



February 16, 2016  
NRC:16:005

U.S. Nuclear Regulatory Commission  
Document Control Desk  
11555 Rockville Pike  
Rockville, MD 20852

**Response to First and Second Request for Additional Information Regarding EMF-2103(P), Revision 3, "PWR Realistic Large Break LOCA Methodology for Pressurized Water Reactors"**

AREVA Inc. (AREVA) requested the NRC's review and approval of the topical report EMF-2103(P), Revision 3, "PWR Realistic Large Break LOCA Methodology for Pressurized Water Reactors" in Reference 1. The NRC provided an initial Request for Additional Information (RAI) in Reference 2, and a second RAI in Reference 3. The combined response to these RAIs is provided in the enclosed document.

Please note that the responses to RAI questions 1 through 26 were previously submitted in Reference 4. Any changes to these previous responses are identified in the enclosed RAI response.

AREVA considers some of the information contained in the enclosed document to be proprietary. As required by 10 CFR 2.390(b), an affidavit is enclosed to support the withholding of the information from public disclosure. Proprietary and non-proprietary versions of the RAI responses are attached.

A complete set of proposed marked-up pages for the submitted topical report, inclusive of those previously sent in Reference 4, will be sent under a separate letter targeting February 19 for release.

If you have any questions related to this information, please contact Morris E. Byram, Product Licensing Manager, by telephone at (434) 832-4665, or by e-mail at [Morris.Byram@areva.com](mailto:Morris.Byram@areva.com).

Sincerely,

A handwritten signature in cursive script that reads "Gary Peters".

Gary Peters, Director  
Licensing and Regulatory Affairs  
AREVA Inc.

cc: J. G. Rowley  
Project 728

**AREVA INC.**

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- Ref. 1: Letter, Pedro Salas (AREVA NP Inc.) to Document Control Desk (NRC), "Request for Review and Approval of EMF-2103(P), Revision 3, 'PWR Realistic Large Break LOCA Methodology for Pressurized Water Reactors'," NRC:13:072, September 13, 2013.
- Ref. 2: Letter, Jonathan G. Rowley (NRC) to Pedro Salas (AREVA NP Inc.), "Request for additional information RE : AREVA NP Inc. (AREVA), Topical Report EMF-2103(P), Revision 3, 'Realistic Large Break LOCA Methodology for Pressurized Water Reactors'," November 20, 2014.
- Ref. 3: Letter, Jonathan G. Rowley (NRC) to Gary Peters (AREVA NP Inc.), "Request for Additional Information Related to Review of AREVA NP Licensing Topical Report EMF-2103 Revision 3, 'Realistic Large Break LOCA Methodology for Pressurized Water Reactors'," January 13, 2016.
- Ref. 4: Letter, Pedro Salas (AREVA NP Inc.) to Document Control Desk (NEC), "Response to Request for Additional Information Regarding EMF-2103(P), Revision 3, 'PWR Realistic Large Break LOCA Methodology for Pressurized Water Reactors'," January 16, 2015.

Enclosures:

1. EMF-2103R3Q1P, Revision 0, Proprietary version of "Response to First and Second Requests for Additional Information for EMF-2103(P), Revision 3, ' Realistic Large Break LOCA Methodology for Pressurized Water Reactors'," February 2016.
2. EMF-2103R3Q1NP, Revision 0, Non-Proprietary version of "Response to First and Second Requests for Additional Information for EMF-2103(P), Revision 3, ' Realistic Large Break LOCA Methodology for Pressurized Water Reactors'," February 2016.
3. Notarized Affidavit

bcc: NRC:16:005

K. C. Abel  
A. C. Attard  
B. L. Baxter  
A. E. Burghlea  
M. E. Byram  
E. Calvo-Tone  
G. F. Elliott  
L. M. Gerken  
J. S. Holm  
N. Hottle  
E. H. Marshall  
C. K. Nithianandan  
P. A. Opsal  
R. M. Pederson  
G. Peters  
T. N. Wills

AFFIDAVIT

COMMONWEALTH OF VIRGINIA )  
                                                  ) ss.  
CITY OF LYNCHBURG       )

1. My name is Morris Byram. I am Manager, Product Licensing, for AREVA Inc. (AREVA) and as such I am authorized to execute this Affidavit.

2. I am familiar with the criteria applied by AREVA to determine whether certain AREVA information is proprietary. I am familiar with the policies established by AREVA to ensure the proper application of these criteria.

3. I am familiar with the AREVA information contained in the AREVA document EMF-2103R3Q1P, Revision 0, "Response to First and Second Request for Additional Information," related to EMF-2103(P), Revision 3, "Realistic Large Break LOCA Methodology for Pressurized Water Reactors, dated February 2016, and referred to herein as "Document." Information contained in this Document has been classified by AREVA as proprietary in accordance with the policies established by AREVA Inc. for the control and protection of proprietary and confidential information.

4. This Document contains information of a proprietary and confidential nature and is of the type customarily held in confidence by AREVA and not made available to the public. Based on my experience, I am aware that other companies regard information of the kind contained in this Document as proprietary and confidential.

5. This Document has been made available to the U.S. Nuclear Regulatory Commission in confidence with the request that the information contained in this Document be withheld from public disclosure. The request for withholding of proprietary information is made in

accordance with 10 CFR 2.390. The information for which withholding from disclosure is requested qualifies under 10 CFR 2.390(a)(4) "Trade secrets and commercial or financial information."

6. The following criteria are customarily applied by AREVA to determine whether information should be classified as proprietary:

- (a) The information reveals details of AREVA's research and development plans and programs or their results.
- (b) Use of the information by a competitor would permit the competitor to significantly reduce its expenditures, in time or resources, to design, produce, or market a similar product or service.
- (c) The information includes test data or analytical techniques concerning a process, methodology, or component, the application of which results in a competitive advantage for AREVA.
- (d) The information reveals certain distinguishing aspects of a process, methodology, or component, the exclusive use of which provides a competitive advantage for AREVA in product optimization or marketability.
- (e) The information is vital to a competitive advantage held by AREVA, would be helpful to competitors to AREVA, and would likely cause substantial harm to the competitive position of AREVA.

The information in this Document is considered proprietary for the reasons set forth in paragraphs 6(c) and 6(d) above.

7. In accordance with AREVA's policies governing the protection and control of information, proprietary information contained in this Document has been made available, on a limited basis, to others outside AREVA only as required and under suitable agreement providing for nondisclosure and limited use of the information.

8. AREVA policy requires that proprietary information be kept in a secured file or area and distributed on a need-to-know basis.

9. The foregoing statements are true and correct to the best of my knowledge, information, and belief.

Maria E. Ruff

SUBSCRIBED before me this 16<sup>th</sup>  
day of February, 2016.

Ellie F. Carr-Payne 309873

