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

December 9, 2016

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

SUBJECT: ARKANSAS NUCLEAR ONE, UNITS 1 AND 2 – REQUEST FOR ALTERNATIVE TEST PLAN TO THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS CODE FOR OPERATION AND MAINTENANCE OF NUCLEAR POWER PLANTS (CAC NOS. MF7537 AND MF7538)

Dear Sir or Madam:

By separate letters dated March 25, 2016 (Agencywide Documents Access and Management System Accession Nos. ML16088A181 and ML16088A186), Entergy Operations, Inc. (Entergy, the licensee), submitted for approval to the U.S. Nuclear Regulatory Commission (NRC) alternative test plans in lieu of certain inservice testing (IST) requirements (1) of the 2001 Edition through 2003 Addenda of the American Society of Mechanical Engineers (ASME) Code for Operation and Maintenance of Nuclear Power Plants (OM Code) for the IST program for Arkansas Nuclear One (ANO), Unit 1; and (2) of the 2004 Edition of ASME OM Code and no Addenda for the IST program for ANO Unit 2. Specifically, the licensee requested to adopt approved Code Case OMN-20, "Inservice Test Frequency," at ANO Unit 1 during the fourth 10-year IST program interval and at ANO Unit 2 during the fourth 10-year IST program interval.

In addition, in the letters dated March 25, 2016, Entergy requested to adopt Technical Specification Task Force (TSTF) Traveler TSTF-545, Revision 3, "TS [Technical Specification] Inservice Testing Program Removal & Clarify SR [Surveillance Requirement] Usage Rule Application to Section 5.5 Testing," for both ANO Units 1 and 2. The license amendment requests are being reviewed separately from this request for alternative. The adoption of TSTF-545 would, among other things, result in the deletion of TS 5.5.8.b from TS 5.5.8, "Inservice Testing Program." TS 5.5.8.b, provides an allowance to apply SR 3.0.2 to certain IST requirements as specified in the ASME OM Code and with test frequencies of 2 years or less. The NRC regulations and ASME OM Code do not make available test allowances similar to SR 3.0.2. In January 2013, the ASME announced the availability of Code Case OMN-20, "Inservice Test Frequency," which provides allowances similar to SR 3.0.2 for IST frequencies. Therefore, pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Section 50.55a(z)(2), the licensee requested to use the proposed alternatives of Code Case OMN-20 on the basis that complying with the current ASME OM Code requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

The NRC staff has reviewed the subject request and concludes, as set forth in the enclosed safety evaluation, that Entergy has adequately addressed all of the regulatory requirements set forth in 10 CFR 50.55a(z)(2) for this alternative. Therefore, pursuant to 10 CFR 50.55a(z)(2), the NRC staff authorizes the proposed alternative requests for the remainder of the fourth

10-year IST interval at ANO Unit 1, which is currently scheduled to end November 30, 2017, and the remainder of the fourth 10-Year IST interval at ANO Unit 2, which is currently scheduled to end March 25, 2020, or until Code Case OMN-20 is incorporated into a future revision of Regulatory Guide 1.192, referenced by a future revision of 10 CFR 50.55a, whichever comes first.

All other ASME OM Code requirements for which relief was not specifically requested and approved in the subject requests for relief remain applicable.

If you have any questions, please contact Thomas Wengert at (301) 415-4037 or by e-mail at Thomas.Wengert@nrc.gov.

