



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

April 5, 2019

PROJ0694

OG-19-71

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555-0001

Subject: PWR Owners Group

Transmittal of Approved Topical Report Supplements (PA-MS-1481):

- **BAW-2192, Revision 0, Supplement 1P-A and Supplement 1NP-A, 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", and**
- **BAW-2178 Revision 0, Supplement 1P-A and Supplement 1NP-A, 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"**

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-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)

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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 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)", dated June 16, 2019
7. PWR Owner's Group letter OG-18-155, "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-1481), dated June 29, 2018
8. NRC Letter Final Safety Evaluation for BAW-2192, 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" and 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," dated December 7, 2018 (ML18333A124)

The purpose of this letter is to transmit the NRC Approved version of the subject Topical Report (TR) Supplements in accordance with the Nuclear Regulatory Commission (NRC) TR program for review and acceptance for referencing in regulatory actions (Enclosure 1). These Approved versions of the TR Supplement are contained in Enclosures 1 through 4 and have been revised to incorporate the project correspondence and final safety evaluation as requested in Reference 8.

The enclosed TR Supplements 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, Program Manager
PWR Owners Group, Program Management Office
Westinghouse Electric Company
1000 Westinghouse Drive, Suite 386
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, Chief Operating Officer and Chairman
PWR Owners Group
KS:WAN:am

Enclosures:

1. Four copies of BAW-2192, Revision 0, Supplement 1P-A, 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"
2. Four copies of BAW-2192, Revision 0, Supplement 1NP-A, 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" (Non-Proprietary)
3. Four copies of BAW-2178-P, Revision 0, Supplement 1P-A, 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"
4. Four copies of BAW-2178-P, Revision 0, Supplement 1NP-A, 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" (Non-Proprietary)
5. Affidavit for Withholding Framatome Proprietary Information

cc with enclosures:

J. Drake, 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

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.

Philip A. Ouel

SUBSCRIBED before me this 4th
day of April, 2019.

Heidi H Elder

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

