

Kusnick, Joshua

From: Stevens, Gary
Sent: Monday, November 12, 2012 8:00 AM
To: Tregoning, Robert; RES_DE_CIB; RES_DE_CMB; ASME Code Participants
Subject: ASME Code Meeting Report -- Subgroup on Evaluation Standards

For those that may be interested, here is a summary report from the November ASME Code meeting in Phoenix, AZ for the Subgroup on Evaluation Standards.

Group Name: Subgroup on Evaluation Standards

When: Wednesday, 11/07/2012, 8:30 a.m. – 11:00 a.m.

Where: Pointe Hilton Squaw Peak Resort, Phoenix, AZ

Group Charter: This group is responsible for all Section XI Flaw Evaluation Rules and Acceptance Criteria

My Capacity: Member, Secretary

SUMMARY

ADMINISTRATIVE ITEMS

- Membership
 - Warren reported that there were four relevant membership items:
 - Reddy Ganta was added as a member to WGPFE, WGFE, and SGES.
 - Sam Sham was terminated from WGPFE and SGES.
 - Yutaka Imamura was changed from "Member" to "Alternate" for Koji Koyama on SGES.
 - Bob McGill will be added as a new member for SGES (Warren will try to get Bob added to the SC XI agenda for tomorrow, as this was overlooked for the Executive Committee XI meeting yesterday).
 - Based on input from WGPFE at the end of the meeting, Gary provided input to SC XI to drop Bilal Dogan as a member from WGPFE as he recently passed away.
- Executive Committee Report (Warren Bamford, Gary Stevens, and Robin Dyle)
 - Met Tuesday afternoon from 3:00 to 8:30 pm.
 - Membership: See above for membership issues related to SGES and the supporting WGs.
 - Tim Lupold (NRC) presented eddy current needs in Code Case N-773 that should be adopted into other Code Cases associated with overlay repairs (e.g., N-766 and N-770-1).
 - Nonmandatory Appendices: Activity continues on revising the nonmandatory appendices as guidance, etc. SG NDE and SGES have the only remaining actions. The SGES action associated with this item is discussed below. The

proposed changes to the SGES Appendices are complete and on the SC XI agenda for tomorrow so that all changes will be included in the 2013 Edition.

- Rick Swayne described an editorial action to correct different forms of "bolts and bolting" terminology throughout Section XI. All such occurrences will be corrected to "bolts and studs" for consistency.
- An issue at Doel Nuclear Power Station Unit 3 in Belgium was discussed. Inspections were performed for RPV under-clad cracks. As a part of these examinations, many (over 9,000) laminar indications were detected within the lower shell ring forging. There is a great deal of media sensitivity on this subject. Both NRC and Tractebel discussed this issue at several meetings and provided updates. The NRC will hold a public meeting on this topic to collect relevant information from the U.S. industry on January 8, 2013.
- The Gravelines Nuclear Power Station in France experienced one bottom-mounted instrument (BMI) nozzle indication. As a result, the French regulatory authority has required that all plants inspect BMI nozzles. Previously, the regulator decided that no inspections were required because the BMI penetrations operate at T_{cold} . To-date, 5 other plants have inspected and no additional indications have been found. Additional plants will be inspecting in the future.
- ASME Certification marks (formerly known as "Code stamps"): Stamps for nuclear components have been replaced with a new common certification mark. However, for nuclear components, the NRC has not yet approved the Code Edition that incorporates the new certification mark, nor have they approved the Code Case that justifies use of the new certification mark in lieu of the old Code stamps. This is problematic in that some plants have already installed replacement parts that use the new certification mark, which vendors are required to use. The NRC and ASME management discussed this issue the August semi-annual ASME/NRC Management Meeting and the NRC has established an action plan to address this issue. In short, no enforcement actions will be imposed on those who have used the new marks until the issue is formally addressed. Refer to the NRC Report to SC XI for details.
- Decommissioning Plants: A number of issues related to inspections and other activities associated with decommissioned plants were raised by Dominion over the planned shutdown of Kewaunee in March 2013. At issue is whether there is a need for Section XI to define requirements for such plants. A handful of plants have shut down in the past, so the NRC took an action to find out what requirements are in place and to report back to EC XI in February. EC XI will then decide if further actions are warranted.
- Table IWA 1600-1 is under development. Refer to the discussion under "New Business" below for further information on this topic.
- Nuclear Plant Aging Management Issues: At the NPAM meeting on Monday, discussion occurred over whether Section XI requirements are needed for various aging management issues, i.e., one-time examinations. EC XI decided that if the utilities need guidance such as this, they should send members to the ASME meetings that are willing to develop such guidance for incorporation into the Code.
- Joint JSME/ASME Committee. This committee has decided to work together to address issues associated with high temperature reactors. Members are being solicited for this group.
- Honors
 - None.

