

From: Diane Jackson *NRA*
To: Glenn Kelly, Joseph Staudenmeier, Tanya Eaton
Date: Wed, Sep 15, 1999 11:17 AM
Subject: my observations on NEI report

Glenn, Joe and Tanya -

Attached are my observations from the NEI report - they are in a "by page" format, which may not be the best organization but can be easily referenced.

In particular, please look at them for areas that we need to enhance, clarify or add to the final report. The facts should be stated in the report that dispute NEI claims - We should not respond directly to NEI accusations in our report. For the threshold of what to clarify, I figure that (in most cases) if NEI can take a pot shot at us, we were not sufficiently clear on how we determined something or it could use more information to support our statements.

If you have any comments on report, please pass them around.

Diane

CC: GTH, Mark Rubin

Q/198

NEI Draft Study Comments:

p 3 - the discussion and figure on reduction in risk only considers decay heat - it does not include increase in risk due to decreased equipment, personnel.

P.7 Past Analyses - NEI recognizes reduced complement of electrical power sources but not reduced makeup capability, cooling capacity, and fewer personnel.

P9 Table 1-1 - NEI makes the conclusion that if INEL did not include initiator in study, then it was not risk significant.

NEI does not recognize that past analyses looked at operating plants with operating plant equipment, that has EP, & may not be doing much heavy load movement

p.11 - discusses backfits

duration for additional equipment/ procedures may be 5 years, not the NEI quoted 1-2 years

p.12 - NEI lists deterministic criteria as the two possible criteria - they missed the point of the study - the study is RISK-informed. - therefore we should state in intro that we start with deterministic and risk-inform the information.

p. 12/13, 54 -we need more discussion in staff report on oxidation transition/input to increasing temperature. - we should add NUREG/CR graph that shows run away above 800.

p.15 - NEI discusses backfit rule & small resource/money to justify - However, it will be a voluntary rule, therefore no backfit & it is for a reduction in regulation -

p.15 - NEI states 2-5 years is a "very short time" - then perhaps they don't mind keeping EP.

p.16 - makes probabilistic argument for no insurance - does the staff buy it?

p.18 - NEI Suggested criteria:

- 1) 48 hours time frame
- 2) decay of iodine
- 3) if less than E-5 shows negligible risk

p.19 - we need to discuss better in report: end states and correlations/assumptions to other end states

p.20 - NEI called our EP exemption criteria to be "air cooling" - this is not true; we used no offsite release over EPA PAGs - if a plant could have shown that a fire would not exceed EPA PAGs that would have been fine. We should clarify this in the report

"[all] Consequences are very low compared to safety goal" - do we agree - even latent??

p.21- human error probabilities are anticipated to be extremely low and offsite resources are expected to be available with a high likelihood within 48 hours - NEI does not supported this claim with any information

p. 25 - Table 3.2-0 - we do not agree that
nominal burnup is less than 60 GWD/MTU
nominal cask movement is NONE in 5 years
nominal heat removal for first 5 years is the operating SFP system

p. 26 - Table 3.2-0 - NEI does not say what they base their nominal values on - unsupported information

We should emphasize in our report that current DECOMM. Plants are not nominal cases - they are atypical - expected future decomm. Plants, which this rule could apply to - would shutdown typically at end of life with a full spent fuel pool

p.36 - NUREG-0612 discussion - human interface improvement judged to be 2 - 3 orders of magnitude? Was this an -0612 conclusion?

P.41 - NEI concludes 50.59 process can manage all potential risk changes for initiating events.

p.49 - NEI states no credit for same personnel for first three years after shutdown.

P.49 - no prohibition against placement of piping or systems with siphon potential - I do not think this is really true - FSAR is analyzed for drain down - would this pass 50.59?

P.51 - NEI states that near boiling freq. from INEL and FFU from draft treated with same time periods.

P.52 - NEI states that after 2-3 years using realistic or typical plant conditions the risk of Zircaloy fire appears to be not physically possible.

P.52, 55/56 NEI uses SHARP code results."801 is not a zirconium ignition" - did NEI even read this part of the report? Perhaps we can make our report stonger in this area.

p.58 Draft p 2 "near-bounding" and Draft p27 "conservative" - we need to change/clarify this in the report - because it is not really true - some of the parameters we choose were near-bounding but they are also typical for what we expect for future decommissioning plants.

p.59 -NEI tables show "typical values for 3 plants" for time to boil, BTU/hr. - This is not typical for future decommissioning plants.

P.60 lists conservative assumptions
time to heat up pool >24 so PRA uses 24 hours - ? if we do not agree we need to clarify this in the report
time to boil down to top of fuel - ? if we do not agree we need to clarify this in the report
time to boil away water within fuel region - ? if we do not agree we need to clarify this in the report
selection of clad ignition temperature - not true
time to heat up zirconium to ignition temperature - true but we are not using it for anything now - we may just want to take this section out.

p.60 "pool heatup calculations have over predicted the heatup times when they are measured in plants" - Joe, we need to address this in T/H portion of report

p.71 - NEI's FFU values