

## ArevaEPRDCPEm Resource

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**From:** HOTTLE Nathan (AREVA) [Nathan.Hottle@areva.com]  
**Sent:** Friday, December 13, 2013 11:33 AM  
**To:** Wunder, George  
**Cc:** Hearn, Peter; Miernicki, Michael; GUCWA Len (EXTERNAL AREVA); UYEDA Graydon (AREVA); RANSOM Jim (AREVA); LEIGHLITER John (AREVA); RYAN Tom (AREVA); WILLIFORD Dennis (AREVA); MUSGRAVE Jennifer (AREVA); BALLARD Bob (AREVA); WATKINS Stan (AREVA); ROMINE Judy (AREVA); DELANO Karen (AREVA); WILLS Tiffany (AREVA)  
**Subject:** Advanced Response to US EPR DC FINAL RAI 603 - Chapter 9.02.02, Reactor Auxiliary Cooling Water Systems - Question 25159  
**Attachments:** Advanced Response to RAI 603 Question 9.02.02-123 US EPR DC.pdf

George,

Attached is an Advanced Response to RAI 603 Question 09.02.02-123 to support the final response date of **February 7, 2014**.

To keep our commitment to send a final response to this question by the commitment date, we need to receive all NRC staff feedback and comments no later than **January 24, 2014**.

Please let me know if NRC staff has any questions or if this response can be sent as final.

Sincerely,

*Nathan Hottle*

AREVA Inc.  
3315 Old Forest Road  
Lynchburg, VA 24501  
Phone 434-832-3864  
Mobile 434-485-4239  
[nathan.hottle@areva.com](mailto:nathan.hottle@areva.com)

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**From:** HOTTLE Nathan (EP/PE)  
**Sent:** Monday, October 21, 2013 5:28 PM  
**To:** [michael.miernicki@nrc.gov](mailto:michael.miernicki@nrc.gov)  
**Cc:** [peter.hearn@nrc.gov](mailto:peter.hearn@nrc.gov); GUCWA Len (External RS/NB); UYEDA Graydon (EP/PE); RANSOM Jim (RS/NB); LEIGHLITER John (RS/NB); KOWALSKI David (RS/NB); MUSGRAVE Jennifer (CORP/IND); DELANO Karen (RS/NB); ROMINE Judy (RS/NB); RYAN Tom (RS/NB)  
**Subject:** Response to US EPR DC FINAL RAI 603 - Chapter 9.02.02, Reactor Auxiliary Cooling Water Systems - Question 25159

Mike,

Attached please find AREVA NP Inc.'s response to the subject request for additional information (RAI). The attached file, "RAI 603 Response US EPR DC.pdf," provides a schedule since a technically correct and complete response to the single question cannot be provided at this time.

The following table indicates the respective pages in the response document, "RAI 603 Response US EPR DC.pdf," that contain AREVA NP's response to the subject question.

Question #	Start Page	End Page
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The schedule for a technically correct and complete response to the question is provided below.

Question #	Advanced Response Date	NRC Comment Request Date	Final Response Date
RAI 603 — 09.02.02-123	December 13, 2013	January 24, 2014	<b>February 7, 2014</b>

Sincerely,

*Nathan Hottle*

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**From:** Snyder, Amy [<mailto:Amy.Snyder@nrc.gov>]

**Sent:** Thursday, September 19, 2013 3:44 PM

**To:** ZZ-DL-A-USEPR-DL

**Cc:** McKenna, Eileen; Wheeler, Larry; Hearn, Peter; Segala, John; Miernicki, Michael; Gleaves, Bill

**Subject:** FW: US EPR DC FINALRAI 603 - Chapter 9.02.02, Reactor Auxiliary Cooling Water Systems - Question 25159

Attached please find the subject request for additional information (RAI). A draft RAI was provided to you on September 11, 2013. On September 19, 2013, AREVA informed us that, the RAI is clear and does not contain proprietary information and that no further clarification is needed.

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 or October 21, 2013**, 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.

Thank You,

Amy

Amy Snyder, U.S. EPR Design Certification Lead Project Manager

Licensing Branch 1 (LB1)

Division of New Reactor Licensing

Office of New Reactors

U.S. Nuclear Regulatory Commission

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 E-mail: [Amy.Snyder@nrc.gov](mailto:Amy.Snyder@nrc.gov)

**From:** Snyder, Amy

**Sent:** Wednesday, September 11, 2013 1:44 PM

**To:** 'usepr@areva.com' ([usepr@areva.com](mailto:usepr@areva.com))

**Cc:** McKenna, Eileen; Wheeler, Larry; Hearn, Peter; Segala, John; Miernicki, Michael; Gleaves, Bill

**Subject:** US EPR DC DRAFT RAI 603 - Chapter 9.02.02, Reactor Auxiliary Cooling Water Systems - Question 25159

Attached please find Draft RAI No. 603 regarding your application for standard design certification of the U.S. EPR. If you have any questions or need clarification regarding this Draft 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 draft RAI to ensure that we have not inadvertently included proprietary information. If there is 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.

