FENOC
FirstEnergy Nuclear Operating Company

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May 8, 2008
L-08-150

10 CFR 54

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

SUBJECT:
Beaver Valley Power Station, Unit Nos. 1 and 2
BV-1 Docket No. 50-334, License No. DPR-66
BV-2 Docket No. 50-412, License No. NPF-73
Correction to Reply to Request for Additional Information for the Review of Beaver Valley Power Station, Units 1 and 2, License Renewal Application (TAC Nos. MD6593 and MD6594), License Renewal Application Amendment No. 8, and Revised License Renewal Boundary Drawings

Reference 1 provided the FirstEnergy Nuclear Operating Company (FENOC) License Renewal Application (LRA) for the Beaver Valley Power Station (BVPS). Reference 2 provided LRA Boundary Drawings. Reference 3 requested additional information from FENOC regarding BVPS license renewal scoping in Section 2.1 of the BVPS LRA. Reference 4 provided the FENOC reply to the U.S. Nuclear Regulatory Commission (NRC) request for additional information (RAI). This letter provides a correction to the FENOC response to NRC RAI 2.1-2 submitted in Reference 4.

During development of responses to NRC RAIs, FENOC identified that a piping support had been incorrectly located on an LRA Boundary Drawing. Subsequent correction of the drawing identified the need to add the structure that houses the piping support to the license renewal scope. This issue was discussed with the NRC during a telephone conference on April 10, 2008.

The Attachment provides the corrected FENOC reply to NRC RAI 2.1-2. Enclosure A provides Amendment No. 8 to the BVPS License Renewal Application, which adds the new in-scope structure details to the LRA. Enclosure B provides two revised BVPS LRA Boundary Drawings.

There are no regulatory commitments contained in this letter. If there are any questions or if additional information is required, please contact Mr. Clifford I. Custer, Fleet License Renewal Project Manager, at 724-682-7139.

AIDS
NRR

I declare under penalty of perjury that the foregoing is true and correct. Executed on May 8, 2008.

Sincerely,

Peter P. Sena III

References:

1. FENOC Letter L-07-113, "License Renewal Application," August 27, 2007.
2. FENOC Letter L-07-118, "License Renewal Application Boundary Drawings," August 27, 2007.
3. NRC Letter, "Request for Additional Information for the Review of the Beaver Valley Power Station, Units 1 and 2, License Renewal Application (TAC Nos. MD6593 and MD6594)," March 5, 2008.
4. FENOC Letter L-08-123, "Reply to Request for Additional Information for the Review of Beaver Valley Power Station, Units 1 and 2, License Renewal Application (TAC Nos. MD6593 and MD6594), License Renewal Application Amendment No. 4, and Revised License Renewal Boundary Drawings," April 3, 2008.

Attachment:

Correction to Reply to Request for Additional Information Regarding Beaver Valley Power Station, Units 1 and 2, License Renewal Application, Section 2.1

Enclosures:

A. Amendment No. 8 to the BVPS License Renewal Application
B. Revised BVPS License Renewal Application Boundary Drawings

cc: Mr. K. L. Howard, NRC DLR Project Manager
Mr. S. J. Collins, NRC Region I Administrator

cc: w/o Attachment or Enclosure
Dr. S. S. Lee, NRC DLR Acting Director
Mr. D. L. Werkheiser, NRC Senior Resident Inspector
Ms. N. S. Morgan, NRC DORL Project Manager
Mr. D. J. Allard, PA BRP/DEP Director
Mr. L. E. Ryan, PA BRP/DEP

ATTACHMENT
L-08-150

Correction to Reply to Request for Additional Information Regarding
Beaver Valley Power Station, Units 1 and 2,
License Renewal Application, Section 2.1

This Attachment provides the corrected FENOC response to NRC request for additional information, RAI 2.1-2. Revision bars have been included to show deleted text (lined-out), and added text (underlined).