ACTION ITEMS

09-182: Code Case to Incorporate Full Master Curve Approach (Cipolla)

- Bill Server reported.
- The proposed Code Case for this item is included in **Attachment 3**.
- The proposed Code Case passed at WGFE and WGOPC.
- Two corrections were identified during the discussion of this item, as marked in Attachment 3.
- The item was motioned and seconded. The vote was unanimous.
- This item will be placed on the SC XI agenda for the February meeting.

02-3759: Cast Stainless Steel Inspection Issues (Griesbach)

- Tim Griesbach reported.
- The TG on CASS met on Monday.
- A presentation was given to the TG (see **Attachment 4**).
- The latest version of the draft Code Case on methodology to evaluate flaws was discussed at the TG and the WGPFE and is included as **Attachment 5**.
- A supporting PVP background paper that describes the work performed to-date was provided (see **Attachment 6**).
- The fracture mechanics and NDE portions of this effort are now converging. The item is not quite ready for voting as items are still being finalized.
- A Technical Basis Document is being assembled. Another PVP paper for 2013 is being prepared.

05-248: Implementation of Code Case N-597 (Scarth)

- Gery Wilkowski reported.
- This item is still being worked and will require a few more meetings before it is finalized for voting.

08-1595: Revision to Article A-3000 for K Calculation Methods for Surface and Subsurface Flaws (Cipolla/Miyazaki)

- Russ Cipolla reported.
- The proposal was updated to include Action 10-783 below.
- This item is now combined with Action 10-783, and will be tracked as Action 10-783 moving forward. Drop this item from the agenda.

"TOP TEN" ITEM!!!

10-783: Revise K Calculation Methods for Circumferential ID Flaws in Cylinders (Lee)

- **Darrell Lee reported.**
- **This item was merged with Action 08-1595 above to simplify these two items into one action.**
- **This item will be finalized for voting at the February meeting.**

08-1642: Revision to Appendix G to Include Nozzle Discontinuity Solutions (Stevens)

- Gary Stevens reported.
- The latest proposed Code Action for this item is included in **Attachment 7**.
- This item was presented and discussed yesterday at WGFE. There were no comments.

- The discussion noted that the "T" term used for thickness should be checked for consistency with the rest of Appendix G, and the equation numbers should be checked for consistency with Appendix G. Gary will review and fix accordingly.
- The item was motioned and seconded. The vote was unanimous.
- This item is on the SC XI agenda for tomorrow. Gary will read in any changes necessitated from the SGES discussion.

09-170: Integral Attachments (Dyle)

- Robin Dyle reported.
- No progress has been made on this item.
- Robin expects to have something drafted for the February meeting.

11-1991: IOU from Wirtz's Withdrawn Inquiry 10-96 (Dyle/Wirtz)

- Robin Dyle reported.
- Robin and Chuck Wirtz have started work on this item.
- Robin expects to have something drafted for the February meeting.

12-552: IWA-9000 Glossary definitions for "evaluation," "engineering evaluation," and "analytical evaluation" (Bamford)

- Gary Stevens reported.
- These 3 terms are used pervasively throughout Section XI (over 600 times total). They are used inconsistently, and there aren't any definitions for these terms in IWA-9000.
- Warren Bamford drafted definitions for these terms earlier this year and distributed those definitions to a few individuals for comment. Extensive comments were received.
- This item was discussed yesterday at EC XI; after much discussion, it was decided that SGES would take the lead, and that all other Section XI SGs would provide an individual to help with this effort since this item affects all portions of Section XI. This small "task group" would work this item off-line.
- **ACTION: Gary will provide a mark-up of Section XI identifying all uses of the "evaluation" terms and Warren's definitions to the "task group" for review and action.**
- Gary will report on progress at the February meeting.
- This item is expected to take a while to complete given the scope of the change to Section XI and the number of SGs involved.

12-841: Operational Leakage – Code Case N-513-4 (McGill/Griesbach)

- Tim Griesbach and Bob McGill reported.
- Phase I of Operational Leakage is complete - Nonmandatory Appendix U.
- For Phase II, WGPFE is revising Code Case N-513-4 to include elbows, reducers, tees, and heat exchangers with external tubing. In addition, the maximum pressure for application of the case is being increased from 275 to 375 psig or possibly higher.
- The hope is to vote on this item at the February meeting. Bob McGill will present the Code Case at the February SGES meeting.
- The WG is reviewing vessel and tanks (Code Case N-705) to see if similar changes are needed.
- WGPT is also putting together an action, but the specifics of that action are unknown.
- **ACTION: Tim will get with Dan Lamond to develop a coordinated status report for Operational Leakage for SGES and EC XI for the February meeting.**

- A new Action Item No. will be needed for other changes made to the Code on this subject after Code Case N-513-4 is approved.
- Phase III will look at leakage in Class 1 systems, but is not being worked on yet. This aspect of this topic will be discussed in the status report above.
- The applicability index was updated for N-513-3; however, at SC XI on Thursday after the SGES meeting, that change was deleted because the Code Case itself has an applicability statement included – so, to change the applicability index would cause a conflict. This needs to therefore be fixed in N-513-4.

