

2019-082 _____ BWR Vessel & Internals Project (BWRVIP)

August 22, 2019

Chief Financial Officer
U. S. Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852

BWRVIP Docket No. 99902016

Subject: Request for Exemption of NRC Review Fees for “BWRVIP-329: BWR Vessel and Internals Project, Updated Probabilistic Fracture Mechanics Analyses for BWR RPV Welds to Address Extended Operations”

- References:
- [1] *BWRVIP-05: BWR Vessel and Internals Project, BWR Reactor Pressure Vessel Shell Weld Inspection Recommendation*. EPRI, Palo Alto, CA: 1995. TR-105697.
 - [2] *BWRVIP-74-A: BWR Vessel and Internals Project, BWR Reactor Pressure Vessel Inspection and Flaw Evaluation Guidelines for License Renewal*. EPRI, Palo Alto, CA: 2003. 1008872.
 - [3] NUREG-2192, Standard Review Plan for Review of Subsequent License Renewal Applications for Nuclear Power Plants, U.S. NRC, July 2017.
 - [4] Summary of the May 29, 2019 Meeting Between the U.S. NRC and the Electric Power Research Institute to Discuss BWRVIP-329 (ADAMS Accession Number ML19094A354), June 19, 2019.

The purpose of this letter is to request that the document titled “BWRVIP-329: BWR Vessel and Internals Project, Updated Probabilistic Fracture Mechanics Analyses for BWR RPV Welds to Address Extended Operations” be exempt from NRC review fees in accordance with 10CFR170.11(a)(1)(ii) and based on past precedent.

BWRVIP-329 was submitted to the NRC by the letter enclosed as Attachment 1 indicating that the document provides a technical basis for an alternative to the BWR reactor pressure vessel (RPV) weld examination requirements specified by ASME Section XI, Category B-A.

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In August 1992, a revision to 10CFR50.55a requiring the augmented examination of reactor vessels was published in the Federal Register. This new rule revoked previously granted licensee relief requests regarding the extent of volumetric examination on RPV shell welds specified as Examination Category B-A, Item No. B 1.10 welds in ASME Section XI and required all licensees to perform once, as part of the current inspection interval, an augmented examination of “essentially 100%” of the circumferential and longitudinal reactor vessel shell welds. However, it has been shown that due to significant interferences, compliance with this requirement is not possible for most BWRs. To address this issue, the BWRVIP developed BWRVIP-05 [1]. This study provided a probabilistic basis for concluding that inservice inspection of circumferentially oriented BWR RPV shell welds is of little or no value. Subsequently, this issue was revisited in the context of 60-year operations in BWRVIP-74-A. Reviews of both BWRVIP-05 and BWRVIP-74 [2] were conducted on a fee waiver basis because of their generic importance to assuring continued integrity of BWR RPVs. As noted in NUREG-2192 [3], Sections 4.2.3.1.5 and 4.2.3.1.6, approved technical alternatives for addressing BWR RPV circumferential weld examinations have yet to be developed for SLR. BWRVIP-329 provides an alternative that can be applied by NRC to eliminate the need for additional regulatory actions to address this issue in the context of 80-year operations. On this basis, an exemption from review fees for BWRVIP-329 is requested per 10CFR170.11(a)(1)(ii).

It is requested that, if this fee exemption is approved, any fees billed to the BWRVIP associated with the report pre-submittal meeting (Reference [4]) be refunded.

If you have any questions on this subject, please contact the BWRVIP SLR project manager, Wayne Lunceford, by telephone at 650.855.8566 or by e-mail at waluenceford@epri.com.

Sincerely,




Nathan Palm, EPRI, BWRVIP Program Manager
Tim Hanley, Exelon Corporation, BWRVIP Chairman

c: D. Alley, NRC-NRR
A. D. Odell, Exelon Corp.
S. Richter, Energy Northwest
R. Carter, EPRI



2019-081 _____ BWR Vessel & Internals Project (BWRVIP)

August 22, 2019

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

BWRVIP Docket No. 99902016

Attention: Joseph Holonich

Subject: Transmittal of "BWRVIP-329: BWR Vessel and Internals Project, Updated Probabilistic Fracture Mechanics Analyses for BWR RPV Welds to Address Extended Operations"

- References:
- [1] *BWRVIP-05: BWR Vessel and Internals Project, BWR Reactor Pressure Vessel Shell Weld Inspection Recommendation*. EPRI, Palo Alto, CA: 1995. TR-105697.
 - [2] *BWRVIP-74-A: BWR Vessel and Internals Project, BWR Reactor Pressure Vessel Inspection and Flaw Evaluation Guidelines for License Renewal*. EPRI, Palo Alto, CA: 2003. 1008872.
 - [3] NRC Letter to Carl Terry, "Final Safety Evaluation of the BWR Vessel and Internals Project BWRVIP-05 Report", July 28, 1998.
 - [4] NRC Letter to Carl Terry, "Supplement to Final Safety Evaluation of the BWR Vessel and Internals Project BWRVIP-05 Report", March 7, 2000, NRC (ADAMS Accession No. ML031430372).