Question RAI 2.1-2

The LRA states that the application was developed in accordance with the guidance of NEI 95-10, Revision 6, which the NRC has endorsed via Regulatory Guide 1.188. NEI 95-10 contains a definition of "equivalent anchor", which includes a combination of restraints or supports such that the nonsafety-related piping and associated structures and components attached to safety-related SSCs are included in scope up to a boundary point that encompasses of at least two supports in each of three orthogonal directions. Equivalent anchors are one method used to define the portion of nonsafety-related pipe, attached to safety-related SSCs, to be included within the scope of LR in accordance with 10 CFR 54.4(a)(2).

During the NRC scoping and screening methodology audit, performed at the facility December 3-6, 2007, the applicant indicated that equivalent anchors had been used to identify portions of nonsafety-related pipe to be included within the scope of LR. However, the applicant indicated that in certain cases, combinations of less than two restraints or supports in each of the three orthogonal directions had been used as equivalent anchors to determine the portions of nonsafety-related pipe, attached to safety-related SSCs, to be included within the scope of LR. This issue applies to BVPS Units 1 and 2.

The staff requests that the applicant provide a written evaluation to address your review of this issue. Indicate if the review concludes that use of the scoping methodology precluded the identification of nonsafety-related SSCs that could interact with safety-related SSCs, and which were not specifically exempted by your current licensing basis (CLB), and therefore should have been considered within the scope of LR. Describe any additional scoping evaluations to be performed to address the 10 CFR 54.4(a)(2) criteria.

As part of your response, please address the extent of condition (the number and location of equivalent anchors which contained less than two supports in each of the three orthogonal directions). List any additional SSCs included within the scope as a result of your efforts, and list those structures and components for which aging management reviews were conducted. For each structure and component, describe the aging management programs, as applicable, to be credited for managing the identified aging effects.

RESPONSE RAI 2.1-2

A review was conducted of the evaluations for nonsafety-related piping directly attached to safety-related piping for which groups of supports were used to define an endpoint for LR scoping. This review identified some additional nonsafety-related components that were added to scope to ensure that each such combination of supports included at least two supports in each of three orthogonal directions (or the scoping terminated at another alternative specifically identified by NEI 95-10, Appendix F, such as a base-mounted component).

Scoping for the boundaries of nonsafety-related piping components that are directly connected to safety-related components relied upon engineering evaluations of combinations of supports for a total of 48 safety/nonsafety transitions. Those engineering evaluations provided conclusions that the piping beyond the scoping boundary was not required to provide support to the attached safety-related components, but did not identify whether the evaluation specifically verified two supports in each of three orthogonal directions. The piping configuration for each of the 48 safety/nonsafety transitions that relied upon a group of supports was reevaluated in response to this question. The existing evaluations for 33 transitions were confirmed to encompass at least two supports in each of three orthogonal directions. Of these 33 transitions with satisfactory supports, one evaluation was identified in which the terminal support was correctly identified, but was determined to be located differently than shown on the License Renewal Application (LRA) Boundary Drawing. The required drawing change resulted in the addition of the North Pipe Trench to scope. The remaining 15 transitions required additions to the depictions of the scoping boundary shown on the applicable LRA Boundary Drawings. ~~The changes are summarized below.~~ In two cases, the scoping boundary was expanded to include components that resulted in a clarifying change to an Aging Management Review (AMR), but the changes did not result in a new combination of component / material / environment / aging effect, so the AMR results did not change. ~~No changes in response to this RAI resulted in a change to the LRA. It should be noted that no Unit 2 drawing changes were required as a result of this review.~~ LRA and LRA Boundary Drawing changes are summarized below:

List of affected LR Drawings and transition letters, and changes to scoping

- 1-07-2 [D-5] at CH-56

  LR Drawing 1-07-2 was changed to depict the endpoint "D" of in-scope piping to the downstream side of CH-55. The endpoint "D" was identified as the endpoint of a stress calculation that encompasses the safety/non-safety transition. This change did not add any new component / material / environment / aging effect combination, and did not affect any AMR results.

- 1-07-3 [A-7] at CH-163

  LR Drawing 1-07-3 was changed to depict endpoints "F" of in-scope piping to anchor between PCV-CH-118 and CH-66 and to a 3-way restraint between PCV-CH-119 and CH-68. This change added some piping and valves to scope, but did not add any new component / material / environment / aging effect combination, and did not affect any AMR results.

