

~~SECURITY RELATED INFORMATION WITHHOLD UNDER 10 CFR 2.390~~

This letter is decontrolled when separated from Enclosure 1



Douglas E. Pehrson
Site Vice President
Arkansas Nuclear One
Tel 479-858-3110

1CAN2026-00012

May 11, 2026

10 CFR 50.4(b)(6)
10 CFR 50.59(d)(2)
10 CFR 50.71(e)
10 CFR 54.37(b)

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

SUBJECT: Arkansas Nuclear One, Unit 1 (ANO-1) Safety Analysis Report (SAR)
Amendment 33, Technical Requirements Manual (TRM), Technical
Specifications (TS) Bases, 10 CFR 50.59 Report, and Commitment Change
Summary Report

Arkansas Nuclear One, Unit 1
NRC Docket No. 50-313
Renewed Facility Operating License No. DPR-51

In accordance with 10 CFR 50.71(e) and 10 CFR 50.4(b)(6), enclosed is an electronic copy of Amendment 33 to the Arkansas Nuclear One, Unit 1 (ANO-1) Safety Analysis Report (SAR). Included with this update is an electronic copy of the current ANO-1 Technical Requirements Manual (TRM) and the current ANO-1 Technical Specification (TS) Bases. The TS Bases file also includes the Table of Contents which outlines the contents of both the TSs and the TS Bases, since the Table of Contents is revised by the licensee in accordance with 10 CFR 50.59. Pursuant to 10 CFR 50.71(e)(4), these documents are being submitted within six months following the previous ANO-1 refueling outage (1R32) which ended November 14, 2025. Summaries of changes to the ANO-1 TRM and TS Bases are included in Attachments 1 and 2 of this letter, respectively. The SAR, TS Bases, and TRM changes enclosed are for the period beginning November 11, 2024, and ending May 11, 2026.

In accordance with NEI 98-03, Appendix A, Section A6, a list and short description of information removed from the SAR should be included with each SAR update submittal. For this reporting period, a reference to the Margin Management Program that was discontinued in 2016 was removed from SAR Section 8.3.2.1.1.

Associated in part with post September 11, 2001, response related to security sensitive information, Entergy has reviewed the ANO-1 SAR and determined that the following items contain information required to be withheld from public disclosure with respect to NRC Regulatory Issue Summary (RIS) 2015-17, "Review and Submission of Updates to Final Safety Analysis Reports, Emergency Preparedness Documents, and Fire Protection Documents."

~~SECURITY RELATED INFORMATION – WITHHOLD UNDER 10 CFR 2.390~~

This letter is decontrolled when separated from Enclosure 1

1CAN2026-00012

Page 2 of 3

SAR Section 2.11.1 "Maximum Probable Flood"

SAR Section 2.11.2 "Failure of Upstream Dams"

SAR Section 2.11.3 "Design Flood Evaluation"

The above is consistent with currently redacted information from the ANO-1 SAR. Entergy requests the aforementioned information be withheld from public disclosure in accordance with 10 CFR 2.390. Accordingly, a complete version and a redacted version of the ANO-1 SAR are enclosed.

In accordance with 10 CFR 54.37(b), after a renewed license is issued, the SAR update required by 10 CFR 50.71(e) must include any systems, structures, and components (SSCs) newly identified that would have been subject to an aging management review or evaluation of time-limited aging analyses in accordance with 10 CFR 54.21. The SAR update must describe how the effects of aging will be managed such that the intended function(s) in 10 CFR 54.4(b) will be effectively maintained during the period of extended operation. No SAR changes were required with respect to 10 CFR 54.37(b) during this reporting period.

In accordance with 10 CFR 50.59(d)(2), a report containing a brief description of any changes, tests, and experiments must be submitted at intervals not to exceed 24 months. A summary of ANO-1 10 CFR 50.59 evaluations and those evaluations common between ANO-1 and ANO Unit 2 (ANO-2) associated with changes to licensing basis documents over the reporting period is provided in Attachment 3. Attachment 4 contains a copy of each evaluation.

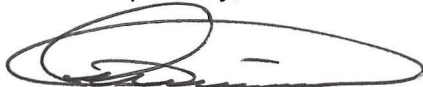
Attachment 5 contains a summary of changes to regulatory commitments which have occurred over the reporting period.

Attachment 6 includes a list of SAR pages that were updated during the period.

This letter contains no new commitments. If you have any questions or require additional information, please contact the Manager, Regulatory Assurance and Emergency Preparedness, Joshua Toben at 479-858-3135.