Enclosed is one (1) paper copy of the report "BWRVIP-329: BWR Vessel and Internals Project, Updated Probabilistic Fracture Mechanics Analyses for BWR RPV Welds to Address Extended Operations," EPRI Technical Report 3002015930. This report is being transmitted to the NRC for review and approval.

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BWRVIP-05 [1] and BWRVIP-74-A [2] provide bases for a technical alternative to the ASME Section XI, Category B-A examination requirements for BWR RPV welds. However, some U.S. BWRs may be unable to continue to demonstrate that the criteria for relief specified in the NRC safety evaluation report for BWRVIP-74 (included in BWRVIP-74-A, Appendix C, Renewal Action Items 11 and 12) are satisfied during a second period of extended operation. In some cases, plants may no longer be able to demonstrate compliance with the axial weld embrittlement criterion specified in action item 12 even before reaching the end of the initial period of extended operation. BWRVIP-329 documents the results of an updated probabilistic fracture mechanics analysis that provides an alternative basis for relief from the ASME Section XI, Category B-A examination requirements for BWR RPV circumferential welds. It should be noted that BWRVIP-329 does not supersede BWRVIP-05 or BWRVIP-74-A. Rather, it provides an alternative technical basis that may be cited by licensees.

BWRVIP requests that the NRC review of BWRVIP-329 be performed on a fee exempt basis and a separate BWRVIP letter to the NRC Chief Financial Officer (CFO) is being transmitted requesting a fee exemption. The BWRVIP requests that the NRC review of BWRVIP-329 proceed in parallel with the CFO's review of the fee exemption request.

Please note that the enclosed report contains proprietary information. All proprietary information is highlighted with yellow shading. Pages containing the proprietary information are also marked with the letters "TS" in the footer area indicating that the highlighted information is considered trade secrets in accordance with 10CFR2.390. A letter requesting that the report be withheld from public disclosure and an affidavit describing the basis for withholding this information are provided as Attachment 1.

One paper copy of the non-proprietary report "BWRVIP-329NP: BWR Vessel and Internals Project, Updated Probabilistic Fracture Mechanics Analyses for BWR RPV Welds to Address Extended Operations," EPRI Technical Report 3002015930NP, is also enclosed. This non-proprietary report is identical to the enclosed proprietary report except that the proprietary information has been deleted and the letters "NP" appear in the BWRVIP report number.

If you have any questions on this subject, please contact the BWRVIP SLR project manager, Wayne Lunceford, by telephone at 650.855.8556 or by e-mail at walunceford@epri.com.

Sincerely,



Nathan Palm, EPRI, BWRVIP Program Manager
Tim Hanley, Exelon Corporation, BWRVIP Chairman

c: D. Alley, NRC-NRR
A. D. Odell, Exelon Corp.
S. Richter, Energy Northwest
R. Carter, EPRI



NEIL WILMSHURST
Vice President and
Chief Nuclear Officer

Ref. BWRVIP Docket No. 99902016

August 21, 2019

Attention: Joseph Holonich
Document Control Desk
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: Request for Withholding of the following Proprietary information included in:
BWRVIP-329: BWR Vessel and Internals Project, Updated Probabilistic Fracture Mechanics
Analyses for BWR RPV Welds to Address Extended Operations,
EPRI Technical Report 3002015930

To Whom It May Concern:

This is a request under 10 C.F.R. §2.390(a)(4) that the U.S. Nuclear Regulatory Commission ("NRC") withhold from public disclosure the information identified in the enclosed Affidavit consisting of the proprietary information owned by Electric Power Research Institute, Inc. ("EPRI") identified above (the "Report"). Proprietary and non-proprietary versions of the Report and the Affidavit in support of this request are enclosed.

EPRI desires to disclose the Report in confidence as a means of exchanging technical information with the NRC. The Report is not to be divulged to anyone outside of the NRC or to any of its contractors, nor shall any copies be made of the Report provided herein. EPRI welcomes any discussions and/or questions relating to the information enclosed.

