity Assessment	Assess adequacy / appropriateness of ASME SC-III criteria in light of Belgian findings
Structural Integrity Assessment	Assess adequacy / appropriateness of ASME SC-XI-AppA criteria in light of Belgian findings
Structural Integrity Assessment	Establish gridelines for inspections (i.e., what size and location of quasi-laminar flaws need to be found to ensure integrity)
Regulation	TBD based on outcome of other tasks
Codes & Standards	TBD based on outcome of other tasks

Who Can Do?	Who Will Do?	Short Term Actions	Long Term Actions
NRR Staff			
NRC staff & industry			
NRC staff & industry			
NRC staff			
NRC staff			
NRC staff & contractors, EPRI staff & contractors			
NRC staff & contractors, EPRI staff & contractors			
NRC staff & contractors, EPRI staff & contractors			
NRC staff & contractors, EPRI staff & contractors			
NRC staff & contractors, EPRI staff & contractors			
NRC staff & contractors, EPRI staff & contractors			
NRC staff & contractors, EPRI staff & contractors			
NRC Staff			
ASME Code "people"			