I declare under penalty of perjury that the foregoing is true and correct. Executed on May 11, 2026. The changes to these documents reflect information and analyses submitted to the Commission, prepared pursuant to Commission requirements, or made under the provisions of 10 CFR 50.59.

Respectfully,



Douglas E. Pehrson
ANO Site Vice President
DEP/mar

1CAN2026-00012

Page 3 of 3

Enclosures:

1. ANO-1 SAR Amendment 33 – Un-redacted Version
2. ANO-1 SAR Amendment 33 – Redacted Version
3. ANO-1 TRM
4. ANO-1 TS Table of Contents and TS Bases

Attachments:

1. Summary of ANO-1 TRM Changes
2. Summary of ANO-1 TS Bases Changes
3. Summary of ANO-1 and ANO-Common 10 CFR 50.59 Evaluations
4. 10 CFR 50.59 Evaluations – November 11, 2024, through May 11, 2026
5. ANO-1 and ANO-2 Commitment Change Summary Report
6. List of Affected SAR Pages

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

Attachment 1

1CAN2026-00012

Summary of ANO-1 TRM Changes

Summary of ANO-1 TRM Changes

The following changes to the Arkansas Nuclear One, Unit 1 (ANO-1) Technical Requirements Manual (TRM) were implemented in accordance with the provisions of 10 CFR 50.59. Because these changes were implemented without prior NRC approval, a description is provided below:

Revision #	TRM Section	Description of Change
80	3.3.6, 3.3.5, B 3.3.2	<p>License Basis Document Change LBDC 24-012, "Update Unit 1 TRM Table 3.3.6-1 to add the fire detection systems inside the computer/control cabinets within the Computer Room (Fire Zone 160-B) and the Main Control Room (Fire Zone 129-F)"</p> <p>License Basis Document Change LBDC 24-022, "Change the Unit 1 Technical Requirements 3.3.5.3 Table 3.3.5-1, Item 1 to reflect the new surveillance frequency of every two (2) refueling outages"</p> <p>License Basis Document Change LBDC 24-035, "Revise Unit 1 TRM 3.3.2 Basis to remove discussion of reportability"</p>
81	3.9.3, B 3.9.3	<p>Condition report CR-ANO-1-2024-02262, "TRM 3.9.3 and its basis state that fuel movement cannot occur within 100 hours of being last irradiated. The actual limit is 72 hours"</p>
82	TR 3.7.12.3, TR 3.7.12.5, B TR 3.7.12.3, B TR 3.7.12.4, B TR 3.7.12.5	<p>Engineering Change EC-54257721, "Update the Unit 1 TRM Test Requirements for Fire Barriers and Fire Barrier Related Penetration Seals"</p>

Attachment 2

1CAN2026-00012

Summary of ANO-1 TS Bases Changes

Summary of ANO-1 TS Bases Changes

The following changes to the Arkansas Nuclear One, Unit 1 (ANO-1) Technical Specification (TS) Bases were implemented in accordance with the provisions of 10 CFR 50.59 and the Bases Control Program of ANO-1 TS 5.5.14. Because these changes were implemented without prior NRC approval, a description is provided below:

Revision #	TS Bases Section	Description of Change
85	B 3.3.1, B 3.3.5, B 3.3.11, B 3.3.15, B 3.4.11, B 3.4.15	Amendment 285, "Revision of Technical Specifications to Use Online Monitoring Methodology"

Attachment 3

1CAN2026-00012

Summary of ANO-1 and ANO-Common 10 CFR 50.59 Evaluations

Summary of ANO-1 and ANO-Common 10 CFR 50.59 Evaluations

50.59 #

50.59 Summary

2024-004	"Low Pressure (LP) Turbine Replacement Project" / EC-94701
2025-001	"Integrated Control System (ICS) Defeat Loss of Runback Signal Upon Loss of One Reactor Coolant Pump (RCP) / EC-54148765 [Change EC-54105613 Temporary Modification to Permanent Modification]"

List of Undefined Acronyms

EC	Engineering Change
----	--------------------

Attachment 4

1CAN2026-00012

10 CFR 50.59 Evaluations – November 11, 2024 through May 11, 2026

19 Pages

I. OVERVIEW / SIGNATURES¹Facility: Arkansas Nuclear One, Unit 1 (ANO-1)Evaluation # / Rev. #: FFN-2024-004/ 0

Proposed Change / Document: EC-94701, ANO-1 Low Pressure Turbine (LPT) Replacements

Description of Change:

EC-94701 replaces both low pressure (LP) turbines at ANO Unit 1 with Siemens Energy (SEI) advanced disk damped element 13.9 m² (exhaust area) LP rotors along with matching inner casings. Each rotor contains a single piece shaft forging with no through-bore and six shrunk-on disks. A new solid jackshaft (no-bore) is also provided by SEI as part of this change.

