



Entergy Operations, Inc.  
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**David B. Bice**  
Acting Manager, Licensing  
Arkansas Nuclear One

1CAN030902

March 4, 2009

U. S. Nuclear Regulatory Commission  
Attn.: Document Control Desk  
Washington, DC 20555-0001

SUBJECT: Inservice Inspection Summary Report for  
the Twenty-First Refueling Outage (1R21)  
Arkansas Nuclear One, Unit 1  
Docket No. 50-313  
License No. DPR-51

Dear Sir or Madam:

Article IWA-6000 of Section XI of the 2001 Edition with the 2003 Addenda of the ASME Code requires an inservice inspection (ISI) report be submitted to regulatory and enforcement authorities having jurisdiction at the plant site. The summary report is to contain the completed Form NIS-1, "Owner's Report for Inservice Inspection," and Form NIS-2, "Owner's Report for Repair or Replacement."

Regulatory Guide 1.147, "Inservice Inspection Code Case Acceptability, ASME Section XI, Division 1," Revision 15 lists Code Case N-532-4 "Alternative Requirements to Repair and Replacement Documentation Requirements and Inservice Summary Report Preparation and Submission as Required by IWA-4000 and IWA-6000," as a code case that is acceptable to the NRC for implementation in the ISI of light water reactors. Code Case N-532-4 has been incorporated into the ANO-1 ISI plan. This code case allows Entergy to prepare an Owner's Activity Report Form OAR-1 in place of the code required NIS-1 and NIS-2 forms.

This report is to be prepared at the completion of a refueling outage and submitted within 90 calendar days of the completion of the refueling outage.

Attached is the completed Form OAR-1 for Arkansas Nuclear One, Unit 1 (ANO-1) for information. Included with the form are tables listing the "Items with Flaws or Relevant Conditions that Required Evaluation for Continued Service" and "Abstract of Repairs Replacements or Corrective Measures Activities Required for Continued Service" in accordance with Code Case N-532-4. The results contained in this completed form are for the twenty-first refueling outage for ANO-1 (1R21). This outage was completed on December 15, 2008.

This letter contains no new commitments.

By means of this submittal, the reporting requirements of IWA-6000 are fulfilled for 1R21.

If you have any questions or require additional information, please contact me.

Sincerely,

A handwritten signature in black ink, appearing to be 'DBB', written in a cursive style.

DBB/rwc

Attachment: Form OAR-1, Owner's Activity Report

cc: Mr. Elmo E. Collins  
Regional Administrator  
U. S. Nuclear Regulatory Commission  
Region IV  
612 E. Lamar Blvd., Suite 400  
Arlington, TX 76011-4125

NRC Senior Resident Inspector  
Arkansas Nuclear One  
P. O. Box 310  
London, AR 72847

U. S. Nuclear Regulatory Commission  
Attn: Mr. Alan B. Wang  
MS O-7 D1  
Washington, DC 20555-0001

Mr. Bernard R. Beville  
Arkansas Department of Health  
Radiation Control Section  
4815 West Markham Street  
Slot #30  
Little Rock, AR 72205

**ATTACHMENT TO**  
**1CAN030902**  
**FORM OAR-1**  
**OWNER'S ACTIVITY REPORT**

**FORM OAR-1 OWNER'S ACTIVITY REPORT**

Report Number OAR-1411

Plant Arkansas Nuclear One / 1448 S.R. 333, Russellville, AR. 72802

Unit No. 1 Commercial service date December 19, 1974 Refueling outage no. 1R21  
(If applicable)

Current inspection interval Fourth (4th) Inspection Interval  
(1st, 2nd, 3rd, 4th, other)

Current inspection period First (1st) Inspection Period  
(1st, 2nd, 3rd)

Edition and Addenda of Section XI applicable to the inspection plan 2001 Edition with 2003 Addenda

Date and revision of inspection plan May 27, 2008 / Revision 0

Edition and Addenda of Section XI applicable to repairs and replacements, if different than the inspection plan Same

Code Cases used: N-532-4  
(if applicable)

**CERTIFICATE OF CONFORMANCE**

I certify that (a) the statements made in this report are correct; (b) the examinations, tests meet the Inspection Plan as required by the ASME Code, Section XI; and (c) the repair/replacement activities and evaluations supporting the completion of 1R21 conform to the requirements of Section XI.  
(refueling outage number)