- 1-07-3 [A-8] at PCV-CH-108

  LR Drawing 1-07-3 was changed to depict endpoints "F" of in-scope piping to anchor between PCV-CH-118 and CH-66 and to a 3-way restraint between PCV-CH-119 and CH-68. This change added some piping and valves to scope, but did not add any new component / material / environment / aging effect combination, and did not affect any AMR results.

- 1-07-3 [A-8] at CH-166

  LR Drawing 1-07-3 was changed to depict endpoints "F" of in-scope piping to anchor between PCV-CH-118 and CH-66 and to a 3-way restraint between PCV-CH-119 and CH-68. This change added some piping and valves to scope, but did not add any new component / material / environment / aging effect combination, and did not affect any AMR results.

- 1-07-3 [B-7] at PCV-CH-109

  LR Drawing 1-07-3 was changed to depict endpoints "F" of in-scope piping to anchor between PCV-CH-118 and CH-66 and to a 3-way restraint between PCV-CH-119 and CH-68. This change added some piping and valves to scope, but did not add any new component / material / environment / aging effect combination, and did not affect any AMR results.

- 1-08-1

  Piping and valves were added to scope due to a change in another system. See discussion, below, for affected drawings "1-14A-1 [D-4] at TV-1SS-111A2" and "1-14A-2 [E-8] at TV-SS-118B".

- 1-09-2

  Piping was added to scope due to a change in another system. See discussion, below, for affected drawings "1-14A-1 [D-4] at TV-1SS-111A2" and "1-14A-2 [E-8] at TV-SS-118B".

- 1-12-1 [E-8] at TV-1CV-102-1

  LR Drawing 1-12-1 was changed to expand scoping to include radiation monitor sample pump 1RM-P-RM-215. All piping from the safety/non-safety transition is now

in-scope to a base-mounted component. The change resulted in an update to the system AMR background report, but did not add any new component / material / environment / aging effect combination, and did not affect any AMR results.

- 1-12-1 [E-7] at Penetration 92

  LR Drawing 1-12-1 was changed to expand scoping to LR Drawing 1-46-2 for transition "E". LR Drawing 1-46-2 was changed to depict endpoint "E" on the downstream side of HY-187 [D-1]. This change added some piping and a valve to scope, but did not add any new component / material / environment / aging effect combination, and did not affect any AMR results.

- 1-12-1 [E-7] at TV-1CV-102

  LR Drawing 1-12-1 was changed to depict endpoints on ¾"-PAS-11, upstream of the reducer on 1-½"-CV-11, and to 1CV-P-1B (as a base-mounted component) for transition "B". This change added some piping, valves, and a vacuum pump to scope. The change required an update to an LRA background AMR report to address the addition of the vacuum pump, but did not add any new component / material / environment / aging effect combination, and did not affect any AMR results.

- 1-14A-1 [D-4] at TV-1SS-111A2

  LR Drawing 1-14A-1 transition flag "A" was changed to "SR/NSR Boundary Notes: 1" to depict the scoping changes that occurred on LR Drawings 1-14A-2, 1-09-2 and 1-08-1. Piping from LR Drawing 1-14A-1 [D-4] continues onto LR Drawing 1-14A-2 [F-8]. Piping and a valve were added to scope on LR Drawing 1-14A-2 continuing onto LR Drawing 1-09-2 [A-8]. Piping and a valve were added to scope on LR Drawing 1-09-2 continuing on to LR Drawing 1-08-1 [A-8 & E-8]. Piping and valves were added to scope on LR Drawing 1-08-1. All piping from TV-1SS-111A2 is in scope or in scope to a base-mounted component. This change added some piping and valves to scope, but did not add any new component / material / environment / aging effect combination, and did not affect any AMR results.

