



Program Management Office
1000 Westinghouse Drive, Suite 380
Cranberry Township, PA 16066

BAW-2178-P, Supplement 1, Revision 0
BAW-2192-P, Supplement 1, Revision 0
Project Number 99902037

June 29, 2018

OG-18-155

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

Subject: PWR Owners Group
**Transmittal of the Response to Request for Additional Information:
RAI 5 Associated with BAW-2192-P, Supplement 1, Revision 0, "Low Upper-
Shelf Toughness Fracture Mechanics Analysis of Reactor Vessels of B&W
Owners Reactor Vessel Working Group for Levels A & B Service Loads", -
RAI 9 Associated with BAW-2178-P Supplement 1, Revision 0, "Low Upper-
Shelf Toughness Fracture Mechanics Analysis of Reactor Vessels of B&W
Owners Reactor Vessel Working Group for Levels C & D Service Loads"
(PA-MS-C-1481)**

References:

1. Letter OG-17-329 Rev 1, Submittal of BAW-2192-P, Revision 0, Supplement 1 and BAW-2178-P, Revision 0, Supplement 1 (PA-MS-C-1481), dated December 15, 2017
2. NRC Letter of Acceptance for Review of the Pressurized Water Reactor Owners Group Topical Report BAW-2192-P, Supplement 1, Revision 0, "Low Upper-Shelf Toughness Fracture Mechanics Analysis for Reactor Vessels of B&W Owners Reactor Vessel Working Group for Levels A & B Service Loads," dated March 6, 2018 (ML18053A154)
3. NRC Letter of Acceptance for Review of the Pressurized Water Reactor Owners Group Topical Report BAW-2178-P, Supplement 1, Revision 0, "Low Upper-Shelf Toughness Fracture Mechanics Analysis for Reactor Vessels of B&W Owners Reactor Vessel Working Group for Levels C & D Service Loads," dated March 6, 2018 (ML18053A149)
4. AMRDEC Safe Access File Exchange from the NRC (Holonich for Benney) to the PWROG (Holderbaum), "Request for Additional Information from the Office of Nuclear Reactor Regulation BAW-2192, Supplement 1, Revision 1, Low Upper-Shelf Toughness Fracture Mechanics Analysis for Reactor Vessels of B&W Owners Reactor Vessel

YGD
NRR

Working Group for Levels A & B Service Loads Topical Report, BAW-2178, Supplement 1, Revision 1, Low Upper-Shelf Toughness Fracture Mechanics Analysis for Reactor Vessels of B&W Owners Reactor Vessel Working Group for Levels C & D Service Loads Topical Report,” dated April 25, 2018

5. Email from the NRC (Benney) to the PWROG (Holderbaum) and Framatome (Page Blair), “BAW-2192 and BAW-2178 Revisions to RAIs 1 5 9.docx”, dated May 16, 2018
6. PWR Owner’s Group letter OG-18-148, “Transmittal of the Response to Request for Additional Information, - RAIs 2, 4 and 6 Associated with BAW-2192-P, Supplement 1, Revision 0, “Low Upper-Shelf Toughness Fracture Mechanics Analysis of Reactor Vessels of B&W Owners Reactor Vessel Working Group for Levels A & B Service Loads”, - RAIs 7, 8, and 10 Associated with BAW-2178-P Supplement 1, Revision 0, “Low Upper-Shelf Toughness Fracture Mechanics Analysis of Reactor Vessels of B&W Owners Reactor Vessel Working Group for Levels C & D Service Loads” (PA-MS-1481)

On December 15, 2017, in accordance with the Nuclear Regulatory Commission (NRC) Topical Report (TR) program for review and acceptance, the Pressurized Water Reactor Owners Group (PWROG) requested formal NRC review and approval of BAW-2192-P, Supplement 1, Revision 0 and BAW-2178-P, Supplement 1, Revision 0 for referencing in regulatory actions (Reference 1). The NRC Staff has accepted the Topical Reports for review on March 6, 2018 (References 2 and 3).

The PWROG was notified on April 25, 2018 of the NRC staff’s determination that additional information is needed to complete the review (Reference 4). The PWROG, supported by Framatome and participating utility members, held a call with the NRC staff to discuss clarification of the RAIs on May 14, 2018. Subsequently on May 16, 2018, the NRC staff provided an email communication to remove RAI-1 and revise RAI-5 and RAI-9 (Reference 5). NRC also acknowledged that RAI-3 placeholder was not used and thus RAI-3 did not require a response.

Enclosures 1 and 2 to this letter provide responses to RAI 5 (Reference 4) associated with BAW-2192-P, Supplement 1, “Low Upper-Shelf Toughness Fracture Mechanics Analysis of Reactor Vessels of B&W Owners Reactor Vessel Working Group for Levels A & B Service Loads”.

Enclosures 3 and 4 to this letter provide responses to RAI 9 (Reference 4) associated with BAW-2178-P, “Low Upper-Shelf Toughness Fracture Mechanics Analysis of Reactor Vessels of B&W Owners Reactor Vessel Working Group for Levels C & D Service Loads”.

Responses to NRC RAIs 2, 4, 6, 7, 8 and 10 were submitted to the Document Control Desk on June 15th via PWR Owner’s Group letter OG-18-148 (Reference 6). Therefore, this submittal completes the response to all NRC staff comments on the two subject Topical Reports.

The enclosed RAI responses (Enclosures 1 and 3) contain information proprietary to Framatome Inc (previously known as AREVA Inc); which is supported by an affidavit signed by Framatome, owner of the information. The affidavit sets forth the basis on which the information may be withheld from public disclosure by the Commission and addresses with specificity the considerations listed in paragraph (b) (4) of Section 2.390 of the Commission's regulations. The affidavit is included as Enclosure 5.

