



FirstEnergy Nuclear Operating Company

Withhold in accordance with 10 CFR 2.390  
Upon removal of Enclosure E, this letter can be decontrolled.

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April 21, 2015  
L-15-139

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  
License Renewal Reactor Vessel Internals Inspection Plan (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 (Davis-Besse). In the Nuclear Regulatory Commission (NRC) Safety Evaluation Report Related to the License Renewal of Davis-Besse Nuclear Power Station dated September 2013 (ML13248A267), Appendix A, "Davis-Besse Nuclear Power Station License Renewal Commitments," Table A-1, "Davis-Besse License Renewal Commitments," Commitment No. 15, FENOC committed to the following:

*"In association with the PWR Reactor Vessel Internals Program, a plant-specific inspection plan for ensuring the implementation of MRP-227 program guidelines, as amended by the safety evaluation for MRP-227, and Davis-Besse's responses to the plant-specific action items, as identified in Section 4.2 of the safety evaluation for MRP-227, will be submitted for NRC review and approval.*

*\* NOTE: The inspection plan will be submitted no later than 2 years after issuance of the renewed operating license or 2 years prior to the beginning of the period of extended operation (April 22, 2015), whichever is earlier."*

The renewed operating license for Davis-Besse has not been issued. The period of extended operation begins April 22, 2017. Accordingly, attached is the requested plant-specific inspection plan, which is being submitted not less than 24 months before entering the period of extended operation.

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The Enclosures listed below provide the Davis-Besse Reactor Vessel Internals Inspection Plan and related supporting reports, developed by AREVA NP Inc. (AREVA NP) and required by MRP-227-A:


- A. AREVA NP Licensing Report No. ANP-3290 Revision 1, "Reactor Vessel Internals Inspection Plan for the Davis-Besse Nuclear Power Plant Unit No. 1"
- B. AREVA NP Report No. ANP-3285 Revision 0, "Confirmation of Stress Relief for the DB-1 Core Support Shield Upper Flange Weld"
- C. AREVA NP Report No. ANP-3359NP Revision 0, "Davis-Besse Reactor Vessel Internals License Renewal Scope and MRP-189, Revision 1 Comparison" (Non-Proprietary)
- D. AREVA NP Affidavit to Support the Disclosure Request for the Proprietary Assessment Report
- E. AREVA NP Report No. ANP-3359P Revision 0, "Davis-Besse Reactor Vessel Internals License Renewal Scope and MRP-189, Revision 1 Comparison" (Proprietary)

AREVA NP Report No. ANP-3359P (Enclosure E) documents Davis-Besse reactor vessel internals details that are considered proprietary information that is to be withheld from public disclosure pursuant to 10 CFR 2.390. A non-proprietary version of the document is provided as Enclosure C. Upon removal of Enclosure E, this letter can be decontrolled.

The Attachment identifies those actions committed to by FirstEnergy Nuclear Operating Company (FENOC) for the Davis-Besse Nuclear Power Station, Unit No. 1 (Davis-Besse) 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. Trent A. Henline, Supervisor, Nuclear Engineering Programs, at (419) 321-7824 of any questions regarding this document or associated Regulatory Commitments.

I declare under penalty of perjury that the foregoing is true and correct. Executed on April 21<sup>st</sup>, 2015.

Sincerely,



Raymond A. Lieb

Attachments:  
Regulatory Commitment List

Enclosures:

- A. AREVA NP Licensing Report No. ANP-3290 Revision 1, "Reactor Vessel Internals Inspection Plan for the Davis-Besse Nuclear Power Plant Unit No. 1"
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cc: NRC DLR Project Manager  
NRC Region III Administrator

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

Attachment  
L-15-139

Regulatory Commitment List  
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Regulatory Commitment	Due Date
<p>1. In response to MRP-227-A Applicant/Licensee Action Item 6, submit detailed analyses justifying the acceptability of inaccessible and non-inspectable component items (core barrel cylinder including vertical and circumferential seam welds, former plates, external baffle-to-baffle bolts and their locking devices, core barrel-to-former bolts and their locking devices, and internal baffle-to-baffle bolts) for continued operation through the period of extended operation by performing an evaluation or by proposing a schedule for replacement of the component items (see CR 2014-06427).</p>	<p>Within one year of the detection of degradation exceeding the acceptance criteria of the linked MRP-227-A primary component items leading to expansion</p>
<p>2. In response to MRP-227-A Applicant/Licensee Action Item 7, develop and submit a plant-specific analysis to demonstrate that the Incore Monitoring Instrumentation (IMI) guide tube assembly spiders, Control Rod Guide Tube (CRGT) spacer castings, and additional RV Internals component items that may be fabricated from CASS, martensitic stainless steel, or martensitic precipitation-hardened stainless steel materials (e.g., Core Support Shield (CSS) vent valve top and bottom retaining rings) will maintain their functionality during the period of extended</p>	<p>One year prior to the MRP-227-A inspection of the applicable component items</p>

<p>operation. The analysis will consider the possible loss of fracture toughness in these component items due to thermal embrittlement (TE) and/or irradiation embrittlement (IE) and may also need to consider limitations on accessibility for inspection and the resolution/sensitivity of the inspection techniques. The Davis-Besse analysis will be consistent with the licensing basis and the need to maintain the functionality of the component items being evaluated under all licensing basis conditions of operation.</p>	
<p>3. In response to MRP-227-A Applicant/Licensee Action Item 8, update and submit an evaluation for the period of extended operation regarding the effect of irradiation on the mechanical properties and deformation limits of the RV internals that was evaluated for the current term of operation in Appendix E of Topical Report BAW-10008, Part 1, Revision 1 supplemented by DB-1 USAR Appendix 4A.</p>	<p>April 22, 2017</p>