

LSNReviews

From: Oleg Povetko
Sent: Thursday, October 09, 2008 12:46 PM
To: Whaley, Sheena
Cc: 'Razvan Nes'; Sippel, Timothy
Subject: RE: HRA needs

Sheena,

Please let me know in advance when you are going to call. I am in all day on October 20-21. We might need to talk to James Chang prior to that and also let him know that we have ISG-04 issued on HRA. The ISG-04 recommends the deletion of reference to NUREG/CR-1278, Handbook of Human Reliability Analysis with Emphasis on Nuclear Power Plant Applications in the YMRP, since the newer NRC guidance documents supersede this older NRC report. ISG-04 also recommends using NUREG-1792 and NUREG-1842 instead. Both, ISG-04 and NUREG-1842 try to prevent mindless using of the quite low human error nominal probabilities tabulated in Section 20 of NUREG-1278. It appears exactly what has been done in estimating of the misloading probability for the hypothetical GROA facility.

Oleg.

From: Sheena Whaley [mailto:Sheena.Whaley@nrc.gov]
Sent: Thursday, October 09, 2008 10:19 AM
To: Oleg Povetko; Timothy Sippel; 'Razvan Nes'
Cc: Christopher Tripp
Subject: RE: HRA needs

I don't see any problems with this.

Let's try to talk either Oct 20th or 21st before we talk to Bret and co. about the potential RAs.

Sheena

From: Oleg Povetko [mailto:opovetko@cnwra.swri.edu]
Sent: Wednesday, October 08, 2008 9:36 PM
To: Timothy Sippel; Sheena Whaley; 'Razvan Nes'
Subject: RE: HRA needs

I have done some sanity check regarding the current margin of compliance for the calculated by DOE probability of criticality caused by assembly misloading. DOE calculated probability of assembly misloading based on the pre-TAD GROA design processes and using NUREG/CR-1278 nominal values for human errors. The calculated value = 1.18×10^{-5} per 21-PWR waste package. This value is used in LA. Previously, based on Framatome (2001) reports that documented LERs events between 1985 and 1999, DOE reported probability of misloading 2.7×10^{-4} per assembly movement. These events are only those reported in LERs and also representative of repository operations. No reactor events are accounted for. This value might be considered as directly derived

from the "hard industry data". The current processes when canister loading takes place at the NPP sites resemble more the processes used in Framatome study rather than the processes in pre-TAD hypothetical GROA facility that will have never materialized.

I checked what the probability would be if the Framatome derived value is used instead of the DOE calculated value. I assumed 2 assembly movements only (i.e., in- and out- of NPP pool). I did it only for one event sequence "criticality following a seismic breach" for 21-PWR waste packages only, as calculated on page 6-284 of FEPs March 2008 report with other parameter values left unchanged. You may check this calculation at the bottom of X:\Oleg Povetko\Familiarization Review\Familiarization Review Progress Reports Povetko.doc file in October 8, 2008 entry. Please check if I made any stupid errors, otherwise the number would exceed the regulatory limit just for this one event sequence. If there are no assembly movements the number is on the limit.

Oleg.

From: Timothy Sippel [mailto:Timothy.Sippel@nrc.gov]
Sent: Tuesday, October 07, 2008 6:49 AM
To: Sheena Whaley; Oleg Povetko; 'Razvan Nes'
Cc: Osvaldo Pensado; Bret Leslie; Jack Guttmann
Subject: RE: HRA needs

The only other item I might add would be DOE's misload analysis with regards to the loading curve. However, given the lack of information provided in DOE's argument about the impact of human errors in misload.; I think that would be better addressed as an RAI.

So your scope of work write up looks good to me. - Tim Sippel.

From: Sheena Whaley
Sent: Tuesday, October 07, 2008 7:28 AM
To: Oleg Povetko; Timothy Sippel; 'Razvan Nes'
Cc: Osvaldo Pensado; Bret Leslie; Jack Guttmann
Subject: RE: HRA needs

Looks ok to me. I think we will have to limit the HRA support to only what is really needed/what's most important. We have yet to get the HRA support needed for postclosure. At this point we don't know who the HRA person is for postclosure, but have contacted the branch chief and Deputy Division Director again.

