Phil Couture
Senior Manager
Fleet Regulatory Assurance - Licensing
601-368-5102

2CAN072401 10 CFR 50.55a

July 19, 2024

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

Subject: Proposed Alternative for Implementation of Extended Reactor Vessel In-Service Inspection Interval (ANO2-ISI-24-02)

Arkansas Nuclear One – Unit 2
NRC Docket No. 50-368
Renewed Facility Operating License No. NPF-6

References:
1) Regulatory Guide 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," Revision 1, U.S. Nuclear Regulatory Commission, ADAMS Accession Number ML023240437, dated November 2002

2) WCAP-16168-NP-A, "Risk-Informed Extension of the Reactor Vessel In-Service Inspection Interval," Revision 3, ADAMS Accession No. ML11306A084, dated October 2011.

In accordance with 10 CFR 50.55a(z)(1), Entergy Operations, Inc. (Entergy) hereby requests Nuclear Regulatory Commission (NRC) approval to extend the In-Service Inspection (ISI) interval for the Arkansas Nuclear One, Unit 2 (ANO-2) reactor pressure vessel (RPV) weld examinations from 2027 to end of the current renewed operating license (July 17, 2038). Entergy proposes to implement an alternative to the requirement of American Society of Mechanical Engineers (ASME) Section XI, IWB 2411, Inspection Program, that volumetric examination of RPV Examination categories B-A and B-D be performed once each 10-year ISI interval.

The enclosed request concludes that the current inspection interval of 10 years can be revised to 20 years with negligible change in risk. This is done by satisfying the risk criteria specified in Regulatory Guide 1.174 (Reference 1). In addition, the requested alternative would provide an acceptable level of quality and safety. Entergy requests approval of the requested alternative to the end of the current renewed ANO-2 Operating License (July 2038).

Although the analysis supports a longer period of extension, Entergy will perform the required B-A and B-D examinations prior to the end of the current renewed operating license for ANO-2.

This request is for the second interval extension. Item (6) of Section 3.4 of the Safety Evaluation of Reference 2 is applicable to this request. The requested information is provided in the enclosure.

Entergy requests approval of the proposed Alternative Requests by October 1, 2025.

This letter contains no new regulatory commitments.

If there are any questions or if additional information is needed, please contact Riley Keele, Manager, Regulatory Assurance, Arkansas Nuclear One, at 479-858-7826.

Respectfully,

Philip Couture

Digitally signed by Philip Couture
DN: cn=Philip Couture, c=US, o=Entergy, ou=Regulatory Assurance, email=pcoutur@entergy.com
Date: 2024.07.19 08:13:05 -05'00'

Phil Couture

PC/rwc

Enclosure: Alternative Requests ANO2-ISI-24-02

cc: NRC Region IV Regional Administrator
NRC Senior Resident Inspector – Arkansas Nuclear One
NRC Project Manager – Arkansas Nuclear One

ENCLOSURE

2CAN072401

ALTERNATIVE REQUEST
ANO2-ISI-24-02

Alternative Request ANO2-ISI-24-02

1. ASME Code Component(s) Affected

The affected component is the Arkansas Nuclear One, Unit 2 (ANO-2) reactor vessel (RV), specifically, the following American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (BPV) Code, Section XI (Reference 1) examination categories and item numbers covering examinations of the RV. These examination categories and item numbers are from IWB-2500 and Table IWB-2500-1 of the ASME BPV Code, Section XI.

Category B-A welds are defined as "Pressure Retaining Welds in Reactor Vessel."
Category B-D welds are defined as "Full Penetration Welded Nozzles in Vessels."

Examination Category	Item No.	Description
B-A	B1.10	Shell Welds
B-A	B1.11	Circumferential Shell Welds
B-A	B1.12	Longitudinal Shell Welds
B-A	B1.20	Head Welds
B-A	B1.21	Circumferential Head Welds
B-A	B1.22	Meridional Head Welds
B-A	B1.30	Shell-to-Flange Weld
B-A	B1.40	Head-to-Flange Weld
B-D	B3.90	Nozzle-to-Vessel Welds
B-D	B3.100	Nozzle Inside Radius Section

Throughout this request, the above examination categories are referred to as "the subject examinations" and the ASME BPV Code, Section XI, is referred to as "the Code."