Signed Original signed by Richard E. Holman, Technical Specialist IV Date 02/16/2009  
Owner or Owner's Designee, Title

**CERTIFICATE OF INSERVICE INSPECTION**

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Arkansas and employed by HSBCT of Hartford, Connecticut have inspected the items described in this Owner's Activity Report, and state that to the best of my knowledge and belief, the Owner has performed all activities represented by this report in accordance with the requirements of Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the repair/replacement activities and evaluation described in this report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Original signed by Carl Thompson Commissions NB-9985, ARK-1054 "A" "B" "N" "I" "NS"  
Inspector's Signature National Board, State, Province, and Endorsements

Date 02/17/2009

**TABLE 1**

**ITEMS WITH FLAWS OR RELEVANT CONDITIONS THAT REQUIRED EVALUATION FOR CONTINUED SERVICE**

**1R21**

<b>Examination Category and Item Number</b>	<b>Item Description</b>	<b>Evaluation Description</b>
B-D B3.90	Nozzle to Reactor Vessel Weld (ISI # 01-018)	Indication exceeded IWB-3500 (CR-ANO-1-2008-2190)
R-A R1.11	Safe-end to Nozzle Dissimilar Metal Weld (ISI # 21-064)	Surface Indications (CR-ANO-1-2008-1959)
F-A F1.10B	Support MU-161 (ISI # 23-087)	Support Configuration Deficiencies (CR-ANO-1-2008-1913)
F-A F1.10B	Support MU-169 (ISI # 23-094)	Support Configuration Deficiencies (CR-ANO-1-2008-2002)
C-H C7.10	Valve SF-42 (ISI # A1.PT.5.20)	Bonnet / Body Leakage (CR-ANO-1-2008-1567 and BAE-08-1-0863)

**TABLE 2**

**ABSTRACT OF REPAIRS, REPLACEMENTS OR CORRECTIVE MEASURES REQUIRED FOR CONTINUED SERVICE (see note 1)**

<b>CODE CLASS</b>	<b>REPAIR, REPLACEMENT OR CORRECTIVE MEASURE</b>	<b>ITEM DESCRIPTION</b>	<b>DESCRIPTION OF WORK</b>	<b>FLAW OR RELEVANT CONDITION FOUND DURING SCHEDULED SECTION XI EXAMINATION OR TEST (YES/NO)</b>	<b>DATE COMPLETED</b>	<b>REPAIR / REPLACEMENT PLAN NUMBER AND MAI OR WO NUMBER</b>
2	Replacement	Valve	Normal rotation for MS valve PSV-2689	No	12/10/2008	Plan # 06-2106, WO 00084135
2	Replacement	Valve	Normal rotation for MS valve PSV-2691	No	12/10/2008	Plan # 06-2107, WO 00084133
2	Replacement	Valve	Normal rotation for MS valve PSV-2693	No	12/10/2008	Plan # 06-2108, WO 00084132
2	Replacement	Valve	Normal rotation for MS valve PSV-2694	No	12/10/2008	Plan # 06-2109, WO 00084131
2	Replacement	Valve	Normal rotation for MS valve PSV-2695	No	12/10/2008	Plan # 06-2110, WO 00084130

**TABLE 2**

<b>CODE CLASS</b>	<b>REPAIR, REPLACEMENT OR CORRECTIVE MEASURE</b>	<b>ITEM DESCRIPTION</b>	<b>DESCRIPTION OF WORK</b>	<b>FLAW OR RELEVANT CONDITION FOUND DURING SCHEDULED SECTION XI EXAMINATION OR TEST (YES/NO)</b>	<b>DATE COMPLETED</b>	<b>REPAIR / REPLACEMENT PLAN NUMBER AND MAI OR WO NUMBER</b>
2	Replacement	Valve	Normal rotation for MS valve PSV-2697	No	12/10/2008	Plan # 06-2111, WO 00084129
2	Replacement	Valve	Replace valve disc for CV 1406	No	11/30/2008	Plan # 07-2000, WO 00079266
T3	Replacement	Valve	Replace valve disc for CV 1616	No	12/04/2008	Plan # 07-2003, WO 00065583
T3	Replacement	Cooler	Replaced Cooling Coil VUC 7C Invoked CC N-416-2	No	10/11/2007	Plan # 07-2060, WO 50033103
T2	Replacement	Piping	Modify HCD-3-4" & 8" Piping	No	12/04/2008	Plan # 08-2035, WO 00050292
T2	Replacement	Support	Modify support DH-80	No	12/02/2008	Plan # 08-2036, WO 00050292
T2	Replacement	Support	Modify support DH-413	No	12/04/2008	Plan # 08-2037, WO 00050292

