

Peter P. Sena III
Site Vice President724-682-5234
Fax: 724-643-8069April 30, 2009
L-09-131ATTN: Document Control Desk
U. S. Nuclear Regulatory Commission
Washington, DC 20555-0001**SUBJECT:**

Beaver Valley Power Station, Unit No. 1
BV-1 Docket No. 50-334, License No. DPR-66
Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency
Recirculation During Design Basis Accidents at Pressurized-Water Reactors" - Request
for Extension of Completion Date for Additional Corrective Actions (TAC Nos. MC4665)

By letter dated February 14, 2008 (ADAMS Accession Number ML080510246), the FirstEnergy Nuclear Operating Company (FENOC) requested extension of completion dates for corrective actions related to Generic Letter (GL) 2004-02 for Beaver Valley Power Station Unit No. 1 (BVPS-1). By letter dated February 29, 2008 (ADAMS Accession Number ML081230116), the Nuclear Regulatory Commission (NRC) approved the extension for completion of BVPS-1 corrective actions to September 30, 2008.

By letter dated August 28, 2008 (ADAMS Accession Number ML082480045), FENOC requested approval of an additional extension for completion of certain sump blockage corrective actions until startup following the spring 2009 refueling outage (1R19). The NRC approved the additional extension for BVPS-1 in a letter dated September 30, 2008 (ADAMS Accession Number ML082740241). The subject corrective actions included modification of certain Temp-Mat® fibrous and calcium-silicate insulation. Temp-Mat® insulation installed within the reactor cavity penetrations as a transition between vessel nozzles and reflective metal insulation (RMI) on the reactor coolant system piping (hot and cold leg) are being replaced with RMI. All of the above modifications are being implemented during 1R19, currently in progress. Entry into Mode 4 (Hot Shutdown) is currently scheduled for May 5, 2009.

SECY-06-0078, STATUS OF RESOLUTION OF GSI-191, "ASSESSMENT OF [EFFECT OF] DEBRIS ACCUMULATION ON PWR SUMP PERFORMANCE," provided criteria for the evaluation of delays in implementation of hardware changes beyond the original schedule for completion proposed in GL 2004-02. The mitigative measures put into place, as described in the August 28, 2008 FENOC letter, as further supplemented

A116
WRR

by letter dated October 29, 2008 (ADAMS Accession Number ML083080094), addressed these criteria, and continue to remain in effect.

During 1R19, however, fibrous insulating material was identified on the six reactor vessel inlet and outlet nozzles. The resulting additional fibrous loading is not bounded by Reactor Coolant System (RCS) nozzle break scenario assumptions for strainer testing and analysis performed in response to GL 2004-02, as discussed in the FENOC October 29, 2008 supplemental response.

The three (3) inlet nozzles (cold legs) are 55.5 inches in outside diameter at the reactor vessel wall face and taper down to a diameter of 34.0 inches. The three outlet nozzles (hot legs) are 51.1 inches at the vessel wall and taper down to 35.5 inches. The dissimilar metal welds are carbon steel (nozzle) buttered with stainless steel to stainless steel (loop piping) using stainless steel weld filler metal. These connections do not utilize Alloy 600 material.

FENOC has a high confidence in the structural integrity of the nozzles, including the welds associated with the nozzle to piping safe-end. The 10-year in-service inspection (ISI) program examination of all six of the nozzle to piping safe-end connections was performed during the previous refueling outage in October 2007. This examination entailed ultrasonic examination from the inside of the wall, supplemented with eddy current examination. No indications were identified.

Additionally, postulated breaks in the reactor coolant loop piping have been evaluated for BVPS-1 by application of leak-before-break (LBB) technology previously approved by the NRC. While LBB is not being used to establish the design basis debris load, the use of LBB results in a substantial reduction in the zone of influence, and a corresponding reduction in postulated debris generation.

Probabilistic risk assessments (PRA) addressing plant-specific debris generation and transport for BVPS-1 are discussed in the August 28, 2008 FENOC correspondence. In lieu of re-evaluating the PRA assessment, a high confidence in the integrity of the RCS nozzle connections is established by the robust design of the RCS, application of LBB considerations and recent ISI examination results. Previously implemented mitigative measures remain in effect to address GL 2004-02 concerns.

Removal of this material will require substantial planning time, and involves significant radiation exposure and personnel safety concerns. Accordingly, alternative approaches to resolution of GL 2004-02 are under consideration, including insulation removal, a retest of the strainer, replacement of the existing buffer and modification to provide additional strainer surface area.

Mitigation of the additional fibrous insulation material will be accomplished through removal, replacement, analysis or design modification prior to startup from the next refueling outage (1R20), scheduled to be completed in the fourth quarter of 2010. A

description of the proposed mitigation activities will be provided as a supplemental response to GL 2004-02 prior to the start of 1R20.

Accordingly, FENOC hereby requests NRC approval of an additional schedule extension to allow completion of final GL 2004-02 corrective actions prior to startup following the BVPS-1 refueling outage scheduled to begin in the fall of 2010. NRC approval would constitute closure of previous commitments to complete these actions in 1R19. Because of the immediate impact of this approval on the completion of 1R19 outage activities, FENOC additionally requests NRC response prior to May 5, 2009.

A list of regulatory commitments made in this submittal is attached. If there are any questions, or if additional information is required, please contact Mr. Thomas A. Lentz, Manager – FENOC Fleet Licensing, at 330-761-6071.

I declare under penalty of perjury that the foregoing is true and correct. Executed on April 30, 2009.

Sincerely,



Peter P. Sena III

Attachment:

Regulatory Commitment List

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

ATTACHMENT
L-09-131

Regulatory Commitment List
Page 1 of 1

The following list identifies those actions committed to by FirstEnergy Nuclear Operating Company (FENOC) for Beaver Valley Power Station Unit No. 1 (BVPS-1) in this document. Any other actions discussed in the submittal represent intended or planned actions by FENOC. They are described only as information and are not Regulatory Commitments. Please notify Mr. Thomas A. Lentz, Manager - Licensing, at (330) 761-6071 of any questions regarding this document or associated Regulatory Commitments.

Regulatory Commitment

Due Date

- | | |
|--|---|
| 1. Mitigation of the additional fibrous insulation will be accomplished through removal, replacement, analysis or design modification prior to startup from the next refueling outage (1R20), scheduled to be completed in the fourth quarter of 2010. | 1. Prior to startup from the next refueling outage (1R20) |
| 2. A description of the proposed mitigation activities will be provided as a supplemental response to GL 2004-02 prior to the start of 1R20. | 2. Prior to the start of 1R20. |