- 1-14A-2 [E-8] at TV-SS-118B

  LR Drawing 1-14A-2 transition flag "A" was changed to "SR/NSR Boundary Notes: 1" to depict the scoping changes that occurred on LR Drawings 1-14A-1, 1-09-2 and 1-08-1. Piping from LR Drawing 1-14A-1 [D-4] continues onto LR Drawing 1-14A-2 [F-8]. Piping and a valve were added to scope on LR Drawing 1-14A-2 continuing onto LR Drawing 1-09-2 [A-8]. Piping and a valve were added to scope on LR Drawing 1-09-2 continuing on to LR Drawing 1-08-1 [A-8 & E-8]. Piping and valves were added to scope on LR Drawing 1-08-1. All piping from TV-SS-118B is in scope or in scope to a base-mounted component. This change added some piping and valves to scope, but did not add any new component / material / environment / aging effect combination, and did not affect any AMR results.

- 1-19-1 [A-4] at GW-85

  LR Drawing 1-19-1 was changed to depict endpoints "A" of in-scope piping to locations between Surge Tank GW-TK-2 and valve GW-50. Endpoint "A" on the downstream side of GW-86 was not changed. This change added some piping to scope, but did not add any new component / material / environment / aging effect combination, and did not affect any AMR results.

- 1-19-1 [A-5] at GW-84

  LR Drawing 1-19-1 was changed to depict endpoints "A" of in-scope piping to locations between Surge Tank GW-TK-2 and valve GW-50. Endpoint "A" on the downstream side of GW-86 was not changed. This change added some piping to scope, but did not add any new component / material / environment / aging effect combination, and did not affect any AMR results.

- 1-24-1 [B-7] at 1WT-506

  LR Drawing 1-24-1 was changed to depict endpoint "D" on the upstream side of the tee leading to 1WT-506. Note that this drawing also depicts a change showing FCV-FW-479(489)(499) and FCV-FW-478(488)(498) as being safety-related components, with support endpoints identified at the upstream header. These changes did not add any new component / material / environment / aging effect combination, and did not affect any AMR results.

- 1-30-1 [E-5] at 1RW-61

  LR Drawing 1-30-1 was changed to depict endpoints "A" on the downstream side of MOV-1RW-110B, the piping tee upstream of 1RW-3 and at REJ-1RW-12A. Endpoint "A" at the piping tee upstream of 1RW-3 was evaluated as the moment of inertia ratio of 30"-WR-171 to 10"-SWW-14. Loads imposed on pipe 10"-SWW-14 would not adversely affect pipe 30"-WR-171. Endpoint "A" at REJ-1RW-12A is a flexible connection where loads would not be transferred across the flexible connection. This change did not add any new component / material / environment / aging effect combination, and did not affect any AMR results.

- 1-46-2 [F-8] at HY-147

  LR Drawing 1-46-2 was changed to depict endpoint "E" on the piping tee upstream of HY-147. This change added some piping to scope, but did not add any new component / material / environment / aging effect combination, and did not affect any AMR results. See also affected drawing "1-12-1 [E-7] at Penetration 92," above, for additional changes.

- 2-30-1 [C-6] at 2SWM-MOV563 and 2SWM-MOV562

  LR Drawing 2-30-1 was changed to depict endpoint "A" further from the safety / nonsafety transitions, and outside of the Service Water Valve Pit. The terminal support credited is within the North Pipe Trench, which was not previously identified as an in-scope structure. The LR Structures drawing is revised to add the North Pipe Trench to LR scope, and LRA Table 2.2-4, Table 2.2-5, and Section 2.4.19 are revised to include the North Pipe Trench on the list of Structures Within the Scope of License Renewal and provide the structure description. The existing Unit 2 Pipe Tunnel AMR results presented in LRA Table 3.5.2-19 encompass the structural components of the North Pipe Trench.

See Enclosure A to this letter for the revision to the BVPS LRA.

See Enclosure B to this letter for copies of revised LRA Boundary Drawings.

ENCLOSURE A

Beaver Valley Power Station (BVPS), Unit Nos. 1 and 2

Letter L-08-150

Amendment No. 8 to the
BVPS License Renewal Application

Sections Affected

Table 2.2-4

Table 2.2-5

Section 2.4.19

The Enclosure identifies the correction by Affected License Renewal Application (LRA) Section, LRA Page No., and Affected Paragraph and Sentence. The count for the affected paragraph, sentence, bullet, etc. starts at the top of the affected page. Below each section the reason for the change is identified, and the sentence affected is printed in italics with deleted text lined-out and added text underlined.