As identified in the associated EN-LI-100 Process Applicability Determination for this change, the portion of this change that screens into the 10 CFR 50.59 evaluation is the change in the element of a method of evaluation for the turbine missile generation probability, P₁, and the applied methodology currently described in the Unit 2 UFSAR Section 3.5.2.2.2.1. Regulatory Guide (R.G.) 1.115 Rev. 2 describes the probability of failure of an essential structure system or component (SSC) because of turbine missiles to be designated P₄. Unit 2 UFSAR Section 3.5.2.2.2.1 and R.G. 1.115 describe P₄ to be the joint probability of three events:

1. the probability of turbine missile generation resulting in the ejection of turbine disk (or internal structure) fragments through the turbine casing, P₁,
2. the probability of ejected missiles perforating intervening barriers and striking essential SSCs, P₂,
3. the probability of essential SSCs that are struck failing to perform their safety functions, P₃.

The methodology from R.G. 1.115, Rev. 2 is applied. Therein, the NRC staff considers a P₄ of less than 1 x 10⁻⁷ failures per year of an essential SSC because of turbine missiles. R.G. 1.115 also states that more recently the review of turbine missiles issues has shifted emphasis in the review of missile issues away from P₂ and P₃ to the missile generation probability, P₁. The NRC staff guidance states that safe and reliable operation is ensured if the probability of missile genesis or (disk or internal structure fragments) ejection from each unit's turbine casing P₁ is kept below an acceptance criteria of 1E-5 per year for an unfavorable oriented turbine. The new ANO-1 P₁ value was developed by the OEM (Siemens) using an analysis previously endorsed by the NRC Staff (Ref.1 and 2).

This activity impacts the UFSAR for each unit at ANO to update the LP turbine descriptions for ANO-1 and revise the turbine missile generation (P₁) probability for ANO-1 in the ANO-2 UFSAR. An LBDCR is issued to perform these revisions.

Summary of Evaluation:

Since the new P₁ value continues to meet the NRC guidance in RG 1.115, Rev. 2 using NRC approved methods established for turbine missile generation probabilities for the Siemens 13.9m² low-pressure steam turbines, the evaluation documented in the sections below concludes that the proposed changes to the turbine missile generation probability, and the methodology applied to determine the turbine missile generation probability can be implemented without prior NRC approval.

References:

1. Letter from Mr. Herbert N. Berkow, NRC Director, to Mr. Stan Dembkoski, SWPC Director, dated March 30, 2004, Subject: Final Safety Evaluation Regarding Referencing the Siemens Technical Report No. CT-27332, Revision 2, "Missile Probability Analysis for the Siemens 13.9m² Retrofit Design of Low-Pressure Turbine by Siemens AG", TAC No. MB7964. ML040930616

¹ The printed name should be included on the form when using electronic means for signature or if the handwritten signature is illegible. Signatures may be obtained via electronic authentication, manual methods (e.g., ink signature), e-mail, or telecommunication. Signing documents with indication to look at another system for signatures is not acceptable such as "See EC" or "See Enterprise Asset Management (EAM) Application." Electronic signatures from other systems are only allowed if they are included with the documentation being submitted for capture in eB (e.g., if using an e-mail, attach it to this form; if using Enterprise Asset Management (EAM) Application, attach a screenshot of the electronic signature(s); if using Corrective Action Program (CAP) Application, attach a copy of the completed corrective action).




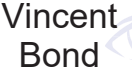

Sheet 2 of 7

2. TP-04124, "Missile Probability Analysis for the Siemens 13.9m² Retrofit Design of Low-Pressure Turbine by Siemens AG", Submitted to the Nuclear Regulatory Commission as Topical Report TP-04124-NP-A, For Public Record, June 7, 2004, Siemens Westinghouse Power Corporation. ML042100095
3. Regulatory Guide (RG) 1.115, Rev. 2, Protection Against Turbine Missiles [January 2012]
4. CALC-ANO1-ME-24-00003 Rev.0, ANO1 13.9m² LP TURBINE MISSILE ANALYSIS REPORT (DPECR-7000096900/B)
5. EC-93373, Rev. 000, "Evaluation of Extending Main Turbine Valve Testing Intervals".
6. PWROG-21018-P, "Extension of Turbine Valve Test Interval to 12 Months for BB 95/96 and BB-296 Steam Chest Turbines:", 09/28/2022.

