

## ArevaEPRDCPEm Resource

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**From:** DUNCAN Leslie E (AREVA NP INC) [Leslie.Duncan@areva.com]  
**Sent:** Thursday, January 28, 2010 1:36 PM  
**To:** Tesfaye, Getachew  
**Cc:** BENNETT Kathy A (OFR) (AREVA NP INC); DELANO Karen V (AREVA NP INC); LENTZ Tony F (EXT)  
**Subject:** Response to U.S. EPR Design Certification Application RAI No. 347, FSAR Ch. 14  
**Attachments:** RAI 347 Response US EPR DC.pdf

Getachew,

Attached please find AREVA NP Inc.'s response to the subject request for additional information (RAI). The attached file, "RAI 347 Response US EPR DC.pdf," provides the schedule for technically correct and complete responses to these questions.

The following table indicates the respective pages in the response document, "RAI 347 Response US EPR DC.pdf," that contain AREVA NP's response to the subject questions.

Question #	Start Page	End Page
RAI 347 — 14.02-145	2	2
RAI 347 — 14.02-146	3	3
RAI 347 — 14.02-147	4	4
RAI 347 — 14.02-148	5	5

A complete answer is not provided for the 4 questions. The schedule for technically correct and complete responses to these questions is provided below.

Question #	Response Date
RAI 347 — 14.02-145	February 19, 2010
RAI 347 — 14.02-146	February 19, 2010
RAI 347 — 14.02-147	February 19, 2010
RAI 347 — 14.02-148	February 19, 2010

Sincerely,

Les Duncan  
Licensing Engineer  
**AREVA NP Inc.**  
An AREVA and Siemens Company  
Tel: (434) 832-2849  
[Leslie.Duncan@areva.com](mailto:Leslie.Duncan@areva.com)

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**From:** Tesfaye, Getachew [mailto:Getachew.Tesfaye@nrc.gov]  
**Sent:** Tuesday, December 22, 2009 11:57 AM  
**To:** ZZ-DL-A-USEPR-DL  
**Cc:** Tomon, John; Rasmussen, Richard; Miernicki, Michael; Colaccino, Joseph; ArevaEPRDCPEm Resource  
**Subject:** U.S. EPR Design Certification Application RAI No. 347 (4129), FSARCh. 14

Attached please find the subject requests for additional information (RAI). A draft of the RAI was provided to you on December 18, 2009, and on December 21, 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, excluding the time period of **December 25, 2009 thru January 3, 2010, to account for the holiday season** as discussed with AREVA NP. For any RAIs that cannot be answered **within 40 days**, it is expected that a date for receipt of this information will be provided to the staff within the 40-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  
**Email Number:** 1110

**Mail Envelope Properties** (F322AA625A7A7443A9C390B0567503A101881DEA)

**Subject:** Response to U.S. EPR Design Certification Application RAI No. 347, FSAR Ch. 14  
**Sent Date:** 1/28/2010 1:36:17 PM  
**Received Date:** 1/28/2010 1:36:19 PM  
**From:** DUNCAN Leslie E (AREVA NP INC)

**Created By:** Leslie.Duncan@areva.com

**Recipients:**

"BENNETT Kathy A (OFR) (AREVA NP INC)" <Kathy.Bennett@areva.com>

Tracking Status: None

"DELANO Karen V (AREVA NP INC)" <Karen.Delano@areva.com>

Tracking Status: None

"LENTZ Tony F (EXT)" <Tony.Lentz.ext@areva.com>

Tracking Status: None

"Tsfaye, Getachew" <Getachew.Tsfaye@nrc.gov>

Tracking Status: None

**Post Office:** AUSLYNCMX01.adom.ad.corp

<b>Files</b>	<b>Size</b>	<b>Date &amp; Time</b>
MESSAGE	2446	1/28/2010 1:36:19 PM
RAI 347 Response US EPR DC.pdf		65137

