

Barry S. Allen  
Vice President - Nuclear

419-321-7676  
Fax: 419-321-7582

November 9, 2011  
L-11-343

10 CFR 54

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

**SUBJECT:**

Davis-Besse Nuclear Power Station, Unit No. 1  
Docket No. 50-346, License Number NPF-3  
Reply to Request for Additional Information for the Review of the Davis-Besse Nuclear Power Station, Unit No. 1, License Renewal Application (TAC No. ME4640)

By letter dated August 27, 2010 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML102450565), FirstEnergy Nuclear Operating Company (FENOC) submitted an application pursuant to Title 10 of the *Code of Federal Regulations*, Part 54 for renewal of Operating License NPF-3 for the Davis-Besse Nuclear Power Station, Unit No. 1 (DBNPS). During a telephone conference call with the Nuclear Regulatory Commission (NRC) held October 26, 2011, regarding the FENOC supplemental response to NRC request for additional information (RAI) 4.6-1 related to containment fatigue analyses provided by FENOC letter dated October 7, 2011 (ML11285A064), the NRC requested additional information.

The Attachment provides the FENOC reply to the NRC request for additional information. The NRC request is shown in bold text followed by the FENOC response.

By letter dated October 11, 2011 (ADAMS Accession No. ML 11271A147), the NRC requested additional information to complete its review of the License Renewal Application (LRA). By letter dated October 31, 2011, FENOC responded to three of the four NRC RAI questions, however, the response to the fourth question requires further analysis. The submittal date for the response to the RAI was discussed with Mr. Samuel Cuadrado de Jesus, NRC Project Manager, on November 8, 2011, and it was mutually agreed to defer the response to a later date.

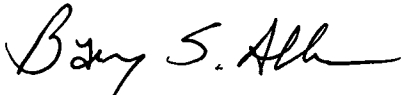
A145  
NR

Davis-Besse Nuclear Power Station, Unit No. 1  
L-11-343  
Page 2

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.

I declare under penalty of perjury that the foregoing is true and correct. Executed on November 9, 2011.

Sincerely,



Barry S. Allen

Attachment:

Reply to Request for Additional Information for the Review of the Davis-Besse Nuclear Power Station, Unit No. 1 (DBNPS), License Renewal Application, Section 4.6

cc: NRC DLR Project Manager  
NRC Region III Administrator

cc: w/o Attachment or Enclosure  
NRC DLR Director  
NRR DORL Project Manager  
NRC Resident Inspector  
Utility Radiological Safety Board

Attachment  
L-11-343

Reply to Request for Additional Information for the Review of the  
Davis-Besse Nuclear Power Station, Unit No. 1 (DBNPS), License Renewal Application,  
Section 4.6  
Page 1 of 2

**Section 4.6**

**Supplemental Question RAI 4.6-1**

**The NRC initiated a telephone conference call with FENOC on October 26, 2011, to discuss the FENOC supplemental response to RAI 4.6-1 submitted under FENOC letter dated October 7, 2011 (ML11285A064). The NRC staff requested that the applicant provide the basis for the original analysis of fatigue cycles of the containment vessel. Specifically, the staff requested the basis for the pressure range (-25 to 20 psi) used in the fatigue waiver for the original fatigue cycles analysis.**

**FENOC agreed to provide a supplemental response to address the review of the current licensing basis (i.e., containment vessel stress report, the containment vessel construction specification and the USAR) relative to the containment vessel pressure range. FENOC also agreed to address the re-performed fatigue waiver.**

**SUPPLEMENTAL RESPONSE RAI 4.6-1**

The original fatigue waiver calculation for the containment vessel was performed in accordance with N-415.1 of the ASME Code 1968 Edition, Section III. This calculation verified the requirements of N-415.1 against 400 pressure cycles (from -25 psi to 20 psi) and 400 temperature cycles (from 30°F to 120°F). Based on a review of the containment vessel stress report, the containment vessel construction specification and the Updated Safety Analysis Report (USAR), the basis for the pressure range of -25 psi to 20 psi could not be determined. Therefore, the fatigue waiver was re-performed using the maximum possible full range pressure fluctuation. This approach is conservative since the maximum possible full range pressure fluctuation bounds the pressure fluctuation during normal operation.

The review of the containment vessel stress report, the containment vessel construction specification and the USAR determined that the maximum possible full range pressure fluctuation is from -0.67 psig to 45 psig based on the containment vessel design allowable negative pressure of 0.67 psig and the containment vessel pneumatic test pressure of 45 psig (design pressure of 36 psig times 1.25). As provided in the containment vessel fatigue waiver calculation, the specified full range of pressure fluctuations during normal operations may not exceed the quantity of 80 psi. The maximum possible full range pressure fluctuation of 45.67 psi (-0.67 psig to 45 psig) is

Attachment  
L-11-343  
Page 2 of 2

less than the quantity of 80 psi, and therefore the pressure fluctuation condition in the fatigue waiver is met.