12-842: Code Case N-694 on Evaluation of Flaws in PWR Reactor Head Nozzles (G. DeBoo)

- Guy DeBoo reported.
- This item missed the SC XI agenda for the August meeting, but is on the SC XI agenda tomorrow.

12-795: Acceptance Standards for Austenitic Steel Heat Exchangers, IWC-3510 (T. Vo)

- Russ Cipolla reported.
- This item received negatives/comments on the SC XI ballot.
- **Attachment 8** provides the SC XI negatives/comments and responses and the revised action.
- The item was discussed and motioned and seconded as-is. The vote was unanimous.
- This item is on the SC XI agenda for tomorrow.

12-1602: Use of Nonmandatory Appendices A, C, E, G, H, K, L, and O (W. Bamford)

- Warren Bamford reported.
- Based on the markups compiled by Angah Miessi, Gary Stevens re-compiled all changes made to the first page of each appendix into one action and obtained an Action Item No. (see **Attachments 9 and 10**).
- The item was discussed and motioned and seconded as-is. The vote was unanimous.
- This item is on the SC XI agenda for tomorrow.

12-1411 Clarification of IWB-3514 Acceptance Standards for Flaws in SCC Susceptible Materials (S. Xu)

- Russ Cipolla and Gery Wilkowski reported.
- This item passed SGES at the May meeting and is on the SC XI agenda for tomorrow.

12-zzzz: Effects of Residual Stress on Flaw Evaluation (Bamford)

- Warren Bamford reported.
- Guy DeBoo's Task Group on Reference Crack Growth Curves is addressing this item by developing a Nonmandatory Appendix for WRS analysis guidance.
- Continuing effort -- it's too early to obtain an action number until things get more defined.

"TOP TEN" ITEM!!!

11-4: Code Case N-809, "Reference Fatigue Crack Growth Rate Curves for Austenitic Stainless Steels in Pressurized Reactor Water Environments" (Cipolla)

- No report but this item was added to the minutes/agenda for future tracking as it is a "Top Ten" item. This item is being worked in the TG on Crack Growth.

INQUIRIES

- There were no inquiries.

RECURRING ITEMS

R1. Errata

- There were no new errata identified.

R2. Fatigue Issues (Stevens)

- EPRI's EAF Advisory Panel has been replaced with a new Section III WG called the Working Group on Environmental Fatigue Evaluation Methods. The WG met for the first time on Monday from 2:00 to 3:30 pm. Jack Cole led the meeting.
- The WG established a membership of 13 members and drafted a charter. The charter includes fatigue crack initiation plus fatigue crack growth since one of the items they will be working on is a Section III Flaw tolerance Code Case similar to Section XI Nonmandatory Appendix L.
- The WG will send out a Letter Ballot to select a Chairman. After that, they will ask for a volunteer to be secretary.
- The initial agenda for the WG will be to pick up the Section III Fatigue Action Plan developed in 2008, update that list, and continue to work those items.
- There is some confusion over the relative jurisdictions of this group and the SG on Fatigue Strength. No clarifications were made to these jurisdictions during the meeting.
- SGFS met on Tuesday a.m., and there were presentation made by the French and the Germans on recent EAF work performed in those countries.
- EPRI has restructured their EAF activities into two parts: (1) a near-term effort for license renewal and operating plants headed by Ken Wolfe with support from Shannon Chu, and (2) a longer-term effort directed at research activities identified by EPRI's Gap Report headed by Jean Smith with support from Letitia Midmore.

R3. Working Group Reports

- WGPFE (Scarth)
 - Gery Wilkowski reported
 - There was discussion at the WG about heat exchanger leakage and whether that action should go to WGFE instead. The PM (Truong Vo) was absent.
 - The TG on HDPE is finally proceeding under the direction of Phil Rush.
- WGOPC (Griesbach)
 - Nothing further to report.
- WGFE (Cipolla)
 - There was further discussion about possible modifications to Appendix K and incorporation of material from Regulatory guide 1.61; a presentation was given by Michael Benson (NRC). No decisions have been made by the WG yet. There is need to review the history of Appendix K to determine why the toughness data present in RG 1.61 was not incorporated into Appendix K before proceeding with this item. Russ Cipolla has the lead on this item; Benson is in the process of getting his paper work in to become a member of WGFE and will help with this item.