Accordingly, it is respectfully requested that this information which is proprietary to Framatome be withheld from public disclosure in accordance with 10 CFR Section 2.390 of the Commission's regulations.

Correspondence with respect to the proprietary aspects of the information or supporting Framatome affidavit should reference this letter and should be addressed to Mr. Philip Opsal, Manager, Product Licensing, AREVA Inc., 3315 Old Forest Road, Lynchburg, Virginia 24506-0935.

Correspondence related to this transmittal should be addressed to:

Mr. W. Anthony Nowinowski, Executive Director
PWR Owners Group, Program Management Office
Westinghouse Electric Company
1000 Westinghouse Drive
Cranberry Township, PA 16066

If you have any questions, please do not hesitate to contact me at (805) 545-4328 or Mr. W. Anthony Nowinowski, Program Manager of the PWR Owners Group, Program Management Office at (412) 374-6855.

Sincerely yours,



Ken Schrader, COO & Chairman
PWR Owners Group

JKS:am

- Enclosure 1: BAW-2192P-00 Supplement 1-00-000_Q2P, Revision 0, "Low Upper-Shelf Toughness Fracture Mechanics Analysis of Reactor Vessels of B&W Owners Reactor Vessel Working Group for Levels A & B Service Loads, Response to NRC RAIs Set 1 (RAI 5)" (Proprietary)
- Enclosure 2: BAW-2192NP-00 Supplement 1-00-000_Q2NP, Revision 0, "Low Upper-Shelf Toughness Fracture Mechanics Analysis of Reactor Vessels of B&W Owners Reactor Vessel Working Group for Levels A & B Service Loads, Response to NRC RAIs Set 1 (RAI 5)"
- Enclosure 3: BAW-2178P-00 Supplement 1-00-000_Q2P, Revision 0, "Low Upper-Shelf Toughness Fracture Mechanics Analysis of Reactor Vessels of B&W Owners Reactor Vessel Working Group for Levels C & D Service Loads, Response to NRC RAIs Set 1 (RAI 9)" (Proprietary)
- Enclosure 4: BAW-2178NP-00 Supplement 1-00-000_Q2NP, Revision 0, "Low Upper-Shelf Toughness Fracture Mechanics Analysis of Reactor Vessels of B&W Owners Reactor Vessel Working Group for Levels C & D Service Loads, Response to NRC RAIs Set 1 (RAI 9)"
- Enclosure 5: Affidavit for Withholding Proprietary Information

cc with enclosures:

B. Benney, US NRC

cc with enclosures:

PWROG Materials Committee Representatives in MSC-1481 Revisions 0-2

cc without enclosures:

PWROG Steering and Management Committee

PWROG Licensing Committee

PWROG PMO

E. Dorman, Framatome

J. Fleck, Framatome

B. Haibach, Framatome

P. Thallapragada, Framatome

M. Rinckel, Framatome

P. Opsal, Framatome

G. Elliott, Framatome

T. Zalewski, Westinghouse

J. Andrachek, Westinghouse

A. Udyawar, Westinghouse

A F F I D A V I T

COMMONWEALTH OF VIRGINIA)
) ss.
CITY OF LYNCHBURG)

1. My name is Philip A. Opsal. I am Manager, Product Licensing, for Framatome Inc., (formally known as AREVA Inc.), and as such I am authorized to execute this Affidavit.

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

3. I am familiar with the Framatome Inc. information contained in the following documents, referred to herein as "Documents." :

- BAW-2192P-00 Supplement 1-00-000_Q2P, Revision 0, "Low Upper-Shelf Toughness Fracture Mechanics Analysis of Reactor Vessels of B&W Owners Reactor Vessel Working Group for Levels A & B Service Loads, Response to NRC RAIs Set 2 (RAI 5)"
- BAW-2178P-00 Supplement 1-00-000_Q2P, Revision 0, "Low Upper-Shelf Toughness Fracture Mechanics Analysis of Reactor Vessels of B&W Owners Reactor Vessel Working Group for Levels C & D Service Loads, Response to NRC RAIs Set 2 (RAI 9)"

Information contained in these Documents has been classified by Framatome Inc. as proprietary in accordance with the policies established by Framatome Inc. for the control and protection of proprietary and confidential information.

4. These Documents contain information of a proprietary and confidential nature and is of the type customarily held in confidence by Framatome Inc. and not made available to the public. Based on my experience, I am aware that other companies regard information of the kind contained in these Documents as proprietary and confidential.

5. These Documents have been made available to the U.S. Nuclear Regulatory Commission in confidence with the request that the information contained in these Documents 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 Framatome Inc. to determine whether information should be classified as proprietary:

- (a) The information reveals details of Framatome Inc.'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 Framatome Inc.
- (d) The information reveals certain distinguishing aspects of a process, methodology, or component, the exclusive use of which provides a competitive advantage for Framatome Inc. in product optimization or marketability.

- (e) The information is vital to a competitive advantage held by Framatome Inc., would be helpful to competitors to Framatome Inc., and would likely cause substantial harm to the competitive position of Framatome Inc.

The information in these Documents is considered proprietary for the reasons set forth in paragraphs 6(b), 6(c) and 6(d) above.

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

8. Framatome Inc.'s 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.

Heidi H. Elder

SUBSCRIBED before me this 25
day of June, 2018.

Heidi H. Elder

Heidi Hamilton Elder
NOTARY PUBLIC, COMMONWEALTH OF VIRGINIA
MY COMMISSION EXPIRES: 12/31/2022
Reg. # 7777873