**TABLE 2**

<b>CODE CLASS</b>	<b>REPAIR, REPLACEMENT OR CORRECTIVE MEASURE</b>	<b>ITEM DESCRIPTION</b>	<b>DESCRIPTION OF WORK</b>	<b>FLAW OR RELEVANT CONDITION FOUND DURING SCHEDULED SECTION XI EXAMINATION OR TEST (YES/NO)</b>	<b>DATE COMPLETED</b>	<b>REPAIR / REPLACEMENT PLAN NUMBER AND MAI OR WO NUMBER</b>
T2	Replacement	Support	Modify support DH-411	No	12/02/2008	Plan # 08-2038, WO 00050292
2	Replacement	Piping	Modify HCB-6-4" Piping	No	12/04/2008	Plan # 08-2039, WO 00050292
2	Replacement	Valve	Replaced valve disc on CV 1278	No	12/11/2008	Plan # 08-2049, WO 00104249
3	Replacement	Valve	Replaced valve disc on CV 1250	No	11/07/2008	Plan # 08-2077, WO 00163263
1	Replacement	Piping	Core Flood weld 01-025 Onlay and CCA-6-14" Piping	No	12/10/2008	Plan # 08-2079, WO 00124774
1	Replacement	Piping	Core Flood weld 01-026 Onlay and CCA-6-14" Piping	No	12/10/2008	Plan # 08-2080, WO 00124774
1	Replacement	Support	Modified support DH-164	No	12/03/2008	Plan # 08-2081, WO 00124774



**TABLE 2**

<b>CODE CLASS</b>	<b>REPAIR, REPLACEMENT OR CORRECTIVE MEASURE</b>	<b>ITEM DESCRIPTION</b>	<b>DESCRIPTION OF WORK</b>	<b>FLAW OR RELEVANT CONDITION FOUND DURING SCHEDULED SECTION XI EXAMINATION OR TEST (YES/NO)</b>	<b>DATE COMPLETED</b>	<b>REPAIR / REPLACEMENT PLAN NUMBER AND MAI OR WO NUMBER</b>
1	Replacement	Support	Modified support DH-196	No	12/01/2008	Plan # 08-2082, WO 00124774
1	Replacement	Valve	Replaced valve disc for SV 1073	No	12/09/2008	Plan # 08-2085, WO 00111854
1	Repair	Piping	Structural weld overlay CCA-8-12" Piping	No	12/10/2008	Plan # 08-2088, WO 00124770
2	Replacement	Valve	Replaced valve bonnet for MU-20A	No	12/09/2008	Plan # 08-2091, WO 00104247
2	Replacement	Heat Exchanger	Replaced secondary manway cover fasteners for E-24A	No	11/09/2008	Plan # 08-2093, WO 00130799
2	Replacement	Support	Modify Support MU-201H-H2	No	11/21/2008	Plan # 08-2096, WO 00170974
2	Replacement	Piping	Modify GCB-3-3" & 8" Piping	No	12/06/2008	Plan # 08-2098, WO 00170929

**TABLE 2**

<b>CODE CLASS</b>	<b>REPAIR, REPLACEMENT OR CORRECTIVE MEASURE</b>	<b>ITEM DESCRIPTION</b>	<b>DESCRIPTION OF WORK</b>	<b>FLAW OR RELEVANT CONDITION FOUND DURING SCHEDULED SECTION XI EXAMINATION OR TEST (YES/NO)</b>	<b>DATE COMPLETED</b>	<b>REPAIR / REPLACEMENT PLAN NUMBER AND MAI OR WO NUMBER</b>
1	Replacement	Support	Replace Support DH-197 piping U-bolt	No	12/01/2008	Plan # 08-2102, WO 00124774
1	Repair	Piping	Non-welded repair to CCA-6-14" Piping for Carbon Steel splatter removal	No	11/27/2008	Plan # 08-2103, WO 00124774
1	Replacement	Heat Exchanger	Replaced primary handhole cover fasteners for E-24B	No	12/07/2009	Plan # 08-2104, WO 00161862

**Note 1:** Table 2 is an abstract of all Repair/Replacement activities performed during Cycle 21 to comply with site procedural requirements.