Affected LRA Section	LRA Page No.	Affected Paragraph and Sentence
Table 2.2-4	**Page 2.2-9**	**New Row**

The North Pipe Trench (a Unit 2 Pipe Tunnel), not previously identified as an in-scope structure, is added to license renewal scope due to the determination that an in-scope pipe support is located in the tunnel. A new row is added to Table 2.2-4, "Structures Within the Scope of License Renewal," and it reads, "***Structure Name:*** *North Pipe Trench;* ***LRA Section:*** *2.4.19.*"

Table 2.2-5	**Page 2.2-11**	**12th Row [Header row not counted]**

The North Pipe Trench (a Unit 2 Pipe Tunnel), not previously identified as an in-scope structure, is added to license renewal scope due to the determination that an in-scope pipe support is located in the tunnel. Therefore, the 12th row of Table 2.2-5, "Structures Not Within the Scope of License Renewal," is deleted, and now reads, "***Structure Name:*** *Deleted* ~~*North Pipe Trench (Common);*~~ ***Function:*** *Deleted* ~~*Houses nonsafety-related, cross-tie piping connecting the Unit 1 Turbine Building with the Unit 2 Pipe Tunnel.*~~"

Table 2.4.19	**Page 2.4-51**	**Unit 2 Structure Description, 1st and 2nd paragraphs**

The North Pipe Trench (a Unit 2 Pipe Tunnel), not previously identified as an in-scope structure, is added to license renewal scope due to the determination that an in-scope pipe support is located in the tunnel. The description of the structure is added to the "Unit 2 Structure Description" for LRA Section 2.4.19, "Pipe Tunnel," and the revised description now reads:

"*There are* ~~*two*~~ *three Unit 2 Pipe Tunnels that are in scope. Two are safety-related, seismic Category I structures. The third is a nonsafety-related structure. One safety-related tunnel connects the Service Building, Main Steam and Cable Vault and Safeguards Building and is approximately 10 feet wide by 42 feet long by 13 feet deep. The second safety-related tunnel connects the Auxiliary Building with the Fuel Building. It is 7 feet wide by 6 feet deep with one portion enlarging to 14 feet wide by 8 feet deep. This tunnel's overall length is 164 feet.*

The safety-related Pipe Tunnels are constructed of reinforced concrete and are protected against external flooding up to El. 730 feet. These safety-related tunnels provide tornado protection except for approximately 103 feet of length

adjacent to the Fuel and Decontamination Buildings. This unprotected length of tunnel does not contain safety-related piping, components or equipment.

The nonsafety-related Pipe Tunnel (the North Pipe Trench) connects the Unit 1 Turbine Building to the [second] Unit 2 safety-related Pipe Tunnel (the safety-related tunnel that connects the Auxiliary Building with the Fuel Building) north of the Unit 2 Cable Tunnel. The nonsafety-related tunnel is approximately 9 feet wide by 6 feet deep, and runs north from the [second] Unit 2 safety-related Pipe Tunnel and then west to the Unit 1 Turbine Building. The nonsafety-related Pipe Tunnel is a reinforced concrete subsurface structure, and the top of the tunnel covers are approximately level with ground grade."

ENCLOSURE B

Beaver Valley Power Station (BVPS), Unit Nos. 1 and 2

Letter L-08-150

Revised License Renewal Application Boundary Drawings

The following License Renewal Application Boundary Drawings are revised and are enclosed:

LR Drawing 2-30-1	**Revision 4**
LR STRUCTURES	**Revision 2**

THIS PAGE IS AN OVERSIZED DRAWING OR FIGURE,

THAT CAN BE VIEWED AT THE RECORD TITLED:

"LR Drawing 2-30-1, Rev. 4 Service Water System (SWS)"

WITHIN THIS PACKAGE... OR BY SEARCHING USING THE

D-01

THIS PAGE IS AN OVERSIZED DRAWING OR FIGURE,

THAT CAN BE VIEWED AT THE RECORD TITLED:

"LR Drawing LR-STRUCTURES, Rev. 2, Site Map-In-Scope Structures"

WITHIN THIS PACKAGE... OR BY SEARCHING USING THE

D-02X