Jack, should we call RES again, or do a drop in?

Sheena

From: Oleg Povetko [mailto:opovetko@cnwra.swri.edu]
Sent: Monday, October 06, 2008 8:20 PM
To: Sheena Whaley; Timothy Sippel; 'Razvan Nes'
Cc: Osvaldo Pensado
Subject: RE: HRA needs

Tim, Sheena and Razvan,

Please look at the draft scope of work for HRA expert that I prepared and let me know your comments and additions if any. I covered only assembly misloading and manufacturing error in misplacement of neutron absorber. I did not add many potential items, such as probability of drip shield misplacement, reactor records, hardware/software errors, manufacturing errors causing stress corrosion cracking etc.

Oleg.

From: Osvaldo Pensado [mailto:opensado@cnwra.swri.edu]
Sent: Thursday, October 02, 2008 4:13 PM
To: 'Bret Leslie'; 'James Mancillas'; povetkooleg@hotmail.com
Cc: 'James Winterle'; 'Greg Oberson'; 'Oleg Povetko'; 'Jack Guttman'; [REDACTED]
Subject: HRA needs

Bret,

It has been difficult to address your request on time in regards to Criticality needs.

1. I told Oleg about developing a precise scope of work for Susan. We can provide the information by Monday.
2. The ENG1 fellows need an HRA person to address the question of initially defective WPs and DSs. This question is also of interest to the criticality evaluation. I think that Susan can kill two birds with a single shot, but Oleg needs to confirm my view.
3. Greg has developed a plan for Susan. We will look into Greg's plan and propose some modifications (or maybe not) to also address our needs.

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Osvaldo Pensado, Ph.D.
Principal Scientist SwRI
opensado@swri.org
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From: Bret Leslie [mailto:Bret.Leslie@nrc.gov]
Sent: Wednesday, October 01, 2008 1:21 PM
To: James Mancillas; Osvaldo Pensado
Cc: James Winterle; Greg Oberson; Oleg Povetko; Jack Guttman
Subject: FW: ACTION by COB 10/2/08
Importance: High

James and Osvaldo,
We have made progress on getting the HRA support you need for your chapters.

Please get back to me by COB tomorrow with the requested information so that I can coordinate at this end.

Both of you should indicate not only the hours but the schedule for the hours (~ how many hours/task over what duration) you will need to accomplish your "internal intermediate" schedules for meeting the project plan deadlines. Note that Susan (HRA) is identified in Tasks 1, 2, 3, 8, and 9). You also will need to provide me the specific information (which sections of the SAR or a supporting document) that you will want the HRA person to review. Be sure you include time in their schedules to bring them up to speed and ensure that a risk-informed and performance-based approach is used. If you have questions don't hesitate to call me immediately.

James, I have just asked Greg to work with you to define the scope and schedule.

Osvaldo, you will need to coordinate this with Oleg as the HRA support is for review of the criticality FEPs.

Once I have your information I will provide it to Susan and get agreement to schedule and scope and close the loop with you (Osvaldo and Oleg; James and Greg) and management directly.
James and Osvaldo, Once the logisitcs are set please keep me, Erasmia Lois and Jack informed on the status of the critical path using the weekly update spreadsheet.

Thanks,

Bret

PS Attached are the hours by tasks for Susan Cooper for probability and Scenario analysis (second page of second file)

From: Jack Guttmann

Sent: Wednesday, October 01, 2008 1:28 PM

To: Susan Cooper; Bret Leslie

Cc: Erasmia Lois; Christiana Lui; Jack Davis

Subject: ACTION

Importance: High

Bret,

Erasmia returned my call.

Please provide Susan Cooper the LA chapters you are requesting her to review and develop a schedule that is agreeable to both parties, if possible.

Please keep Erasmia and me informed on the status of the critical path.

Thank you.

Jack G.