

## AP1000DCDFileNPEm Resource

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**From:** Loza, Paul G. [lozapg@westinghouse.com]  
**Sent:** Monday, November 09, 2009 2:40 PM  
**To:** Donnelly, Patrick  
**Cc:** Lindgren, Donald A.  
**Subject:** RE: AP1000 - New Draft RAIs - RAI-SRP6.2.2-CIB1-24

Patrick,

I have RAI-SRP3.8.2-CIB1-01 R2 as being sent 09/17/09 via DCP NRC 002620.

Should we call this rev 3?

Thanks,

Paul

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**From:** Donnelly, Patrick [mailto:Patrick.Donnelly@nrc.gov]  
**Sent:** Monday, November 09, 2009 11:25 AM  
**To:** Loza, Paul G.; Lindgren, Donald A.  
**Cc:** McKenna, Eileen; Snodderly, Michael; Hayes(NRO), Michelle; Honcharik, John; Butler, Rhonda  
**Subject:** AP1000 - New Draft RAIs - RAI-SRP6.2.2-CIB1-24

Don & Paul,

Below are two draft RAIs on SRP6.2.1.1. and SRP3.8.2. These RAI's were discussed in a conference call on 11/2 and Westinghouse agreed to revise the RAI responses. The staff wanted to be sure their comments were on the record.

Please let me know whether they are accepted.

Regards-

Patrick

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### Draft RAI-SRP3.8.2-CIB1-01 R2

1) Please provide a plot of the steady state results (containment shell temperature response in cold conditions) discussed in the RAI response, similar to that provided in response to RAI-SRP-6.2.1.1-SPCV-07 (e).

2) Is the minimum service metal temperature of -18.5 °F in the AP1000 DCD based on the steady state result or the additional transient scenario discussed in your response to RAI-SRP-6.2.1.1-SPCV-07?

### Draft RAI-SRP6.2.1.1-SPCV-07 R2

1) In the proposed DCD changes, the bounding external pressure event is identified as a nonmechanistic step change in containment atmosphere from 120F with 100% relative humidity to 50F, with an associated bounding pressure change is -2.9 psid. This is a change from both the event certified in rev. 15 and event described in rev. 17.

- a) Because minimum containment pressure is not a tech spec requirement, explain how it was determined to be 50F and how this will be controlled.
- b) What methodology (hand calcs, WGOTHIC) was used to calculate the bounding pressure change?
- c) What assumptions were made in analysis?
- d) Why is loss of ac power, which was certified to be limiting event in rev. 15, no longer the limiting event? (What changed in design or analysis to make this new event more limiting?)
- e) I would like to audit analysis.

2) Response to part a) states that best estimates are appropriate for this analysis, but the analysis never characterized the values as best estimates. Please explain how the values chosen for relative humidity and heat transfer options represent best estimates.

3) Response to part c) states that inadvertant actuation of the fan cooler is the only conceivable event to reduce internal pressure because inadvertantly actuation of spray system is not feasible and inadvertant actuation of the PCS would actually heat the shell on extremely cold day. Address why the other conditions discussed in tech spec basis B 3.6.5 are not limiting, including loss of ac power. Explain why a nonmechanistic step change to 50F was not considered to be limiting.

4) My interpretation of the response to part d) is that there are two external pressure values. One is -.9 psid, and this only applies to extremely cold days. The other is -2.9 psid, and this applies to every condition except for extremely cold days. I am confused as to what determines an extremely cold day. For example, what pressure value should be used at -30F? What about 0F?

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**Patrick Donnelly**

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