2. Applicable Code Edition and Addenda

ASME Code Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," 2007 Edition through 2008 Addenda (Reference 1).

3. Applicable Code Requirement

IWB-2411, Inspection Program, requires volumetric examination of essentially 100% of RV pressure-retaining welds identified in Table IWB-2500-1 once each 10-year interval. The fifth 10-year in-service inspection (ISI) interval for ANO-2 is scheduled to end on March 25, 2030. The applicable Code for the sixth 10-year ISI interval will be selected in accordance with the requirements of 10 CFR 50.55a.

4. Reason for Request

An alternative is requested from the requirement of the IWB-2411 Inspection Program, that volumetric examination of essentially 100% of RV pressure-retaining Examination Category B-A and B-D welds be performed once each 10-year interval. Extension of the interval between examinations of Category B-A and B-D welds from 10 years to up to 20 years will result in a reduction in man-rem exposure and examination costs.

5. Proposed Alternative and Basis for Use

Entergy proposes not to perform the ASME Code required volumetric examination of the ANO-2 RV full penetration pressure-retaining Examination Category B-A and B-D welds for the fifth ISI interval. The fifth interval examination is currently scheduled to be performed in 2027. Entergy will perform the next ASME Code required volumetric examination of the ANO-2 RV full penetration pressure-retaining Examination Category B-A and B-D welds in the third period of the sixth ISI interval, which ends on July 17, 2038 (end of the current renewed operating license). The proposed inspection date is within plus or minus one refueling outage of the latest revised implementation plan, OG-10-238 (Reference 2), which reflects the next inspection being performed in 2038.

In accordance with 10 CFR 50.55a(z)(1), an alternate inspection interval is requested on the basis that the current interval can be revised with negligible change in risk by satisfying the risk criteria specified in Regulatory Guide (RG) 1.174 (Reference 3).

The methodology used to conduct this analysis is based on that defined in the study WCAP-16168-NP-A, Revision 3, "Risk-Informed Extension of the Reactor Vessel In-service Inspection Interval" (Reference 4). This study focuses on risk assessments of materials within the beltline and extended beltline regions of the RV wall. The results of the calculations for ANO-2 were compared to those obtained from the Combustion Engineering (CE) pilot plant evaluated in WCAP-16168-NP-A, Revision 3. Appendix A of the WCAP identifies the parameters to be compared. Demonstrating that the parameters for ANO-2 are bounded by the results of the CE pilot plant qualifies ANO-2 for an ISI interval extension.

Table 1 below lists the critical parameters investigated in the WCAP and compares the results of the CE pilot plant to those of ANO-2. Tables 2 and 3 provide additional information that was requested by the NRC and included in Appendix A of Reference 4.

Table 1: Critical Parameters for the Application of Bounding Analysis for ANO-2			
Parameter	**Pilot Plant Basis**	**Plant-Specific Basis**	**Additional Evaluation Required?**
Dominant Pressurized Thermal Shock (PTS) Transients in the NRC PTS Risk Study are Applicable	NRC PTS Risk Study (Reference 5)	PTS Generalization Study (Reference 6)	No
Through-Wall Cracking Frequency (TWCF)	3.16E-07 Events per year (Reference 4)	5.99E-13 Events per year (Calculated per Reference 4)	No
Frequency and Severity of Design Basis Transients	13 heat up / cooldown cycles per year (Reference 4)	Bounded by 13 heat up / cooldown cycles per year	No
Cladding Layers (Single/Multiple)	Single Layer (Reference 4)	Single Layer	No

Table 2 below provides a summary of the latest reactor vessel inspection for ANO-2 and an evaluation of the recorded indications. This information confirms that satisfactory examinations have been performed on the ANO-2 RV.

Table 2: Additional Information Pertaining to Reactor Vessel Inspection for ANO-2	
Inspection methodology:	The latest RV ISI for ANO-2 was conducted in accordance with the requirements of Appendix VIII of the ASME Code, Section XI, 2007 Edition with 2008 Addenda, as modified by 10 CFR 50.55a. Evaluation of recordable indications was performed to the acceptance standards of Section XI, 2007 Edition with 2008 Addenda. Future ISIs will be performed to ASME Section XI, Appendix VIII requirements.
Number of past inspections:	Three 10-Year ISIs have been performed.