Sincerely,

for

Douglas A. Broaddus, Acting Chief
Plant Licensing IV-2 and Decommissioning
Transition Branch
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-313 and 50-368

Enclosure:
Safety Evaluation

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

REQUEST FOR ALTERNATIVE RELATED TO THE

INSERVICE TESTING PROGRAM FOURTH 10-YEAR INTERVAL

ENTERGY OPERATIONS, INC

ARKANSAS NUCLEAR ONE, UNITS 1 AND 2

DOCKET NOS. 50-313 AND 50-368

1.0 INTRODUCTION

By separate letters dated March 25, 2016 (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML16088A181 and ML16088A186), Entergy Operations, Inc. (Entergy, the licensee), submitted alternative requests to the U.S. Nuclear Regulatory Commission (NRC) for Arkansas Nuclear One (ANO), Units 1 and 2, respectively. The licensee requested an alternative test plan in lieu of certain inservice testing (IST) requirements of the 2001 Edition through 2003 Addenda of the American Society of Mechanical Engineers (ASME) Code for Operation and Maintenance of Nuclear Power Plants (OM Code) for the IST program at ANO Unit 1 during the fourth 10-year IST program interval, which is currently scheduled to end November 30, 2017. Also, the licensee requested an alternative test plan in lieu of certain IST requirements of the 2004 Edition of ASME OM Code for the IST program at ANO Unit 2 during the fourth 10-year IST program interval, which is currently scheduled to end March 25, 2020.

Specifically, pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Section 50.55a(z)(2), the licensee requested to use proposed alternatives on the basis that complying with the current ASME OM Code requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. The proposed alternative is Code Case OMN-20, "Inservice Test Frequency," which addresses testing periods for pumps and valves specified in ASME OM Division 1, Section IST, 2009 Edition through OMa-2011 Addenda, and all earlier editions and addenda of ASME OM Code. The licensee proposes to adopt Code Case OMN-20.

2.0 REGULATORY EVALUATION

The regulation in 10 CFR 50.55a(f), "Inservice Testing Requirements," requires, in part, that IST of certain ASME Code Class 1, 2, and 3 components must meet the requirements of the ASME OM Code and applicable addenda, except where alternatives have been authorized by the NRC.

In proposing an alternative pursuant to 10 CFR 50.55a(z)(2), a licensee must demonstrate that compliance would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

Based on the above, and subject to the following technical evaluation, the NRC staff finds that regulatory authority exists for the licensee to request and the Commission to authorize the alternatives requested by the licensee.

3.0 TECHNICAL EVALUATION

3.1 Licensee's Alternative Requests

The proposed alternatives relate to the test frequency requirements for all pumps and valves applicable to ASME OM Division 1, Section IST. For ANO Unit 1, the IST program is based on the 2001 Edition through 2003 Addenda of the ASME OM Code, and the current interval is the fourth 10-year program interval ending November 30, 2017. For ANO Unit 2, the IST program is based on the 2004 Edition of ASME OM Code and the current interval is the fourth 10-year interval ending March 25, 2020.

The licensee proposes to adopt ASME OM Code Case OMN-20, which was published in conjunction with ASME OM Code, 2012 Edition. The purpose of this code case is to prescribe a methodology for determining acceptable tolerances for pump and valve test frequencies. This proposed alternative will be utilized for the remainder of the ANO Unit 1 and ANO Unit 2, fourth 10-year IST program intervals or until Code Case OMN-20 is incorporated into a future revision of Regulatory Guide 1.192, referenced by a future revision of 10 CFR 50.55a, whichever occurs first.

3.2 NRC Staff Evaluation

Historically, licensees have applied and the NRC staff has accepted the standard technical specification (TS) definitions for IST intervals (including allowable interval extensions) to ASME OM Code-required testing (see Section 3.1.3 of NUREG-1482, Revision 2, "Guidelines for Inservice Testing at Nuclear Power Plants: Inservice Testing of Pumps and Valves and Inservice Examination and Testing of Dynamic Restraints (Snubbers) at Nuclear Power Plants," October 2013 (ADAMS Accession No. ML13295A020). Recently, the staff reconsidered the allowance of using TS testing intervals and interval extensions for IST not associated with TS surveillance requirements (SRs). As noted in Regulatory Issue Summary (RIS) 2012-10, "NRC Staff Position on Applying Surveillance Requirements 3.0.2 and 3.0.3 to Administrative Controls Program Tests," dated August 23, 2012 (ADAMS Accession No. ML12079A393), the NRC determined that programmatic test frequencies cannot be extended in accordance with the TS SR 3.0.2. This includes all IST described in the ASME OM Code not specifically required by the TS SRs.