Is the validity of this Evaluation dependent on any other change? Yes No

If "Yes," list the required changes/submittals. The changes covered by this 50.59 Evaluation cannot be implemented without approval of the other identified changes (e.g., license amendment request). Establish an appropriate notification mechanism to ensure this action is completed. _____

Based on the results of this 50.59 Evaluation, does the proposed change require prior NRC approval? Yes No

Preparer²:	Joshua A. Coffman /  /EOI / Project Engineering/ See Signature <small>Digitally signed by Josh Coffman DN: cn=Josh Coffman, o=US, ou=Entergy Operations, Inc., ou=Design Engineering - Civil, email=jcoffm1@entergy.com Date: 2024.11.18 11:44:14 -06'00'</small>
Reviewer²:	David E. Torgerson /  /Enercon/ Project Engineering/ See Signature <small>cn=David E. Torgerson, c=US, ou=ENERCON, email=dtorg@entergy.com 2024.11.18 11:57:21 -06'00'</small>
Independent Review³:	David Williams /  /EOI / Fleet Licensing / See Signature <small>Digitally signed by David L Williams Date: 2024.11.18 14:15:56 -06'00'</small>
Responsible Manager Concurrence:	Vince Bond /  /EOI / Project Engineering/ See Signature <small>Digitally signed by Vincent Bond DN: cn=Vincent Bond, c=US, ou=Project Engineering, ou=Engineering Manager, email=vbond@entergy.com Date: 2024.11.18 15:11:33 -06'00'</small>
50.59 Program Coordinator Concurrence:	Michael Hall /  / See Signature <small>Digitally signed by Michael Hall DN: cn=Michael Hall, c=US, o=Entergy, ou=ANO Regulatory Assurance, email=mhall10@entergy.com Date: 2024.11.18 15:34:38 -06'00'</small>

² Either the Preparer or Reviewer will be a current Entergy employee.

³ If required by Section 5.1[2].

Sheet 3 of 7

OSRC:

Paul Butler Date: 11/21/24
2:10:25 PM

Chairman's Name (print) / Signature / Date [GGNS P-33633, P-34230, & P-34420;
W3 P-151]

OSRC-2024-014
OSRC Meeting #

II. 50.59 EVALUATION [10 CFR 50.59(c)(2)]

Does the proposed Change being evaluated represent a change to a method of evaluation ONLY? If "Yes," Questions 1 – 7 are not applicable; answer only Question 8. If "No," answer all questions below.

Yes
 No

Does the proposed Change:

1. Result in more than a minimal increase in the frequency of occurrence of an accident previously evaluated in the UFSAR? Yes
 No

BASIS:

The new probability of turbine missile generation resulting in the ejection of turbine disk (or internal structure) fragments through the turbine casing, P_1 turbine missile value ($3.08E-7$ events per year) for ANO-1 provided by SEI in CALC-ANO1-ME-24-00003 (Siemens DPECR-7000096900/B) has increased compared to the original P_1 value of $1.90E-7$. The change is conservative (closer to the limiting value) and is still less than the UFSAR regulatory plant specific frequency threshold of $1E-5$ events per year (from R.G.1.115 R2).

In conclusion, there is a minimal increase to the probability of turbine missile generation, P_1 . However, the frequency of occurrence of an accident previously evaluated in the UFSAR is not affected as the P_1 remains below the limit established in RG 1.115 limit of $1E-5$ for an unfavorable oriented turbine. Since the P_1 value remains below the established limit, the P_4 , or overall risk to damage an essential SSC from a turbine missile also remains below its applicable limit in RG 1.115. Thus, this change does not result in more than a minimal increase in the frequency of occurrence of an accident previously evaluated in the UFSAR.

2. Result in more than a minimal increase in the likelihood of occurrence of a malfunction of a structure, system, or component important to safety previously evaluated in the UFSAR? Yes
 No

BASIS:

As described in question 1, there is a minimal increase to the probability turbine missiles generation, P_1 , but below the established limit in RG 1.115. Therefore, the resulting P_4 , or overall risk to damage an essential SSC as a result of the missile, also remains below the applicable limit in RG 1.115. NEI 96-07 Section 4.3.2, example 8, provides guidance on a "more than minimal increase in the likelihood of a malfunction of a structure, system, or component important to safety previously evaluated in the UFSAR" by stating that NRC approval would be necessitated in the event that "the change in likelihood of occurrence of a malfunction is calculated in support of the evaluation and increases by more than a factor of two", and this factor of two "should be applied at the component level".