Table 2: Additional Information Pertaining to Reactor Vessel Inspection for ANO-2

Number of indications found:

There were four total indications identified in the beltline and extended beltline regions during the most recently completed ISI. These subsurface indications are located in the intermediate shell-to-lower shell circumferential weld seam (Item 20 in Table 3), the upper shell longitudinal weld seam (Item 10 in Table 3) and the intermediate shell longitudinal weld seam (Item 15 in Table 3). All four indications fall within the inner 3/8th of the RV thickness and are acceptable per Table IWB 3510-1 of Section XI of the ASME Code. Of the four indications, there are three indications within the inner 1/10th or inner 1" of the RV wall thickness. The three indications are acceptable per the requirements in the Alternate PTS Rule, 10 CFR 50.61a (Reference 7).

A disposition of the three indications against the limits of the Alternate PTS Rule is shown in the tables below. Two of the indications were located in the weld materials and one indication was located in the plate material of the RV.

The four indications described above were previously reported in the second 10-year (2R13) inspection. There is no site-specific flaw growth data since these indications were evaluated as acceptable per ASME Section XI Table IWB-3510-1.

Through-Wall Extent, TWE (in.)		Scaled maximum number of flaws per 1,590 inches of weld length in the inspection volume that are greater than or equal to TWE_{MIN} and less than TWE_{MAX}.	Number of ANO-2 Flaws Evaluated (Axial/Circ.)
TWE_{MIN}	TWE_{MAX}		
0	0.075	No Limit	0
0.075	0.475	265	2 (2/0)
0.125	0.475	144	2 (2/0)
0.175	0.475	36	1 (1/0)
0.225	0.475	13	1 (1/0)
0.275	0.475	6	1 (1/0)
0.325	0.475	4	1 (1/0)
0.375	0.475	2	1 (1/0)
0.425	0.475	1	0
0.475	Infinite	0	0

Table 2: Additional Information Pertaining to Reactor Vessel Inspection for ANO-2

<table>
<tr><td></td><td>
<table>
<tr><th colspan="2">TWE (in.)</th><th rowspan="2">Scaled maximum number of flaws per 9,733 square-inches of inside surface area in the inspection volume that are greater than or equal to TWE_{MIN} and less than TWE_{MAX}.</th><th rowspan="2">Number of ANO-2 Flaws Evaluated (Axial/Circ.)</th></tr>
<tr><th>TWE_{MIN}</th><th>TWE_{MAX}</th></tr>
<tr><td>0</td><td>0.075</td><td>No Limit</td><td>0</td></tr>
<tr><td>0.075</td><td>0.375</td><td>78</td><td>1 (1/0)</td></tr>
<tr><td>0.125</td><td>0.375</td><td>30</td><td>1 (1/0)</td></tr>
<tr><td>0.175</td><td>0.375</td><td>8</td><td>0</td></tr>
<tr><td>0.225</td><td>0.375</td><td>2</td><td>0</td></tr>
<tr><td>0.275</td><td>0.375</td><td>0</td><td>0</td></tr>
<tr><td>0.325</td><td>0.375</td><td>0</td><td>0</td></tr>
<tr><td>0.375</td><td>Infinite</td><td>0</td><td>0</td></tr>
</table>

The plant-specific total length (1,590 inches) of reactor vessel beltline welds that were volumetrically inspected and the plant-specific total surface area (9,733 square-inches) of RV beltline plates that were volumetrically inspected are comprised of the upper-to-intermediate shell circumferential weld, the intermediate to lower shell circumferential weld, three longitudinal welds in the intermediate shell, and for the total weld length, three longitudinal welds in the lower shell. While the three upper shell longitudinal welds were inspected and evaluated, the length and area associated with these welds are conservatively excluded from the total inspected length and area. Weld length and area were also adjusted based on examination coverage of each weld as this is considered a conservative approach.</td></tr>
<tr><td>Proposed inspection schedule for balance of plant life:</td><td>The fourth ISI is scheduled for 2027. This inspection will instead be performed in the third period of the sixth interval, which ends on July 17, 2038. The proposed inspection date is within plus or minus one refueling outage of the latest revised implementation plan, OG-10-238 (Reference 2), which reflects the next inspection being performed in 2038.</td></tr>
</table>

Table 3 summarizes the inputs and outputs for the calculation of through-wall cracking frequency (TWCF).

