



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

May 2, 2011

Barry S. Allen  
Vice President, Davis-Besse Nuclear  
Power Station  
FirstEnergy Nuclear Operating Company  
5501 North State Route 2  
Oak Harbor, OH 43449

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION FOR THE REVIEW OF THE  
DAVIS-BESSE NUCLEAR POWER STATION-BATCH 3 (TAC NO. ME4640)

Dear Mr. Allen:

By letter dated August 27, 2010, FirstEnergy Nuclear Operating Company, submitted an application pursuant to Title 10 *Code of the Federal Regulation* Part 54 for renewal of Operating License NPF-3 for the Davis-Besse Nuclear Power Station. The staff of the U.S. Nuclear Regulatory Commission (NRC or the staff) is reviewing this application in accordance with the guidance in NUREG-1800, "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants." During its review, the staff has identified areas where additional information is needed to complete the review. The staff's requests for additional information are included in the Enclosure. Further requests for additional information may be issued in the future.

Items in the enclosure were discussed with Mr. Cliff Custer, of your staff, and a mutually agreeable date for the response is within 30 days from the date of this letter. If you have any questions, please contact me by telephone at 301-415-2277 or by e-mail at [brian.harris2@nrc.gov](mailto:brian.harris2@nrc.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "B. Harris", is written over a large, stylized, light-colored scribble or background mark.

Brian K. Harris, Project Manager  
Projects Branch 1  
Division of License Renewal  
Office of Nuclear Reactor Regulation

Docket No. 50-346

Enclosure:  
As stated

cc w/encl: Listserv

the scope of LRA Section 4.3.2.3.3.

2. Justify that the Fatigue Monitoring Program can adequately ensure the CUF for HELB locations remain below 0.1 by using systematic counting of plant transient cycles associated with HELB analysis. Provide any appropriate revisions to the program elements of the Fatigue Monitoring Program, as needed, to incorporate activities for ensuring that the CUF for HELB locations remain below 0.1.

#### **RAI 4.3-14**

In LRA Section 4.3.4, the applicant discussed the methodology to determine the locations that require environmentally assisted fatigue (EAF) analyses consistent with NUREG/CR-6260 "Application of NUREG/CR-5999 Interim Fatigue Curves to Selected Nuclear Power Plant Components." The staff recognized that, in LRA Table 4.3-2, there are fifteen plant-specific locations listed, based on the six generic components identified in NUREG/CR-6260.

The GALL Report AMP X.M1, "Metal Fatigue of Reactor Coolant Pressure Boundary" states that the impact of the reactor coolant environment on a sample of critical components should include the locations identified in NUREG/CR-6260 as a minimum, and that additional locations may be needed. It was not clear to the staff whether the applicant verified that the plant-specific locations listed in the LRA Table 4.3-2 were bounding for the generic NUREG/CR-6260 components. Furthermore, the staff noted that the applicant's plant-specific configuration may contain locations that should be analyzed for the effects of the reactor coolant environment other than those identified in NUREG/CR-6260.

The staff requests the following information:

1. Confirm and justify that the plant-specific locations listed in LRA Table 4.3-2 are bounding for the generic NUREG/CR-6260 components.
2. Confirm and justify that the LRA Table 4.3-2 locations selected for environmentally assisted fatigue analyses consists of the most limiting locations for the plant (beyond the generic locations identified in the NUREG/CR-6260 guidance). If these locations are not bounding, clarify the locations that require an environmentally assisted fatigue analysis and the actions that will be taken for these additional locations.

#### **RAI 4.3-15**

LRA Section 4.3.1.2 states that "Transients 9C, 9D, and 32 are the only transients affecting Class 1 components where the 60-year projected cycles exceed the design cycles".

The applicant stated that HPI nozzles 2-1 and 2-2 are limited to 40 cycles for Transients 9C and 9D, respectively, and it will manage cumulative fatigue damage of these nozzles for the period of extended operation. However, it is not clear to the staff if there are other components that have Transient 9C or 9D in the design-basis fatigue calculation and whether these components will be affected if the 60-year projected cycles are exceeded.