The increased ratio between the new SEI P_1 ($3.08E-7$ from CALC-ANO1-ME-24-00003) and the current value stated P_1 in the ANO-2 SAR Section 10.2.3 ($P_1=1.90E-7$) (Ref.CALC-ANO1-ME-23-00001 (EC-93373)) is 1.62. Thus, the factor of two increase criteria is not exceeded, and this change does not result in more than a minimal increase in likelihood of occurrence of a malfunction of a structure, system, or component important to safety previously evaluated in the UFSAR.

NEI 96-07 Section 4.3.2, example 8, also specifies that “the factor of two should be applied at the component level” such that both the heavy disc inspection interval and turbine valve testing interval need to be reviewed. The ANO-1 main turbine governor valves (GVs), throttle valves (TVs), reheat stop valves (RSVs), and interceptor valves (IVs) are used to terminate steam flow to the high pressure (HP) and low pressure (LP) turbines as part of the turbine overspeed protection system (OPS). High reliability of the components is required to ensure that the risk of turbine missiles remains low. The inputs used for determining the impact of the turbine valve testing interval on the missile probability have not changed from those previously evaluated in PWROG-21018-P, Revision 0 and CALC-ANO1-ME-23-00001. There are no turbine valve interval changes being made as a result of this change. ANO-1 utilizes a 6-month test interval for the HP turbine valves (GVs and TVs) and an 18 month test interval for RSVs and IVs both as previously established in CALC-01-E-0033-01 (ER010623R101) supported by CALC-90-R-1005-01. The prior P_1 values from CALC-ANO1-ME-23-00001 are shown for various intervals in Table 2-1. Note, the inputs used for the determination of previous P_1 values for 12-month intervals have been conservatively applied to 6- and 9-month valve testing intervals.

Run-away overspeed events ($>120\%$ of rated speed) are due to failure of the overspeed protection system which consists of speed monitoring devices, trip and fast closure of throttle and governor valves. Adding the conditional probability of destructive overspeed of $5.85E-06$ to the conditional probability of intermediate overspeed of $1.08E-06$ and multiplying by the system separation frequency of $2.39E-02$ yields the probability of run-away overspeed (P_{1o}) of $1.66E-07$ events per year. The same data or valve unreliability inputs from CALC-ANO1-ME-23-00001 are used to calculate the probability of a run-away overspeed incident ($>120\%$ of rated speed), or P_{1o} in CALC-ANO1-ME-24-00003. Since the unreliability inputs are unchanged, there are no impacts at the component level.

Therefore, this change does not result in more than a minimal increase in the likelihood of occurrence of malfunction of a structure, system, or component important to safety previously evaluated in the UFSAR.

3. Result in more than a minimal increase in the consequences of an accident previously evaluated in the UFSAR? Yes No

BASIS:

A turbine missile event is not postulated to yield any radiological consequence to the public or operators in the control room. Turbine missiles are not considered credible as described by ANO-1 UFSAR section 14.1.2.9.5. However, ANO-1 turbine generated missiles may impact ANO-2 SSCs. Although the probability of the ANO-1 turbine missile genesis has increased, it remains bounded by the acceptable NRC RG 1.115 limits as described in Question 1 above. Since the probability of a damage to an essential SSC by a turbine missile are below the RG 1.115 limits as stated in the ANO-2 UFSAR Section 3.5.2.2.2.1, the dose consequences of the existing accident analyses are not changed and bound the scenario. Therefore, this change does not result in a more than minimal increase in the consequences of an accident previously evaluated in either unit's UFSAR.

4. Result in more than a minimal increase in the consequences of a malfunction of a structure, system, or component important to safety previously evaluated in the UFSAR? Yes No

Sheet 5 of 7

BASIS:

As stated in the response to Question 3 above, a radiological consequence is not postulated to occur as a result of a turbine missile transient. Turbine missiles are not considered credible as described by ANO-1 UFSAR section 14.1.2.9.5, but they may impact ANO-2. As described in question 1, there is a minimal increase to the probability turbine missiles generation, P_1 , but below the established limit in RG 1.115. The resulting P_4 , or overall risk to damage an essential SSC as a result of the missile, also remains below the applicable limit in RG 1.115. Since the probability of a damage to an essential SSC by a turbine missile is below the RG 1.115 limits as stated in the ANO-2 UFSAR Section 3.5.2.2.2.1, the dose consequences of the existing accident analyses are not changed and bound the scenario.

Therefore, this change does not result in more than a minimal increase in the consequences of a malfunction of a structure, system, or component important to safety previously evaluated in either unit's UFSAR.