Table 3: Details of TWCF Calculation for ANO-2 at 54 Effective Full Power Years (EFPY)								
Inputs (1)								
							Intermediate and Lower Shell T_{wall} [inches]:	8.09375
							Upper Shell T_{wall} [inches]:	10.71875
No.	**Region and Component Description**	**Material Heat No. Identification**	**Copper [weight %]**	**Nickel [weight %]**	**RG 1.99 Position**	**Chemistry Factor [°F]**	**$RT_{NDT(u)}$ [°F]**	**Fluence [Neutron/cm^2, E > 1.0 MeV]**
1	Upper Shell Plate C-8008-1	C8182-1	0.13	0.60	1.1	91.0	12.2	5.89E+17
2	Upper Shell Plate C-8008-2	C7605-1	0.13	0.55	1.1	89.5	60.5	
3	Upper Shell Plate C-8008-3	C8571-2	0.08	0.55	1.1	51.0	27.3	
4	Intermediate Shell Plate C-8009-1	C8161-3	0.098	0.605	1.1	63.6	- 1.4	4.91E+19
5	Intermediate Shell Plate C-8009-2	C8161-1	0.085	0.600	1.1	54.5	0.5	
6	Intermediate Shell Plate C-8009-3	C8182-2	0.096	0.580	1.1	62.2	0.0	
7	Lower Shell Plate C-8010-1	C8161-2	0.085	0.585	1.1	54.5	12.0	4.98E+19
8	Lower Shell Plate C-8010-2	B2545-1	0.083	0.668	1.1	53.1	- 16.7	
9	Lower Shell Plate C-8010-3	B2545-2	0.080	0.653	1.1	51.0	- 22.6	
10	Upper Shell Long. Weld 1-203A	BOLA	0.02	0.93	1.1	27.0	- 60	5.89E+17
11	Upper Shell Long. Weld 1-203B	BOLA	0.02	0.93	1.1	27.0	- 60	5.89E+17
12	Upper Shell Long. Weld 1-203C	BOLA	0.02	0.93	1.1	27.0	- 60	5.89E+17
13	Inter. Shell Long. Weld 2-203A	Multiple	0.05	1.00	1.1	68.0	- 56	4.64E+19
14	Inter. Shell Long. Weld 2-203B	Multiple	0.05	1.00	1.1	68.0	- 56	3.68E+19
15	Inter. Shell Long. Weld 2-203C	Multiple	0.05	1.00	1.1	68.0	- 56	3.68E+19
16	Lower Shell Long. Weld 3-203A	10120	0.046	0.082	1.1	34.0	- 56	4.71E+19
17	Lower Shell Long. Weld 3-203B	10120	0.046	0.082	1.1	34.0	- 56	3.73E+19
18	Lower Shell Long. Weld 3-203C	10120	0.046	0.082	1.1	34.0	- 56	3.73E+19
19	Upper to Inter. Shell Girth Weld 8-203	10137	0.22	0.02	1.1	98.5	- 56	5.89E+17
		6329637	0.21	0.11	1.1	100.8	- 56	
		FAGA	0.03	0.95	1.1	41.0	- 24	
20	Inter. to Lower Shell Girth Weld 9-203	83650	0.045	0.087	1.1	34.1	- 40	4.89E+19

Table 3: Details of TWCF Calculation for ANO-2 at 54 Effective Full Power Years (EFPY) (Continued)							
Outputs							
Methodology Used to Calculate ΔT_{30}: RG 1.99, Revision 2 (Reference 8)							
	Controlling Material Region No.	**α_{XX}**	**$RT_{MAX\text{-}XX}$ [°R]**	**Fluence [Neutron/cm^2, E >1.0 MeV]**	**FF (Fluence Factor)**	**ΔT_{30} [ºF]**	**$TWCF_{95\text{-}XX}$**
Limiting Axial Weld - AW	2	2.5000	548.76	5.89E+17	0.3194	28.59	0.000E-00
Limiting Plate - PL	2	2.5000	548.76	5.89E+17	0.3194	28.59	2.395E-13
Limiting Circumferential Weld - CW	2	2.5000	548.76	5.89E+17	0.3194	28.59	0.000E-00
$TWCF_{95\text{-}TOTAL}(\alpha_{AW}TWCF_{95\text{-}AW} + \alpha_{PL}TWCF_{95\text{-}PL} + \alpha_{CW}TWCF_{95\text{-}CW})$:							**5.99E-13**

(1) Material properties and fluence inputs are based on WCAP-18169-NP (Reference 9).

