

## ArevaEPRDCPEm Resource

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**From:** Getachew Tesfaye  
**Sent:** Tuesday, February 24, 2009 12:04 PM  
**To:** 'usepr@areva.com'  
**Cc:** Jacqwan Walker; Molly Keefe; Michael Junge; James Steckel; Joseph Colaccino; ArevaEPRDCPEm Resource  
**Subject:** Draft - U.S. EPR Design Certification Application RAI No. 193 (2213), FSAR Ch. 18  
**Attachments:** Draft RAI\_193\_COLP\_2213.doc

Attached please find draft RAI No. 193 regarding your application for standard design certification of the U.S. EPR. If you have any question or need clarifications regarding this RAI, please let me know as soon as possible, I will have our technical Staff available to discuss them with you.

Please also review the RAI to ensure that we have not inadvertently included proprietary information. If there are any proprietary information, please let me know within the next ten days. If I do not hear from you within the next ten days, I will assume there are none and will make the draft RAI publicly available.

Thanks,  
Getachew Tesfaye  
Sr. Project Manager  
NRO/DNRL/NARP  
(301) 415-3361

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**From:** Getachew Tesfaye

**Created By:** Getachew.Tesfaye@nrc.gov

**Recipients:**

"Jacqwan Walker" <Jacqwan.Walker@nrc.gov>  
Tracking Status: None  
"Molly Keefe" <Molly.Keefe@nrc.gov>  
Tracking Status: None  
"Michael Junge" <Michael.Junge@nrc.gov>  
Tracking Status: None  
"James Steckel" <James.Steckel@nrc.gov>  
Tracking Status: None  
"Joseph Colaccino" <Joseph.Colaccino@nrc.gov>  
Tracking Status: None  
"ArevaEPRDCPEm Resource" <ArevaEPRDCPEm.Resource@nrc.gov>  
Tracking Status: None  
"usepr@areva.com" <usepr@areva.com>  
Tracking Status: None

**Post Office:** HQCLSTR02.nrc.gov

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Request for Additional Information No. 193 (2213), Revision 0

2/24/2009

U. S. EPR Standard Design Certification  
AREVA NP Inc.  
Docket No. 52-020  
SRP Section: 18 - Human Factors Engineering  
Application Section: 18.6

QUESTIONS for Operating Licensing and Human Performance Branch (AP1000/EPR Projects) (COLP)

18-35

EPR FSAR Section 18.6 refers to the HRA Implementation plan (IP) and the FSAR Chapter 19, PRA, for a description of how the risk-significant human actions (HAs) were identified. The HRA IP provides an overview of the use of RAW and FV importance measures for the selection of the risk-significant HAs. RAI-40 on the HFE Topical Report requested the method and acceptance criteria for selection of the risk-significant HAs. The response did not provide the information but rather stated that the method was within the scope of PRA/HRA engineering. A review of Chapter 19 of the FSAR provided much of the needed information including lists of the risk-significant HAs determined from the various portions of the PRA. However, a few questions remain:

1. FSAR Table 19.1-7 lists the top cutset groups for Level 1 Internal Events of the PRA. The top cutset group in the PRA is LOOP-14, which has a recovery action [REC OSP 2HR], which is [the failure of operators to recover offsite power within 2 hours]. Tables 19.-10 and -11 contain the risk-significant HAs for Level 1 Internal Events based on FV and RAW. This particular action is not in the risk-significant tables and in general there are no recovery actions listed as risk significant. This does not appear correct. Please explain.
2. The contribution of operator action to initiating events does not appear to be consistently picked up in the tables. For example, FSAR Chapter 19, page 19.1-121 discusses the importance of operator failure to isolate FWDS break in the annulus, which is not in any table. However, for the shutdown PRA the contribution of HAs to initiating events is addressed. Please explain this discrepancy.
3. FSAR Section 19.1.5.1.2.3 discusses HAs in the seismic PRA cutsets. However, there do not appear to be any calculations or related tables for risk-significant HAs from the seismic PRA. Are these calculations and associated tables available for staff review? If so, please provide for staff review.