5. Create a possibility for an accident of a different type than any previously evaluated in the UFSAR? Yes
 No

BASIS:

No new accident is introduced as a result of this change; the turbine overspeed/missile accident described in ANO-1 UFSAR Section 14.2.1.9 and ANO-2 UFSAR sections 3.5.2, 10.2.3, and 10.2.4 remains bounding. Therefore, this change does not create a possibility for an accident of a different type than any previously evaluated in either unit's UFSAR.

6. Create a possibility for a malfunction of a structure, system, or component important to safety with a different result than any previously evaluated in the UFSAR? Yes
 No

BASIS:

The increase in missile genesis probability does not introduce a new failure mode or alter the existing failure modes or the credited failure mode frequency of the turbines in a manner that would change the failure results (generation of a turbine missile), as described in ANO-1 UFSAR Section 14.1.2.9 and the conclusions in 14.1.2.9.5 or ANO-2 UFSAR sections 3.5.2, 10.2.3, and 10.2.4. Therefore, this change does not create a possibility for a malfunction of a structure, system, or component important to safety with a different result than any previously evaluated in the UFSAR.

7. Result in a design basis limit for a fission product barrier as described in the UFSAR being exceeded or altered? Yes
 No

BASIS:

This change involves the replacement of the ANO-1 low-pressure steam turbines in the secondary system. These components are not credited as fission product barriers in the UFSAR. In addition, turbine missiles are not considered credible as described by ANO-1 UFSAR section 14.1.2.9.5. Although the probability of the turbine missile genesis has increased, it remains bounded by the acceptable NRC RG 1.115 limits as described in Question 1 above. Since the probability of a damage to an essential SSC by a turbine missile are below the RG 1.115 limits as stated in the ANO-2 UFSAR Section 3.5.2.2.2.1, the potential to damage or challenge design basis limits for a fission product barrier considered within the existing accident analyses are not changed. Therefore, this change does not result in a design basis limit for a fission product barrier as described in the UFSAR being exceeded or altered.

8. Result in a departure from a method of evaluation described in the UFSAR used in establishing the design bases or in the safety analyses? Yes
 No

BASIS:

The CALC-ANO1-ME-24-00003 (Siemens) (ref. 4) method of evaluation for the missile genesis probability, P_1 , is not specified in the ANO-1 UFSAR. The P_1 values for both units are stated in Section

Sheet 6 of 7

3.5.2.2.2.1 of the Unit 2 UFSAR with reference to the PWROG-21018-P (ref. 6) methodology as added by EC-93373 (Ref. 5) for ANO-1. References to missile analyses performed for previous LP Rotor replacements in the ANO-1 UFSAR (14.1.2.9) were given as background information to prove that missile probabilities were reduced with those replacements. The ANO-1 UFSAR states that turbine missile "analysis applies to the original LP turbine design" and not the replacement rotor analyses (14.1.2.9.2). The OEM analysis and methodology referenced in CALC-ANO1-ME-24-00003 is in accordance with the most recent Nuclear Regulatory Commission (NRC) Acceptance Letter (Ref.1) and Safety Evaluation Report (Ref. 2) for Siemens Energy designed LP rotors. The CALC-ANO1-ME-24-00003 evaluation method includes considerations for missile genesis and the prior valve testing frequency as delineated in the SER (Ref. 2). The SER (Ref. 2) considered quarterly valve testing. The effect of extended turbine valve test intervals was previously considered as part of EC-93373 for ANO-1 in CALC-ANO1-ME-23-00001 which utilized the PWROG-21018-P method.

Since the valve testing frequency was not previously described, this change does not require a submittal to the NRC change for the disc inspection interval as the change is licensee-controlled under 10 CFR 50.59. A submittal is only necessary if the requirements of the two applicable topical reports or NEI 96-07, Revision 1, Section 4.3.8.2 are not met.

The safety evaluation (SE) contained in approved TP-03143-NP-A states, in part, that the licensee will have to verify they used values consistent with Section 4.0 (Conclusion) of the SE, which are inputs to PDBURST, internally defined parameters for PDBURST, and input to PDMISSILE. As a part of this change, these values are incorporated into ANO-1 report CALC-ANO1-ME-24-00003. Siemens has provided the identified parameters are verified to be consistent with the SE. TP-04124-NP-A is the applicable NRC topical report reference to utilize for comparison. This topical report contains the 13.9m² LP analysis submitted and approved by the NRC. The analysis and methodology used for the ANO analysis, as contained in CALC-ANO1-ME-24-00003 (DPECR-7000096900/B), are in accordance with this methodology.