6. Duration of Proposed Alternative

This request is applicable to the ANO-2 ISI program for the fifth and sixth 10-year inspection intervals.

7. Precedents

- NRC letter to Entergy Operations, Inc. (Entergy), "Arkansas Nuclear One, Unit 2 – Request for Alternative ANO2-ISI-004, to Extend the Third 10-Year Inservice Inspection Interval for Reactor Vessel Weld Examinations (TAC No. ME2508)," Agencywide Document Access and Management System (ADAMS) Accession Number ML102450654, dated September 21, 2010.

- NRC letter to Virginia Electric and Power Company, "Surry Power Station Units 1 and 2 – Relief Implementing Extended Reactor Vessel Inspection Interval (TAC Nos. ME8573 and ME8574)," ADAMS Accession Number ML13106A140, dated April 30, 2013.

- NRC letter to Southern Nuclear Operating Company, "Vogtle Electric Generating Plant, Units 1 and 2 – Request for Alternatives VEGP-ISI-ALT-05 and VEGP-ISI-ALT-06 (TAC Nos. MF2596 and MF2597)," ADAMS Accession Number ML14030A570, dated March 20, 2014.

- NRC letter to Duke Energy Carolinas, LLC (Duke), "Catawba Nuclear Station Units 1 and 2: Proposed Relief Request 13-CN-003, Request for Alternative to the Requirement of IWB-2500, Table IWB-2500-1, Category B-A and Category B-D for Reactor Pressure Vessel Welds (TAC Nos. MF1922 and MF1923)," ADAMS Accession Number ML14079A546, dated March 26, 2014.

- NRC letter to Tennessee Valley Authority, "Sequoyah Nuclear Plant, Units 1 and 2 – Requests for Alternatives 13-ISI-1 and 13-ISI-2 to Extend the Reactor Vessel Weld Inservice Inspection Interval (TAC Nos. MF2900 and MF2901)," ADAMS Accession Number ML14188B920, dated August 1, 2014.

- NRC letter to Exelon Generation Company, LLC (Exelon), "Byron Station, Unit No. 1 – Relief from Requirements of the ASME Code to Extend the Reactor Vessel Inservice Inspection Interval (TAC No. MF3596)," ADAMS Accession Number ML14303A506, dated December 10, 2014.

- NRC letter to Wolf Creek Nuclear Operating Corporation, "Wolf Creek Generating Station – Request for Relief Nos. 13R-08 and 13R-09 for the Third 10-Year Inservice Inspection Program Interval (TAC Nos. MF3321 and MF3322)," ADAMS Accession Number ML14321A864, dated December 10, 2014.

- NRC letter to Union Electric Company, "Callaway Plant, Unit 1 – Request for Relief 13R-17, Alternative to ASME Code Requirements Which Extends the Reactor Vessel Inspection Interval from 10 to 20 Years (TAC No. MF3876)," ADAMS Accession Number ML15035A148, dated February 10, 2015.

- NRC letter to Exelon, "Braidwood Station, Units 1 and 2 – Request for Relief from the Requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) (CAC Nos. MF8191 and MF8192)," ADAMS Accession Number ML17054C255, dated March 15, 2017.

- NRC letter to STP Nuclear Operating Company, "South Texas Project, Units 1 and 2 – Relief from the Requirements of the ASME Code Regarding the Third 10-Year Inservice Inspection Program Interval (EPID L-2018-LLR-0010)," ADAMS Accession Number ML18177A425, dated July 24, 2018.

- NRC letter to Indiana Michigan Power Company, "Donald C. Cook Nuclear Plant, Unit No. 1 – Approval of Alternative to the ASME Code Regarding Reactor Vessel Weld Examination – Relief Request ISIR-4-08 (EPID L-2018-LLR-0106)," ADAMS Accession Number ML18284A310, dated October 26, 2018.

