



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

April 26, 2010

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

SUBJECT: ARKANSAS NUCLEAR ONE, UNIT 2 – REQUEST FOR RELIEF ANO2-ISI-003, ALTERNATIVE TO USE 2001 EDITION THROUGH 2003 ADDENDA IN LIEU OF THE 2004 EDITION OF THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS BOILER AND PRESSURE VESSEL CODE, SECTION XI (TAC NO. ME1452)

Dear Sir or Madam:

By letter dated June 8, 2009 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML091600248), Entergy Operations, Inc. (Entergy, the licensee), submitted Request for Relief ANO2-ISI-003, pursuant to paragraph 50.55a(a)(3)(i) of Title 10 of the *Code of Federal Regulations* (10 CFR). In its submittal, the licensee proposed an alternative to the requirements of 10 CFR 50.55a(g)(4)(ii) pertaining to the 10-year update of the Arkansas Nuclear One, Unit 2 (ANO-2) inservice inspection (ISI) program. Specifically, the licensee proposes to update the ANO-2 ISI program to the requirements in the 2001 Edition through the 2003 Addenda of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI, rather than the 2004 Edition, which is the latest edition/addenda approved for use in 10 CFR 50.55a(b)(2). The proposed alternative is applicable to ANO-2's fourth 10-year ISI interval which began on March 26, 2010.

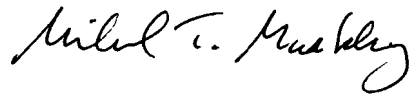
The ASME Code, Section XI activities (e.g., ISI, repair/replacement, pressure testing, and non-destructive examination at Arkansas Nuclear One, Unit 1, ANO-2, Grand Gulf Nuclear Station, River Bend Station, and Waterford Steam Electric Station, Unit 3 are standardized and corporately administered by Entergy. With the approval of this request, all ISI programs for the Entergy southern plants will be based on the same version of the ASME Code (2001 Edition with the 2003 Addenda), which will allow the licensee to return to one standard process.

The Nuclear Regulatory Commission (NRC) staff has reviewed the licensee's request for approval of the alternative. On the basis of its review, the staff has concluded that the proposed alternative will provide an acceptable level of quality and safety. Therefore, pursuant to 10 CFR 50.55a(a)(3)(i), the NRC staff authorizes the use of the proposed alternative for the fourth 10-year ISI interval at ANO-2.

All other ASME Code, Section XI requirements for which an alternative was not specifically requested and approved in this relief request remain applicable, including third-party review by the Authorized Nuclear Inservice Inspector.

The NRC staff's safety evaluation is enclosed.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael T. Markley". The signature is written in a cursive style with a large, looping initial "M".

Michael T. Markley, Chief
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-368

Enclosure:
Safety Evaluation

cc w/encl: Distribution via ListServ



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

REQUEST FOR RELIEF ANO2-ISI-003

USE OF ASME CODE, SECTION XI, 2001 EDITION THROUGH 2003 ADDENDA

ARKANSAS NUCLEAR ONE, UNIT 2

ENTERGY OPERATIONS, INC.

DOCKET NO. 50-368

1.0 INTRODUCTION

By letter dated June 8, 2009 (Reference 1), Entergy Operations, Inc. (Entergy, the licensee), submitted Request for Relief ANO2-ISI-003, pursuant to paragraph 50.55a(a)(3)(i) of Title 10 of the *Code of Federal Regulations* (10 CFR). In its submittal, the licensee proposed an alternative to the requirements of 10 CFR 50.55a(g)(4)(ii) pertaining to the 10-year update of the Arkansas Nuclear One, Unit 2 (ANO-2) inservice inspection (ISI) program. Specifically, the licensee proposes to update the ANO-2 ISI program to the requirements in the 2001 Edition through the 2003 Addenda of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI, rather than the 2004 Edition, which is the latest edition/addenda approved for use in 10 CFR 50.55a(b)(2). The proposed alternative is applicable to ANO-2's fourth 10-year ISI interval which began on March 26, 2010.