The SE for TP-04124-NP-A, Section 4.0 states that "plant-specific applicants that intend to apply this technical report to their Siemens' 13.9m² retrofit design of LP turbine rotors need to state in their submittals":

- a. The approximate date for the turbine disk inspection at the end of 100,000 hours of operation of their rotors,
- b. A commitment to inform the NRC about their turbine disk inspection results and plans to reduce the probability of turbine missile generation, P_1 , for continued operation should cracks be detected in the inspection, and
- c. Justification for any additional turbine missile analyses, or minor deviations that may be plant specific.

The above items are addressed as follows:

- a. The retrofit LP turbine rotors are scheduled to be installed in 1R32 in Fall 2025. Therefore, 100,000 operational hours beyond that point is approximately 137 operating months. Based on the cycle plans at the time of this change, 137 operating months after the replacement will be reached in 2036 such that inspections would likely be in the preceding outage, 1R39. This estimate is subject to change based on actual plant performance as forced or planned mid-cycle outages during upcoming cycles (not refueling outages), potential changes in operating cycle length to 24 months which could occur in the future under a separate change, or other unanticipated factors. The inspection requirement at 100,000-hour intervals is controlled by a 7R PM interval.
- b. Any cracks discovered during inspections will require re-evaluation of the inspection interval and the testing interval for turbine valves to ensure that P_1 remains within the NRC allowed limits consistent with RG 1.115, Revision 2. Consistent with Entergy Procedure EN-LI-106, NRC Correspondence, commitments are generated as part of a submittal and since this change does not involve a submittal, no commitment is generated.

Sheet 7 of 7

- c. CALC-ANO1-ME-24-00003 (Siemens) (ref. 4) determines the P_1 value while using a longer turbine valve test interval than used in the SER (ref.2). CALC-ANO1-ME-24-00003 determines the probability of an external missile P_1 is evaluated by considering two distinct types of LP shrunk on disk failures namely, P_r which is a failure at normal operating speed up to 120% of the rated speed; and P_o , which is a failure due to run-away overspeed greater than 120% of the rated speed.

The SER describes the use of a 3-month, or quarterly, valve test interval which is an input to the calculation of P_o . This is an assumed, conservative input parameter as there is no discussion or justification in the SER on requiring the use of the 3-month value. The 3-month testing interval value was provided from available data Siemens was able to provide. CALC-ANO1-ME-24-00003 utilizes newer data collected from the industry over the past 10 years contained in PWROG-21018-P. Subsequent to the issuance of the PWROG-21018-P report, it was noted that ANO-1 differs slightly from the plant configurations assumed in that analysis. The difference being that ANO-1 has two crosstie pipes under the turbine connecting the steam chests. The inclusion of the cross ties results in a conditional probability of destructive overspeed of $5.85E-06$. This was a 23% increase compared to the design without crossties ($4.12E-06$ from PWROG-21018-P [2] Table 8-5). The overspeed probability (P_{1o}) is based on PWROG-21018-P, Revision 0, which was developed consistent with the NRC approved methodology in WCAP-11525. P_{1o} is a function of the maintenance and test frequency of the speed control and overspeed protection system. Both SEs for TP-03143 and TP-04124 describe use of a 3-month, or quarterly, valve test interval which is an input to the calculation of P_{1o} . This value is calculated independently from the values stated in the conclusions of TP-03143 and TP-04124 for calculating the P_r term. The P_{1o} input parameter is determined using the Siemens methodology as described in TP-03143 Section 3.3 which is appropriate. The P_r term and P_{1o} terms that are summed to calculate P_1 are calculated with independent methodologies and inputs. The P_{1o} term is dependent on the configuration of the overspeed protection system, including the steam supply valve (governor, throttle, reheat stop, and intercept valves) configuration. As stated in the response to question 2, the inputs related to valve unreliability are unchanged. The use of these input terms is consistent with the methodology approved in the topical report.

Consistent with NEI 96-07 Section 4.3.8.2, the preceding discussion demonstrates the proposed change is consistent with the approved topical reports and the requirements and limitations of the associated SEs. The application of the methodology is consistent with the facility's licensing basis, industry standards, and the methodology is not controlled by any specific regulations other than 10 CFR 50.59 and is not part of any analysis supporting Technical Specifications controlled equipment. As noted in TP-04124-NP-A, the methodology was initially approved for the Siemens $13.9m^2$ retrofit design of LP turbine rotors and is also applicable to other designs. The proposed change is to install the Siemens' $13.9m^2$ retrofit design of LP turbine rotors such that it is consistent with the original scope of the SE and is within the bounds of the topical report and associated SE. The components are non-safety related and non-seismic.