- NRC letter to Exelon, "R. E. Ginna Nuclear Power Plant – Issuance of Relief Request ISI-18 Regarding Fifth 10-year Inservice Inspection Program Interval (EPID L-2018-LLR-0104)," ADAMS Accession Number ML19100A004, dated April 22, 2019.

- NRC letter to NextEra Energy Point Beach, LLC, "Point Beach Nuclear Plant, Units 1 and 2 – Approval of Relief Requests 1-RR-13 and 2-RR-13 Regarding Extension of Inspection Interval for Reactor Pressure Welds from 10 to 20 years (EPID L-2019-LLR-0060)," ADAMS Accession Number ML20036F261, dated March 4, 2020.

- NRC letter to Florida Power & Light, Company, "St. Lucie Plant, Unit 2 – Authorization of RR#15 Regarding Extension of ASME Requirements Related to Reactor Pressure Vessel Weld Examinations from 10 to 20 Years (EPID L-2020-LLR-0283)," ADAMS Accession Number ML21236A131, dated September 30, 2021.

- NRC letter to Duke, "Oconee Nuclear Station, Units 1, 2, and 3 – Authorization and Safety Evaluation for Alternative Reactor Pressure Vessel Inservice Inspection Intervals (EPID L-2021-LLR-0004)," ADAMS Accession Number ML21281A141, dated November 19, 2021.

- NRC letter to Florida Power & Light Company, "Turkey Point Nuclear Generating Unit Nos. 3 and 4 – Authorization of Relief Request Nos. 8 and 9 Regarding Extension of Inspection Interval for Reactor Pressure Vessel Welds (EPID L-2021-LLR-0038)," ADAMS Accession Number ML22123A192, dated May 10, 2022.

- NRC letter to Entergy, "Arkansas Nuclear One, Unit 1 – Authorization of Request for Alternative ANO1-ISI-037 Regarding Extension of Reactor Vessel Inservice Inspection Interval (EPID L-2023-LLR-0028)," ADAMS Accession Number ML24086A541, dated April 10, 2023.

8. References

1. ASME Boiler and Pressure Vessel Code, Section XI, 2007 Edition with Addenda through 2008, American Society of Mechanical Engineers, New York.

2. PWROG Letter OG-10-238, "Revision to the Revised Plan for Plant Specific Implementation of Extended Inservice Inspection Interval per WCAP-16168-NP, Revision 1, "Risk-Informed Extension of the Reactor Vessel In-Service Inspection Interval." PA-MSC-0120," ADAMS Accession Number ML11153A033, dated July 12, 2010.

3. NRC Regulatory Guide 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," Revision 1, U.S. Nuclear Regulatory Commission, ADAMS Accession Number ML023240437, dated November 2002.

4. Westinghouse Report, WCAP-16168-NP-A, "Risk-Informed Extension of the Reactor Vessel In-service Inspection Interval," Revision 3, ADAMS Accession Number ML11306A084, dated October 2011.

5. NUREG-1874, "Recommended Screening Limits for Pressurized Thermal Shock (PTS)," U.S. Nuclear Regulatory Commission, ADAMS Accession Number ML15222A848, dated March 2010.

6. NRC Letter Report, "Generalization of Plant-Specific Pressurized Thermal Shock (PTS) Risk Results to Additional Plants," U.S. Nuclear Regulatory Commission, ADAMS Accession Number ML042880482, dated December 14, 2004.

7. 10 CFR 50.61a, "Alternate Fracture Toughness Requirements for Protection Against Pressurized Thermal Shock Events," U.S. Nuclear Regulatory Commission, Washington D.C., Federal Register, Volume 75, No. 1, dated January 4, 2010, and No. 22 with corrections to part (g) dated February 3, 2010, March 8, 2010, and November 26, 2010.

8. NRC Regulatory Guide 1.99, "Radiation Embrittlement of Reactor Vessel Materials," Revision 2, U.S. Nuclear Regulatory Commission, ADAMS Accession Number ML003740284, dated May 1988.

9. Westinghouse Report, WCAP-18169-NP, "Arkansas Nuclear One Unit 2 Heatup and Cooldown Limit Curves for Normal Operation," Revision 1, dated June 2018.