

NRR-PMDAPEm Resource

From: Regner, Lisa
Sent: Tuesday, September 22, 2015 1:50 PM
To: Wayne Harrison
Cc: Cusumano, Victor; Stang, John; Smith, Stephen; Regner, Lisa; Sterling, Lance (lsterling@STPEGS.COM); Michael Murray
Subject: Additional clarifications from NRC - debris generation and transport

Wayne,

I received some details on the questions for the deterministic section on debris generation and transport. These are not formal RAI questions and, at this point, are meant to be topics of discussion for the 10/1 call and/or the November Working Group meeting.

These are meant to give you an idea of what is missing so far in this section of the review, *and it is not a complete list* – there will be more; further, many will need answers docketed. However, no action is required at this time. I will issue STPNOC an RAI when staff has a complete picture of questions to be answered formally.

I will send other clarifications and details as I receive them. The goal is to have a comprehensive list of questions by the November meeting.

Thanks,
Lisa

- *Why can Marinite (or Cal-Sil) be compared to Microtherm. We have seen significantly higher head losses with smaller amounts of Min-K and Microtherm than Cal-Sil. You don't clearly state what the current plant state is versus the tested state and why this is acceptable. It appears that a test was run with 158 lb of Marinite and 33 lb of Microtherm. However the plant has 0 lb of Mariinite and 64 lb of Microtherm (61.5 lb transports). Why is this acceptable? Are there other particulates that STP is crediting for the delta in Microtherm?*
- *Microtherm and Marinite are listed as small fines in the submittal. They should be 100% fines.*
- *You do not state why comparison against fine fiber is acceptable. Why are not small and fine fibers included? Need basis. This might include discussion of the testing.*
- *You do not state why looking only at welds and not at other break locations is acceptable. Need justification.*
- *In the transport evaluation you state in some areas that conservatism was used in the calculation, but don't state what the conservatisms are.*
- *The submittal states that break flow was not considered because breaks above the pool were not modelled. Are there breaks above the pool that should be considered for break flow effects in the pool?*
- *The transport evaluation was based on two sumps operating. Does the single sump operating need to be considered since some of these cases are evaluated in the risk-informed portion. Does the 3 train case need to be evaluated?*
- *It was not clear how the referenced transport metrics from NUREG/CR-6772 and 6808 were applicable to the debris types at STP. It was not clear how Stokes' Law was applied and whether it appropriate. This also applies to the coatings section.*

- *It was unclear how the unqualified epoxy outside the reactor cavity was treated for transport. 48% transports. Does all the particulate transport? What chips transport?*
- *Why is less than 10% erosion justified for fiber in the pool?*
- *The methodology for erosion transport is unclear. Table 10 (page 31 of Att 1-2) and how it is applied needs to be explained. What is early and late arrival? What do the percentages of small and large represent? Similar for Table 12.*
- *What is late arrival fines in Table 11? What is the difference between early and late? Why would latent debris be delayed?*
- *In attachment 1-3, page 3, the test description is not clear that the test contains bounding amounts of all debris except fine fiber.*

Lisa Regner

Sr. PM

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