2.0 REGULATORY EVALUATION

Pursuant to 10 CFR 50.55a(g)(4), ASME Code Class 1, 2, and 3 components (including supports) will meet the requirements, except the design and access provisions and the preservice examination requirements, set forth in the ASME Code, Section XI, "Rules for Inservice Inspection (ISI) of Nuclear Power Plant Components," to the extent practical within the limitations of design, geometry, and materials of construction of the components. The regulations require that inservice examination of components and system pressure tests conducted during the first 10-year ISI interval and subsequent intervals comply with the requirements in the latest edition and addenda of Section XI of the ASME Code incorporated by reference in 10 CFR 50.55a(b) 12 months prior to the start of the 120-month interval, subject to the limitations and modifications listed therein.

Pursuant to 10 CFR 50.55a(a)(3), alternatives to requirements may be authorized by the NRC if the licensee demonstrates that: (i) the proposed alternative provides an acceptable level of

Enclosure

quality and safety, or (ii) compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

3.0 TECHNICAL EVALUATION

3.1 Licensee's Request for Alternative

3.1.1 Code Requirements

The Code of record for ANO-2's fourth 10-year ISI program interval is the 2004 Edition of the ASME Code, Section XI.

3.1.2 Licensee's Proposed Alternative

Entergy proposes to use the alternative requirements in the 2001 Edition through the 2003 Addenda of the ASME Code, Section XI, subject to the limitations and modifications contained in 10 CFR 50.55a(b)(2).

3.1.3 Basis for Proposed Alternative

In its letter dated June 8, 2009, the licensee stated:

ASME [Code] Section XI activities (e.g. ISI, repair/replacement, pressure testing, and Non-Destructive Examination (NDE) at Arkansas Nuclear One, Unit 1 (ANO-1), Arkansas Nuclear One, Unit 2 (ANO-2), Grand Gulf Nuclear Station (GGNS), River Bend Station (RBS), and [Waterford Steam Electric Station, Unit 3] (W3) are standardized and corporately administered by Entergy.

In accordance with the requirements of 10 CFR 50.55a(g)(4)(ii), the ANO-1, GGNS, RBS, and W3 ISI programs were updated to the 2001 Edition through the 2003 Addenda of ASME Code, Section XI, on May 31, 2008. To maintain standardization of the Entergy southern plants, the ANO-2 repair/replacement, pressure testing, and NDE programs were updated to the 2001 Edition through the 2003 Addenda of ASME Code, Section XI, concurrent with the updates at the other Entergy southern plants as approved by NRC staff letter dated December 20, 2007 (Reference 2). The ANO-2 ISI program was not updated at that time.

The ANO-2 fourth 10-year ISI interval began on March 26, 2010. The regulations in 10 CFR 50.55a(g)(4)(ii) require Entergy to update the ANO-2 ISI program to the 2004 Edition of ASME Code, Section XI; therefore, Entergy would be required to maintain two different ISI programs for its southern fleet and two different programs at the ANO site.

In its letter dated June 8, 2009, the licensee stated:

Entergy believes that updating the ANO-2 ISI Program to the 2001 Edition through the 2003 Addenda to be standard with the other southern Entergy plants will improve the level of quality and safety at ANO-2. This allows leveraging the knowledge from all five units to ISI activities such as selection, planning, scheduling, performance, and assessments provide ANO-2 with a wealth of

experience to draw on as well as minimizing the time spent on developing and maintaining procedures that are different from the rest of the Entergy southern units.

The licensee also noted that while there were changes to ASME Code, Section XI in the 2004 Edition, these changes were not necessary to ensure an acceptable level of quality and safety and they were not made to address a deficiency in the ASME Code that adversely impacted safety.

3.2 NRC Staff Evaluation

The licensee's proposed alternative would allow ANO-2 to update its fourth 10-year ISI program interval to the 2001 Edition through the 2003 Addenda of ASME Code, Section XI, rather than the 2004 Edition currently incorporated by reference in 10 CFR 50.55a(b). The ANO-2 fourth 10-year ISI interval began on March 26, 2010.

