



Energy Harbor Nuclear Corp.  
Beaver Valley Power Station  
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724-682-5234

August 13, 2021  
L-21-205

10 CFR 50.90

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

Subject:  
Beaver Valley Power Station, Unit Nos. 1 and 2  
Docket No. 50-334, License No. DPR-66  
Docket No. 50-412, License No. NPF-73  
Supplement to Amendment Request to Update Analytical Methods Used to Develop  
Reactor Coolant System Pressure and Temperatures Limits (EPID L-2020-LLA-0233)

By correspondence dated October 30, 2020 (ADAMS Accession No. ML20304A215), as supplemented by letter dated April 22, 2021 (Accession No. ML21113A044), Energy Harbor Nuclear Corp. submitted a license amendment request to change Technical Specification 5.6.4, "Reactor Coolant System (RCS) PRESSURE AND TEMPERATURE LIMIT REPORT (PTLR)," Item b. This would replace the currently referenced analytical methods with more recent analytical methods found acceptable by the Nuclear Regulatory Commission (NRC) staff for calculating reactor vessel fluence and reactor coolant system pressure and temperature limits when updating the reactor coolant system Pressure and Temperature Limits Report.

Energy Harbor Nuclear Corp. discovered that a technical specification page markup provided in the enclosure to the October 30, 2020 letter did not match the wording in Section 2.4, Description of the Proposed Change. This issue has been entered into the Corrective Action Program, and the attachment to this letter contains the replacement technical specification page markup that matches the proposed change description in Section 2.4 of the license amendment request. The revision to the Technical Specification Markup, Section 5.6.4.b has been annotated with a revision bar in the margin.

The information provided by this submittal does not invalidate the significant hazards consideration analysis provided in the October 30, 2020 letter.

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There are no regulatory commitments contained in this submittal. If there are any questions or if additional information is required, please contact Mr. Phil H. Lashley, Manager - Fleet Licensing, at (330) 696-7208.

I declare under penalty of perjury that the foregoing is true and correct. Executed on August 13, 2021.

Sincerely,

Grabnar, John 19072  
Grabnar, John 19072  
Grabnar, John 19072  
Site Vice President, Beaver Valley  
I am approving this document  
Aug 13 2021 1:23 PM

DocuSign

John J. Grabnar

Attachment: Updated Technical Specification Markup

cc: NRC Region I Administrator  
NRC Resident Inspector  
NRR Project Manager  
Director BRP/DEP  
Site BRP/DEP Representative

Attachment  
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Updated Technical Specification Markup

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5.6.3 CORE OPERATING LIMITS REPORT (COLR) (continued)

WCAP-16045-P-A, "Qualification of the Two-Dimensional Transport Code PARAGON,"

WCAP-16045-P-A, Addendum 1-A, "Qualification of the NEXUS Nuclear Data Methodology,"

WCAP-12610-P-A & CENPD-404-P-A, Addendum 1-A, "Optimized ZIRLO™."

As described in reference documents listed above, when an initial assumed power level of 102% of RATED THERMAL POWER is specified in a previously approved method, 100.6% of RATED THERMAL POWER may be used when input for reactor thermal power measurement of feedwater flow is by the leading edge flow meter (LEFM).

Caldon, Inc. Engineering Report-80P, "Improving Thermal Power Accuracy and Plant Safety While Increasing Operating Power Level Using the LEFM  $\sqrt{\text{TM}}$  System"

Caldon, Inc. Engineering Report-160P, "Supplement to Topical Report ER-80P: Basis for a Power Uprate with the LEFM  $\sqrt{\text{TM}}$  System"


- c. The core operating limits shall be determined such that all applicable limits (e.g., fuel thermal mechanical limits, core thermal hydraulic limits, Emergency Core Cooling Systems (ECCS) limits, nuclear limits such as SDM, transient analysis limits, and accident analysis limits) of the safety analysis are met.
- d. The COLR, including any midcycle revisions or supplements, shall be provided upon issuance for each reload cycle to the NRC.

5.6.4 Reactor Coolant System (RCS) PRESSURE AND TEMPERATURE LIMITS REPORT (PTLR)

- a. RCS pressure and temperature limits for heat up, cooldown, low temperature operation, criticality, and hydrostatic testing, Overpressure Protection System (OPPS) enable temperature, and PORV lift settings as well as heatup and cooldown rates shall be established and documented in the PTLR for the following:

LCO 3.4.3, "RCS Pressure and Temperature (P/T) Limits," and

LCO 3.4.12, "Overpressure Protection System (OPPS)"

- b. The analytical methods used to determine the RCS pressure and temperature limits shall be those previously reviewed and approved by the NRC, specifically those described in the following documents: 

WCAP-14040-A, Revision 4, "Methodology Used to Develop Cold Overpressure Mitigating System Setpoints and RCS Heatup and Cooldown Limit Curves," May 2004.  
WCAP-18124-NPA, Revision 0, "Fluence Determination with RAPTOR-M3G and FERRET," July 2012, may be used as an alternative to Section 2.2 of WCAP-14040-A, Revision 4.