

## ArevaEPRDCPEm Resource

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**From:** Tesfaye, Getachew  
**Sent:** Tuesday, July 14, 2009 2:17 PM  
**To:** 'usepr@areva.com'  
**Cc:** Ashley, Clinton; Jackson, Christopher; Carneal, Jason; Colaccino, Joseph; ArevaEPRDCPEm Resource  
**Subject:** U.S. EPR Design Certification Application RAI No. 259 (3104), FSAR Ch. 6  
**Attachments:** RAI\_259\_SPCV\_3104.doc

Attached please find the subject requests for additional information (RAI). A draft of the RAI was provided to you on July 7, 2009, and on July 13, 2009, you informed us that the RAI is clear and no further clarification is needed. As a result, no change is made to the draft RAI. The schedule we have established for review of your application assumes technically correct and complete responses within 30 days of receipt of RAIs. For any RAIs that cannot be answered within 30 days, it is expected that a date for receipt of this information will be provided to the staff within the 30 day period so that the staff can assess how this information will impact the published schedule.

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

**Hearing Identifier:** AREVA\_EPR\_DC\_RAIs  
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**From:** Tesfaye, Getachew

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

**Recipients:**

"Ashley, Clinton" <Clinton.Ashley@nrc.gov>  
Tracking Status: None  
"Jackson, Christopher" <Christopher.Jackson@nrc.gov>  
Tracking Status: None  
"Carneal, Jason" <Jason.Carneal@nrc.gov>  
Tracking Status: None  
"Colaccino, Joseph" <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. 259 (3104), Revision 0

7/14/2009

U. S. EPR Standard Design Certification  
AREVA NP Inc.  
Docket No. 52-020  
SRP Section: 06.02.02 - Containment Heat Removal Systems  
Application Section: 06.02.02

QUESTIONS for Containment and Ventilation Branch 1 (AP1000/EPR Projects) (SPCV)

06.02.02-32

RG 1.206 guidance requests that the applicant describe how containment sump recirculation design meets the guidelines of RG 1.82 Rev 3.

RG 1.82, regulatory position C.1.1.1.6 specifies that trash racks and debris screens should have sufficient strength to withstand loads from jets, missiles, debris accumulation and pressure differentials caused by post-LOCA blockage under design basis flow conditions.

ANP 10293 Table A-1 "RG 1.82 Conformance Assessment Matrix", in response to RG 1.82 position C.1.1.1.6, indicates that the heavy duty trash rack design (in conjunction with the heavy floor) prevents missiles, large debris, and expanding jets from impacting baskets and screens. In addition, the retaining baskets and sump screens (strainer) are designed for the expected loading and corresponding differential pressure.

NRC staff request the following information related to the US-EPR containment debris interceptor\* design in order to assess conformance to RG 1.82 position C.1.1.1.6:

- a. Summarize the design codes, design inputs and assumptions, loads and load combinations used for the sump debris interceptors\* structural analysis.
- b. Summarize the structural qualification results and design margins for the various sump debris interceptors\*
- c. Summarize the evaluations performed for dynamic effects such as pipe whip, jet impingement, and missile impacts associated with high-energy breaks (as applicable).

[\* Examples of debris interceptors are structures and components such as weirs, trash racks, retaining baskets and strainers.]