R4. Task Group Reports

- **Task Group on HDPE Pipe (Scarth)**
 - Gery Wilkowski reported.
 - The TG met on Monday and is finally proceeding under the direction of Phil Rush.
- **Task Group on Evaluation of Beyond Design Basis Events (Pace)**

- Ray Pace reported.
- The TG met on Tuesday from 4:00 to 6:00 pm.
- Tim Griesbach found an old draft Code Case on this topic from 1984 developed by Don Landers that was discussed.
- Ray Pace presented the Entergy fleet post-earthquake procedure for inspections.
- EPRI recently published a report on the North Anna earthquake that the TG will be reviewing.
- The TG first actions will be to develop a Code Case for reactor pressure vessel and reactor coolant loop and what to do to start a plant back up after an earthquake. Hal Gustin volunteered to draft the enabling words.
- The TG will not use the 1984 Code Case; it has good information in it, but it needs to be completely reworked.
- Gery Wilkowski will draft a white paper on margins available above SSE.
- Paul Donavin will draft up some proposed initial inspection plans.
- Collectively, these items will provide a strawman on where the TG is headed.

R5. Approved Action Items Retained Until Printed

- **"TOP TEN" ITEM!!!! -- 05-1328: Alternative Acceptance Criteria and Evaluation Procedure for Flaws in Ferritic Steel Components Operating in the Upper Shelf Range (Cipolla)**
 - (Errata) Keep Appendices proof mark-up issues on agenda until published.
 - (Errata) N-641 identified by Nathan Palm (Westinghouse) -- Warren provided this item to Ryan Crane for processing at the February meeting.
- 03-1377: Code Case for RT_{T0} (**Cipolla**)
- 05-1328: Alternative Acceptance Criteria and Evaluation Procedure for Flaws in Ferritic Steel Components Operating in the Upper Shelf Range (**Cipolla**)
- 07-1307: Class 1, 2, and 3 Flaw Evaluation for Pipes Less Than NPS 4" (**Cipolla**)
- 09-159: EPRI-MRP-BWRVIP Risk Informed Appendix G Work (**Server/Griesbach**)
 - Need to verify that editorials submitted in November 2011 SC XI meeting get implemented.
- 09-794: Operational Leakage (**Griesbach**)
- 10-915: Evaluation of Metal Loss in Class 2 and 3 Metallic Piping Buried in a Back-filled Trench (**McGill/Scarth**)
- 11-61: Change to IWB-3112/IWC-3112 to Allow Evaluation of Subsurface Flaws Found During Pre-Service Inspections (**Stevens**)
- 11-207: Improvements in Evaluation of Flaws in PWR Reactor Head Nozzles (Guy DeBoo)
- 11-1791: Change to IWB-3112/IWC-3112 to Allow Evaluation of Subsurface Flaws Found During Pre-Service Inspections (**Stevens**)
- 11-1996: (Errata) An editorial change to Appendix G and a Table note correction for Appendix A.

NEW BUSINESS

- 12-40: Code Case N-648-2, "Alternative Requirements for Inner Radius Examinations of Class 1 Reactor Vessel Nozzles" (R. Rishel)
 - Rick Rishel (WesDyne) reported.
 - Proposed Code Case N-648-2 and supporting documents were presented (see **Attachments 11 – 13**).
 - This item was originally written to address nozzle inner radius examinations for operating plants, so it only includes inservice examination requirements.
 - It is now desired to apply this Code Case to new plants so the Code Case is being revised to adopt preservice examination requirements.
 - The changes to the Code Case involve editorial improvements plus the addition of the preservice examination requirements.
 - The item was discussed and motioned and seconded as-is. The vote was unanimous.
- Dr. Kunio Hasegawa (JNES) gave an updated presentation on the restructuring of the Japanese nuclear regulator (see **Attachment 14**).
 - A new regulatory structure became effective in September 2012.
 - The key motivation is to ensure separation between nuclear power promotion and regulation responsibilities. New entities were formed.
 - The details of the structure are provided in the attachment. Further changes will occur over the next few years.
- References to Other Standards, Table IWA-1600-1 (Stevens)
 - Kevin Rhyne of WGGR led the effort for this item.
 - This was discussed at EC XI; there was recent e-mail discussion on the SGES aspects of this item.
 - Gary Stevens took the action at EC XI to address the needed changes to this table with SGES.
 - Gary developed a proposed markup of the changes needed for the SGES items (see **Attachment 15**).
 - The item was discussed and motioned and seconded. The vote was unanimous.
 - Gary sent this item to Ryan Crane and Kevin Rhyne for inclusion into Kevin's action, which is on the SC XI agenda for tomorrow.

The meeting was adjourned at ~11:00 a.m.

Let me know if you have any questions, or would like to see any of the attachments.

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