The changes incorporated into the 2004 Edition of ASME Code, Section XI, were evaluated by the NRC staff when the 10 CFR 50.55a(b)(2) regulations were changed to incorporate, by reference, the 2004 Edition of ASME Code, Section XI. The staff did not find it necessary to mandate that plants following earlier editions and addenda of ASME Code, Section XI implement any of the changes incorporated into the 2004 Edition of Section XI. However, the staff did mandate the requirements found in 10 CFR 50.55a(g)(6)(ii)(D), "Reactor vessel head inspections," and 10 CFR 50.55a(g)(6)(ii)(E), "Reactor coolant pressure boundary visual inspections." In its letter dated June 8, 2009, the licensee stated that the requirements in 10 CFR 50.55a(g)(6)(ii)(D) and (E) have been implemented at ANO-2. Therefore, the staff concludes that an ISI program following the requirements of the 2001 Edition through the 2003 Addenda of ASME Code, Section XI, subject to the limitations and modifications of 10 CFR 50.55a(b) and the requirements of 10 CFR 50.55a(g)(6)(ii)(D) and (E), will provide an acceptable level of quality and safety.

The proposed alternative will allow the use of a common Code of record for the Entergy southern plants and the ANO plant site. The common Code of record will be 2001 Edition through the 2003 Addenda of ASME Code, Section XI, for all five Entergy southern plants. There are distinct advantages in implementing the same code requirements at multiple sites for a licensee. The advantages include the reduction of administrative burden of maintaining different sets of procedures and requirements and results in a significant decrease in the chances of applying the wrong requirements.

Based on the above, the NRC staff has determined that the licensee's proposed alternative will ensure implementation of the ISI programs at ANO-2 is more efficient and effective. Therefore, the staff concludes that the licensee's proposed alternative will provide an acceptable level of quality and safety.

4.0 CONCLUSION

The NRC staff has reviewed the licensee's proposed Relief Request ANO2-ISI-003 submittal and concludes that the licensee's proposed alternative provides an acceptable level of quality and safety. Therefore, pursuant to 10 CFR 50.55a(a)(3)(i), the NRC staff authorizes the use of

Relief Request ANO2-ISI-003 for the use of the 2004 Edition of the ASME Code, Section XI, for ANO-2 for the fourth 10-year ISI interval, which began on March 26, 2010. All other ASME Code, Section XI requirements for which relief was not specifically requested and approved in the subject requests for relief remain applicable, including third-party review by the authorized Nuclear Inservice Inspector.

5.0 REFERENCES

1. Bice, D. B., Entergy Operations, Inc., letter to U.S. Nuclear Regulatory Commission, "Request for Alternative to Use 2001 Edition Through 2003 Addenda in Lieu of the 2004 Edition, Arkansas Unit One, Unit 2, Docket No. 50-368, License No. NPF-6," dated June 8, 2009 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML091600248).
2. Hiltz, T. G., U.S. Nuclear Regulatory Commission, letter to Timothy G. Mitchell, Entergy Operations, Inc., "Arkansas Nuclear One, Unit 2 - ISI-2007-1, Request to Use a Later Edition and Addenda of American Society of Mechanical Engineers Boiler and Pressure Vessel Code (TAC No. MD6603)," dated December 20, 2007 (ADAMS Accession No. ML073390442).

Principal Contributor: Keith Hoffman

Date: April 26, 2010

The NRC staff's safety evaluation is enclosed.

Sincerely,

/RA/

Michael T. Markley, Chief
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-368

Enclosure:
Safety Evaluation

cc w/encl: Distribution via ListServ

DISTRIBUTION:

PUBLIC

LPL4 r/f

RidsAcrsAcnw_MailCTR Resource

RidsNrrDciCpnb Resource

RidsNrrDorIDpr Resource

RidsNrrDorlLpl4 Resource

RidsNrrLAJBurkhardt Resource

RidsNrrPMANO Resource

RidsOgcRp Resource

RidsRgn4MailCenter Resource

KHoffman, NRR/DCI/CPNB

LTrocine, EDO RIV

ADAMS Accession No. ML100970659 *Only Editorial Changes from Staff provided SE

| OFFICE | NRR/LPL4/PM | NRR/LPL4/LA | NRR/DCI/CPNB | NRR/LPL4/BC |
|--------|-------------|-------------|--------------|-------------|
| NAME | NKalyanam | JBurkhardt | TLupold* | MMarkley |
| DATE | 4/21/10 | 4/15/10 | 3/8/10 | 4/26/10 |

OFFICIAL RECORD COPY