If you have any questions about the legal aspects of this request for withholding, please do not hesitate to contact me at (704) 595-2732. Questions on the content of the Report should be directed to Nathan Palm of EPRI at (724) 288-4043.

Sincerely,

A handwritten signature in blue ink, appearing to read "Neil Wilmshurst", is positioned below the word "Sincerely,".

Attachment(s)

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AFFIDAVIT

RE: Request for Withholding of the Following Proprietary Document:

BWRVIP-329: BWR Vessel and Internals Project, Updated Probabilistic Fracture Mechanics Analyses for BWR RPV Welds to Address Extended Operations, EPRI Technical Report 3002015930

I, Neil Wilmshurst, being duly sworn, depose and state as follows:

I am the Vice President and Chief Nuclear Officer at Electric Power Research Institute, Inc. whose principal office is located at 3420 Hillview Avenue, Palo Alto, California ("EPRI") and I have been specifically delegated responsibility for the above-listed Report that is sought under this Affidavit to be withheld (the "Report"). I am authorized to apply to the U.S. Nuclear Regulatory Commission ("NRC") for the withholding of the Report on behalf of EPRI.

EPRI Proprietary Information is identified in the above referenced report with highlighted yellow shading. The pages with the proprietary information are also marked with the letters "TS" in the page footer indicating that information is considered trade secrets in accordance with 10 CFR 2.390.

EPRI requests that the Report be withheld from the public on the following bases:

Withholding Based Upon Privileged And Confidential Trade Secrets Or Commercial Or Financial Information (see e.g. 10 C.F.R. §2.390(a)(4))::

a. The Report is owned by EPRI and has been held in confidence by EPRI. All entities accepting copies of the Report do so subject to written agreements imposing an obligation upon the recipient to maintain the confidentiality of the Report. The Report is disclosed only to parties who agree, in writing, to preserve the confidentiality thereof.

b. EPRI considers the Report and the proprietary information contained therein (the "Proprietary Information") to constitute trade secrets of EPRI. As such, EPRI holds the Report in confidence and disclosure thereof is strictly limited to individuals and entities who have agreed, in writing, to maintain the confidentiality of the Report. EPRI made a substantial economic investment to develop the Report, and, by prohibiting public disclosure, EPRI derives an economic benefit in the form of licensing royalties and other additional fees from the confidential nature of the Report. If the Report and the Proprietary Information were publicly available to consultants and/or other businesses providing services in the electric and/or nuclear power industry, they would be able to use the Report for their own commercial benefit and profit and without expending the substantial economic resources required of EPRI to develop the Report.

c. EPRI's classification of the Report and the Proprietary Information as trade secrets is justified by the Uniform Trade Secrets Act which California adopted in 1984 and a version of which has been adopted by over forty states. The California Uniform Trade Secrets Act, California Civil Code §§3426 – 3426.11, defines a "trade secret" as follows:

"Trade secret" means information, including a formula, pattern, compilation, program device, method, technique, or process, that:

(1) Derives independent economic value, actual or potential, from not being generally known to the public or to other persons who can obtain economic value from its disclosure or use; and

(2) Is the subject of efforts that are reasonable under the circumstances to maintain its secrecy."

d. The Report and the Proprietary Information contained therein are not generally known or available to the public. EPRI developed the Report only after making a determination that the Proprietary Information was not available from public sources. EPRI made a substantial investment of both money and employee hours in the development of the Report. EPRI was required to devote these resources and effort to derive the Proprietary Information and the Report. As a result of such effort and cost, both in terms of dollars spent and dedicated employee time, the Report is highly valuable to EPRI.

e. A public disclosure of the Proprietary Information would be highly likely to cause substantial harm to EPRI's competitive position and the ability of EPRI to license the Proprietary Information both domestically and internationally. The Proprietary Information and Report can only be acquired and/or duplicated by others using an equivalent investment of time and effort.

I have read the foregoing and the matters stated herein are true and correct to the best of my knowledge, information and belief. I make this affidavit under penalty of perjury under the laws of the United States of America and under the laws of the State of North Carolina.

Executed at 1300 W WT Harris Blvd, Charlotte, NC being the premises and place of business of Electric Power Research Institute, Inc.

Date: 8-21-2019
Neil Wilmshurst
Neil Wilmshurst

(State of North Carolina)
(County of Mecklenburg)

Subscribed and sworn to (or affirmed) before me on this 21st day of August, 2019, by Neil Wilmshurst, proved to me on the basis of satisfactory evidence to be the person(s) who appeared before me.

Signature Deborah H. Rouse (Seal)

My Commission Expires 2nd day of April, 2021

