



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

July 26, 2017

ANO Site Vice President  
Arkansas Nuclear One  
Entergy Operations, Inc.  
1448 S.R. 333  
Russellville, AR 72802

**SUBJECT: ARKANSAS NUCLEAR ONE, UNIT 1 – STAFF RESPONSE TO LICENSEE  
SUBMITTAL OF INFORMATION CONCERNING LICENSEE ACTION ITEM  
NO. 6 OF PRESSURIZED WATER REACTOR VESSEL INTERNALS  
INSPECTION AND EVALUATION GUIDELINES (MRP-227-A)  
(CAC NO. MF9068)**

Dear Sir or Madam:

By letter dated May 20, 2014 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML14141A554), as supplemented, Entergy Operations, Inc. (the licensee), submitted to the U.S. Nuclear Regulatory Commission (NRC) a reactor vessel internals (RVI) aging management program (AMP) based on Materials Reliability Program (MRP)-227-A for Arkansas Nuclear One, Unit 1 (ANO-1). In a supplemental letter dated February 10, 2015 (ADAMS Package Accession No. ML15043A098), the licensee committed to submit its evaluation of MRP-227-A, Action Item No. 6, concerning inaccessible components by December 31, 2016. By letter dated December 21, 2016 (ADAMS Package Accession No. ML16365A016), the licensee submitted its evaluation of MRP-227-A, Action Item No. 6.

By letter dated February 13, 2017 (ADAMS Accession No. ML16333A338), the NRC staff issued its approval of the ANO-1, AMP; however, the staff did not address the licensee's evaluation of Action Item No. 6 in its assessment of the AMP. The purpose of this letter is to respond to the submittal of information concerning Action Item No. 6 provided by the licensee in its letter dated December 21, 2016.

Background

By letter dated June 20, 2001 (ADAMS Accession No. ML011720024), the NRC issued a renewed facility operating license for ANO-1. The NRC staff's review of the licensee's January 31, 2000, license renewal application (ADAMS Accession No. ML003679667) is documented in NUREG-1743, "Safety Evaluation Report Related to the License Renewal of Arkansas Nuclear One, Unit 1," dated May 31, 2001 (ADAMS Package Accession No. ML011640298). As part of its application, the licensee developed an AMP for the reactor vessel internals, which the NRC approved in NUREG-1743. In its application, the licensee committed to participate in the Babcock and Wilcox Owners Group Reactor Vessel Internals Aging Management Program and other industry programs, as appropriate, to continue investigation of aging effects for the RVI. This commitment is discussed in paragraph 3.3.2.4.2 of Section 3.3, "Aging Management Review," of NUREG-1743.

The joint industry efforts aimed at further understanding the aging effects of RVI culminated in the issuance of the Electric Power Research Institute (EPRI) Topical Report 1016596, "Materials Reliability Program: Pressurized Water Reactor Internals Inspection and Evaluation Guidelines (MRP-227-Rev. 0)," dated December 2008, which EPRI provided to the NRC by letter dated January 12, 2009 (ADAMS Accession No. ML090160212). By letter dated June 22, 2011 (ADAMS Accession No. ML111600498), the NRC issued its Final Safety Evaluation Report for MRP-227 that endorsed the guidance, provided that eight plant-specific actions and seven topical report condition items were implemented (including Applicant/Licensee Action Item No. 6 – "Evaluation of Inaccessible [Babcock and Wilcox] Components").

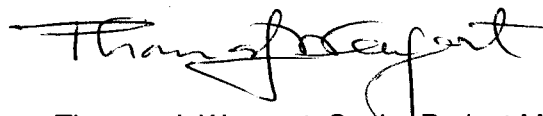
On July 21, 2011, the NRC issued Regulatory Issue Summary 2011-07, "License Renewal Submittal Information for Pressurized Water Reactor Internals Aging Management" (ADAMS Accession No. ML111990086), to provide guidance to licensees with renewed licenses for the submittal of AMPs and inspection plans. On December 16, 2011, the NRC issued Revision 1 of the safety evaluation report for MRP-227-A (ADAMS Accession No. ML11308A770) to ensure that the final approved version of MRP-227 (i.e., MRP-227-A) included all NRC-required changes. By letter to the NRC dated January 9, 2012 (ADAMS Accession No. ML120170453), EPRI submitted Topical Report 1022863, "Material Reliability Program: Pressurized Water Reactor Internals Inspection and Evaluation Guidelines (MRP-227-A)," dated December 2011.

#### Conclusion

As noted above, by letter dated December 21, 2016, the licensee submitted its evaluation of MRP-227-A, Action Item No. 6. After review of the submittal, the NRC staff concludes that the licensee has fulfilled the commitment it made in its letter dated February 10, 2015.

If you have any questions regarding this matter, please contact me at 301-415-4037 or via e-mail at [Thomas.Wengert@nrc.gov](mailto:Thomas.Wengert@nrc.gov).

Sincerely,



Thomas J. Wengert, Senior Project Manager  
Plant Licensing Branch IV  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-313

cc: Distribution via Listserv

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