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Fax: 724-643-8069December 22, 2010
L-10-331

10 CFR 50.55a

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001**SUBJECT:**Beaver Valley Power Station, Unit No. 2
Docket No. 50-412, License No. NPF- 73
Response to Request for Additional Information Related to 10 CFR 50.55a Requests
Associated with Service Water Pump Testing (TAC Nos. ME4385 and ME4393)

By correspondence dated July 22, 2010 (L-10-194), FirstEnergy Nuclear Operating Company (FENOC) submitted two relief requests which contained proposed alternatives to requirements associated with the Beaver Valley Power Station, Unit No. 2 Inservice Testing Program. The two relief requests, Pump Relief Request (PRR) 4 and PRR10 are associated with service water pump testing. By letter dated November 22, 2010, the Nuclear Regulatory Commission (NRC) staff requested additional information to complete their review of the proposed alternatives. The attachment provides responses to the NRC staff requests for information.

There are no regulatory commitments contained in this submittal. If there are any questions or additional information is required, please contact Mr. Thomas A. Lentz, Manager – Fleet Licensing, at (330) 761-6071.

Sincerely,



Paul A. Harden

Attachment:

Response to Request for Additional Information Related to Pump Relief Requests
PRR4 and PRR10cc: NRC Region I Administrator
NRC Resident Inspector
NRC Project ManagerA047
NRR

Attachment 1
L-10-331

Response to Request for Additional Information Related to Pump Relief Requests
PRR4 and PRR10
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The Nuclear Regulatory Commission (NRC) staff has requested additional information regarding proposed alternatives to requirements associated with the Beaver Valley Power Station, Unit No. 2 (BVPS-2) Inservice Testing Program. The proposed alternatives are described in two relief requests, Pump Relief Request (PRR) 4 and PRR10, which are both associated with service water pump testing. The FirstEnergy Nuclear Operating Company (FENOC) responses to the NRC staff requests for information are provided below. The NRC requests are presented in bold type, followed by FENOC's responses.

Relief Request PRR4

RAI 1

Explain why a pump curve is being developed in accordance with NUREG-1482 guidelines instead of American Society of Mechanical Engineers Operations and Maintenance (ASME) Code Case OMN-9 or OMN-16.

Response

The reference to NUREG-1482 guidelines was a carryover from the original PRR4 relief request which was approved by the NRC in 2008. This reference was not changed in the July 22, 2010 submittal. Since BVPS-2 uses the guidance contained in OMN-9, the proposed alternative of PRR4 is hereby modified to state a pump curve developed in accordance with the guidelines of OMN-9 will be used.

RAI 2

This relief request is noted as Revision 1. Is Revision 0 the relief request described in Section 8, "Precedent?" If not, provide a copy of Revision 0 of the relief request.

Response

No, the precedent described in Section 8 of the July 22, 2010 submittal was from the 1997-2007 inservice test (IST) 10-year interval. Revision 0 of the relief request was submitted by letter dated May 11, 2007 (Accession No. ML071370347) and approved by the NRC in the Safety Evaluation dated February 14, 2008 (Accession No. ML080140299) for the 2007-2017 IST interval.

Relief Request PRR10

RAI 3

Provide ASTM numbers and thermal expansion coefficients for the stainless steel pump shaft and the carbon steel pump columns.

Response

The American Society for Testing and Material (ASTM) number for the shaft is A-479 TP420 CL2, and the American Society of Mechanical Engineers (ASME) number for the columns is SA-515 or SA-516, Grade 70.

The thermal expansion coefficients are:

stainless steel shaft = 5.9×10^{-6} inch/inch/degree Fahrenheit, and
carbon steel columns = 6.4×10^{-6} inch/inch/degree Fahrenheit.

RAI 4

Explain why ASME Section XI is being referenced, and provide which Edition/Addenda is being referenced.

Response

ASME Section XI was being referenced in order to show that the expanded limits that are being requested for the summer were once used by ASME XI as the lower limits for these pumps all year round. The ASME XI Edition/Addenda referenced is the 1983 Edition, Section IWP, Table IWP-3100-2.

RAI 5

Explain why an OMN-9 pump curve cannot be developed in the summer to accommodate river water temperatures above 60°F, in addition to the winter pump curve proposed to be developed in Pump Relief Request 4, Revision 1.

Response

A pump curve could not be developed due to limits on pump flows during the summer months. In 2008, BVPS-2 attempted to obtain a summer pump curve for the service water system (SWS) C pump. However, the range of flows was limited between approximately 11,700 to 13,300 gallons per minute to avoid low SWS header pressure at high flow rates (two SWS pumps running at high flow rates with the system cross-connected downstream can lower SWS header pressure significantly), and limited SWS

cooling to the primary and secondary component cooling water heat exchangers. The primary and secondary component cooling water cools the reactor coolant pumps and main generator auxiliaries, among other components. Reduced cooling with higher outside temperatures during the summer increases the potential of overheating plant components which increases the risk of a plant trip.