Following this development, the NRC staff sponsored and co-authored an ASME OM Code inquiry and Code Case to modify the ASME OM Code to include TS like test interval definitions and interval extension criteria. The resultant Code Case OMN-20 was approved by the ASME Operation and Maintenance Standards Committee on February 15, 2012, with the NRC

representative voting in the affirmative. Code Case OMN-20 was subsequently published in conjunction with the ASME OM Code, 2012 Edition. The licensee has proposed to adopt Code Case OMN-20 at ANO Units 1 and 2.

The NRC staff has determined that requiring the licensee to meet the ASME OM Code requirements and applicable adopted ASME OM Code Cases, without an allowance for defined frequency and frequency extensions for IST of pumps and valves, would cause a loss of operational flexibility for meeting ASME OM Code requirements and result in a hardship without a compensating increase in the level of quality and safety. In addition, allowing the usage of Code Case OMN-20 provides reasonable assurance of operational readiness of pumps and valves subject to the ASME OM Code IST. Based on the above and the prior acceptance by the NRC staff of similar TS test interval definitions and interval extension criteria, the NRC staff concludes that implementation of the test interval definitions and interval extension criteria contained in ASME OM Code Case OMN-20 is acceptable.

The NRC staff notes that the proposed alternative to the ASME OM Code, by adoption of approved Code Case OMN-20, is part of Technical Specification Task Force (TSTF) Traveler TSTF-545. Entergy included these requests for these alternatives as part of its submittals to revise its technical specifications and adopt TSTF-545, Revision 3, "TS Inservice Testing Program Removal & Clarify SR Usage Rule Application to Section 5.5 Testing."

4.0 CONCLUSION

As set forth above, the NRC staff has determined that complying with the current ASME OM Code requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety and that the proposed alternatives to adopt Code Case OMN-20 provides reasonable assurance that the affected components at ANO Units 1 and 2 are operationally ready. Accordingly, the NRC staff concludes that the licensee has adequately addressed all of the regulatory requirements set forth in 10 CFR 50.55a(a)(z)(2) for this alternative. Therefore, pursuant to 10 CFR 50.55a(z)(2), the NRC staff authorizes the proposed alternative requests for the remainder of the fourth 10-Year IST interval at ANO Unit 1, which is currently scheduled to end November 30, 2017, and the remainder of the fourth 10-Year IST interval at ANO Unit 2, which is currently scheduled to end March 25, 2020, or until Code Case OMN-20 is incorporated into a future revision of Regulatory Guide 1.192, referenced by a future revision of 10 CFR 50.55a, whichever comes first.

All other ASME OM Code requirements for which relief was not specifically requested and approved in the subject requests for relief remain applicable.

Principal Contributor: Michael Farnan

Date: December 9, 2016

10-year IST interval at ANO Unit 1, which is currently scheduled to end November 30, 2017, and the remainder of the fourth 10-Year IST interval at ANO Unit 2, which is currently scheduled to end March 25, 2020, or until Code Case OMN-20 is incorporated into a future revision of Regulatory Guide 1.192, referenced by a future revision of 10 CFR 50.55a, whichever comes first.

All other ASME OM Code requirements for which relief was not specifically requested and approved in the subject requests for relief remain applicable.

If you have any questions, please contact Thomas Wengert at (301) 415-4037 or by e-mail at Thomas.Wengert@nrc.gov.

Sincerely,

/RA/ SKoenick for

Douglas A. Broaddus, Acting Chief
Plant Licensing IV-2 and Decommissioning
Transition Branch
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-313 and 50-368

Enclosure:
Safety Evaluation

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ADAMS Accession No. ML16130A471 ***concurrence via**

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DATE	5/3/2016	12/9/16	

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