**Options**

**Priority:** Standard

**Return Notification:** No

**Reply Requested:** No

**Sensitivity:** Normal

**Expiration Date:**

**Recipients Received:**

**Response to**

**Request for Additional Information No. 347 (4129), Revision 0**

**12/22/2009**

**U. S. EPR Standard Design Certification**

**AREVA NP Inc.**

**Docket No. 52-020**

**SRP Section: 14.02 - Initial Plant Test Program - Design Certification and New  
License Applicants**

**Application Section: SRP 14.02 (NUREG 0800)**

**QUESTIONS for Quality and Vendor Branch 2 (ESBWR/ABWR) (CQVB)**

**Question 14.02-145:**

Follow-up to RAI 176, Question 14.02-93 (b)

The NRC staff reviewed the applicant's response to RAI question 14.02-93 part (b) and requests that the applicant clarifies and/or includes the following information into U.S. EPR FSAR section 14.2.12.5.5, "Component Cooling Water System (CCWS) (Test #046)":

- a. In test method item 3.4, the lead sentence requires verification of flow path isolations in response to "emergency signals." Since the terminology "emergency" is frequently used in reference to design basis accidents, the NRC staff requests that the applicant clarify whether emergency signal applies only to accident conditions (e.g. safety injection) or if it is also intended to apply to individual surge tank level set-points independent of a safety injection signal.
- b. In test method item 3.4.a the applicant use the term "non-safety headers outside of the reactor building" is confusing; therefore, the NRC staff requests that the applicant define these headers to avoid confusion with other loads (e.g. fuel handling building) that are not isolated on a safety-injection signal.
- c. Test method item 3.4.b indicates that non-safety piping will be isolated when the surge tank level is below MIN2 if there is a difference between inlet and outlet flow rate. This also appears to apply to the non-safety loads in the reactor auxiliary and radwaste buildings. Therefore the NRC staff requests that the applicant revise the description to be consistent and also state whether or not a safety injection signal is required for this action to occur.
- d. Test method item 3.4.d describes control actions that take place "below" various surge tank level set-points. However, US FSAR Tier 2 Section 9.2.2 indicates that control actions take place when the level set-points are reached. Therefore the NRC staff requests that the applicant clarify test method item 3.4.d to accurately reflect when the control actions occur.
- e. The NRC staff requests that the applicant clarify the terminology used in describing the equipment isolation.

**Response to Question 14.02-145:**

A response to this question will be provided by February 19, 2010.

**Question 14.02-146:**

In U.S. EPR FSAR section 14.2.12.5.5, "Component Cooling Water System (CCWS) (Test #046), the applicant states in acceptance criteria item 5.1.6 that "CCW pump differential pressure signal starts the idle pump in each division; " however, FSAR section 9.2.2 design safety related (SR) CCWS train contains only a single pump per division. Therefore, the NRC staff requests that the applicant clarify the intent of acceptance criteria item 5.1.6 and update the FSAR accordingly.

**Response to Question 14.02-146:**

A response to this question will be provided by February 19, 2010.

**Question 14.02-147:****Follow-up to RAI 176, Question 14.02-93 (d)**

In RAI question 14.02-93 part (d), the NRC staff requested that AREVA revise test abstract #046 to include the testing of the automatic switchover function and the partial switchover function of the common headers in response to the various control signals or justify the exclusion of such testing. In its response to this question the applicant stated that "the U.S. EPR design generates a non-safety header closure with a CCWS surge tank level less than MIN2 concurrent with a measured difference between the inlet and outlet flow of each branch and that test abstract #046 was revised in the response to RAI 144, Question 14.02-72 to address this correction. However, neither the applicant's responses to part (d) nor the markup of test abstract #046 addressed these features for the automatic common header switchover function and the partial switchover functions. Therefore, the NRC staff requests that the applicant revise test abstract #046 to include the testing of the automatic switchover function and the partial switchover function of the common headers in response to the various control signals or justify the exclusion of such testing.

**Response to Question 14.02-147:**

A response to this question will be provided by February 19, 2010.

**Question 14.02-148:**

The NRC staff requests that the applicant revise US EPR FSAR section 14.2.12.3.2, "Containment Personnel Airlock Functional Leak Test (Test #025)," to replace the term "portion" with the term "position" in test method items 3.2 and 3.3.

**Response to Question 14.02-148:**

A response to this question will be provided by February 19, 2010.