Thank You,

Amy

Amy Snyder, U.S. EPR Design Certification Lead Project Manager  
Licensing Branch 1 (LB1)  
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**Hearing Identifier:** AREVA\_EPR\_DC\_RAIs  
**Email Number:** 4760

**Mail Envelope Properties** (8D35DF68A379A34E8526B758FDCFC0420B70152B)

**Subject:** Advanced Response to US EPR DC FINAL RAI 603 - Chapter 9.02.02, Reactor Auxiliary Cooling Water Systems - Question 25159  
**Sent Date:** 12/13/2013 11:32:54 AM  
**Received Date:** 12/13/2013 11:32:59 AM  
**From:** HOTTLE Nathan (AREVA)

**Created By:** Nathan.Hottle@areva.com

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"Wunder, George" <George.Wunder@nrc.gov>  
Tracking Status: None

**Post Office:** FUSLYNCMX01.fdom.ad.corp

Files	Size	Date & Time	
MESSAGE	5026	12/13/2013 11:32:59 AM	
Advanced Response to RAI 603 Question 9.02.02-123 US EPR DC.pdf			128881

**Options**

**Priority:** Standard  
**Return Notification:** No

**Reply Requested:**  
**Sensitivity:**  
**Expiration Date:**  
**Recipients Received:**

No  
Normal

**Advanced Response to**

**Request for Additional Information No.603**

**9/11/2013**

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

**AREVA NP Inc.**

**Docket No. 52-020**

**SRP Section: 09.02.02 - Reactor Auxiliary Cooling Water Systems**

**Application Section: 09.02.02**

**SRSB Branch**

**Question 09.02.02-123:**

In accordance with 10 CFR50 Appendix A and GDC 44, cooling water must have the capability to transfer heat from systems, structures, systems, and components (SSCs) important to safety to an ultimate heat sink during both normal and accident conditions, with suitable redundancy, assuming a single active component failure coincident with either the loss of offsite power or loss of onsite power.

Based on the staff's review of US-EPR FSAR Revision 5, the following questions are needed related to the component cooling water system (CCWS) and SSCs important to safety.

1. FSAR Tier 2 Table 9.2.2-4, "Power Supplies for CCWS Valves", has missing information related to containment isolation valves KAB30AA050 and KAB30AA054 for the thermal barrier. According to FSAR Tier 1 Table 2.7.1-2, "CCWS Equipment I&C and Electrical Design," these valves are motor operated valves. The power supplies for these valves should also be added to Table 9.2.2-4.
2. FSAR Tier 2 Table 9.2.2-4, "Power Supplies for CCWS Valves", has conflicting divisional power information related to containment isolation valves KAB30AA053/55/56 for the thermal barrier. According to FSAR Tier 1 Table 2.7.1-2, "CCWS Equipment I&C and Electrical Design," these valves have different power supplies than the Tier 2 Table 9.2.2-4. In Tier 1, KAB30AA053 power is shown as Division 2, KAB30AA055 power is shown as Division 3, and KAB30AA056 power is shown as Division 2. In FSAR Tier 2 Table 9.2.2-4, KAB30AA053 power is shown as Division 4, KAB30AA054 power is shown as Division 1, and KAB30AA056 power is shown as Division 4.

See response to RAI 406, Question 09.02.02-114 for additional information related to these changes to Revision 4 of the FSAR.

These items should be corrected in the FSAR.

**Response to Question 09.02.02-123:**

In the Response to RAI 505, Supplement 29, Question 07.01-35, the normal divisional powers for the component cooling water system (CCWS) containment isolation valves (CIVs) KAB30AA053/054/055/056 changed from Divisions 1 and 4 to Divisions 2 and 3.

The divisional power supplies for CCWS CIVs KAB30AA053/055/056 will be updated in U.S. EPR FSAR Tier 2, Table 9.2.2-4—Power Supplies for CCWS Valves. CIVs KAB30AA050 and KAB30AA054 and their divisional power supplies will also be added to Table 9.2.2-4.

**FSAR Impact:**

U.S. EPR FSAR Tier 2, Table 9.2.2-4 will be revised as described in the response and indicated on the enclosed markup.

# U.S. EPR Final Safety Analysis Report Markups





**Table 9.2.2-4—Power Supplies for CCWS Valves**  
Sheet 1 of 2

Description	Tag Number	IEEE Class 1E	
		Normal	Alternate
Heat Exchanger Bypass Valve	KAA10AA112	1	2
Heat Exchanger Bypass Valve	KAA20AA112	2	1
Heat Exchanger Bypass Valve	KAA30AA112	3	4
Heat Exchanger Bypass Valve	KAA40AA112	4	3
LHSI HX Isolation Valve	KAA12AA005	1	2
LHSI HX Isolation Valve	KAA22AA005	2	1
LHSI HX Isolation Valve	KAA32AA005	3	4
LHSI HX Isolation Valve	KAA42AA005	4	3
LHSI Pump Seal Cooler Isolation Valve	KAA22AA013	2	1
LHSI Pump Seal Cooler Isolation Valve	KAA32AA013	3	4
Common 1.b Header Non-Safety Loads	KAB40AA001	1	2
	KAB40AA006	1	2
	KAB40AA012	4	3
Common 1.b Header Safety-Related Loads	KAB60AA013	1	2
	KAB60AA018	4	3
	KAB60AA019	1	2
Common 2.b Header Safety-Related Loads	KAB70AA013	4	3
	KAB70AA018	1	2
	KAB70AA019	4	3
Common 1.a Header Fuel Pool Cooling HX Downstream Control Valve	KAB10AA134	1	2
Common 2.a Header Fuel Pool Cooling HX Downstream Control Valve	KAB20AA134	4	3
Common 1.b Header RCP Thermal Barrier Containment Isolation Valves	KAB30AA049	1	2
	<u>KAB30AA050</u>	<u>4</u>	<u>3</u>
	KAB30AA051	4	3
	KAB30AA052	1	2
Common 2.b Header RCP Thermal Barrier Containment Isolation Valves	KAB30AA053	<u>2</u> <del>4</del>	<u>1</u> <del>3</del>
	<u>KAB30AA054</u>	<u>3</u>	<u>4</u>
	KAB30AA055	<u>3</u> <del>1</del>	<u>4</u> <del>2</del>
	KAB30AA056	<u>2</u> <del>4</del>	<u>1</u> <del>3</del>