Based on the preceding discussion, the proposed methodology approved by the NRC in TP-04124-NP-A is consistent with the associated SER and associated regulatory guidance (such as RG 1.115) and is therefore not a departure from a method of evaluation described in the UFSAR used in establishing the design bases or in the safety analyses.

If any of the above questions is checked "Yes," obtain NRC approval prior to implementing the change by initiating a change to the Operating License in accordance with NMM Procedure EN-LI-103.

I. OVERVIEW / SIGNATURES¹Facility: Arkansas Nuclear One, Unit 1Evaluation # / Rev. #: FFN-2025-001/ 0**Proposed Change / Document:**

Make EC-54105613 Permanent, Defeat Loss of Single RCP Runback Feature in ICS/ EC0054148765

Initiating Event:

In January of 2024, Arkansas Nuclear One Unit 1 (ANO-1) experienced a plant runback from a loss of a single Reactor Coolant Pump (RCP) due to a spurious runback signal from the Integrated Control System (ICS) as noted in CR-ANO-1-2024-00084. Troubleshooting revealed that all four RCP pumps remained running in spite of the spurious signal. Further troubleshooting efforts were unable to isolate the cause of the failure beyond that of the control system components within and/or between ICS and the field devices that would signal RPS and/or ICS of an RCP failure. This was in part due to self-restoration of the condition prior to troubleshooting beginning. At this point it was decided to perform a temporary change to disable the 50% per minute rate of runback on a loss of a single RCP via a temporary modification (EC-54105613). Troubleshooting after the temporary modification was installed found that the D RCP Breaker Status Aux Relay had a high contact resistance, which caused the runback. Given the risk of tripping the unit from such possible failures in the single RCP runback circuit, it was decided to make the temporary modification permanent.

Description of Change:

To support continued operation to the next refueling outage while investigating the cause of CR-ANO-1-2024-00084, a temporary modification (T-mod) was installed to disable the RCP runback function within ICS from acting due to a single pump failure signal. Prior to the T-mod, a portion of the ICS system was being operated in manual in order to defeat the possibility of a runback due to the potential risk to reactivity control should the condition repeat itself. EC 0054105613 rendered a specific control relay within the ICS system non-functional such that the ICS system would not perform a runback when the Unit Load Demand (ULD) exceeds 75% with the loss of a single RCP. The response to such a condition will be approximated by other functions of the ICS, albeit, at a slower rate (10% per minute max) than the system is capable of performing due to the installation of the T-mod. While a faster rate could have potentially been performed manually by Operations by placing the system into track (20% per minute) for the remainder of the cycle until the cause of the condition report have been addressed, the manual rate is also slower than the automatic runback rate (50% per minute). It is desired to make this temporary modification permanent. Due to the modification affecting functions described in the UFSAR and potentially other license basis documents (act of disabling an automatic function and using manual operator action in its place), this condition screened into requiring an evaluation as part of the 10CFR50.59 process.

Summary of Evaluation:

The ICS system includes a function to perform a runback when above 75% plant power at a rate of 50% per minute upon the indication of a loss of a single RCP. This function is listed within ANO-1's UFSAR section 7.2.3.2.2 and will be updated by LBDCR24-028. Furthermore, ICS is identified to be involved in a handful of accidents and abnormalities evaluated within Chapter 14, Safety Analysis, of the UFSAR. In some cases, ICS is described as a system that would initially respond to the event while another system, such as the Reactor Protection System (RPS) or Control Rod Drive (CRD) system, would be the designed system credited for mitigating said event. In other cases, ICS is identified as responding to the event to maintain the plant within the normal operating limits, but is not credited in any accident for mitigating an analyzed part of the event or its consequences (it is simply discussed in the section). See Question 1's response for more details.

A T-mod was implemented under EC 0054105613 in response to a plant malfunction identified in CR-ANO-1-2024-00084 which resulted in a false actuation of the UFSAR section 7.2.3.2.2 described function of a 50% per min plant runback to 75% plant power (675 Mwe Loss of 1 RCP Runback). EC0054148765 is being performed to make the modification permanent. To restore the system to automatic control and return to 100% power, the specific runback was required to be disabled to prevent a repeat occurrence. Based on the modification's scope, the ability to reduce plant demand would still exist following the modification. The ability for the ICS system to respond to changing plant conditions in support of plant operation would also be retained. Operation's ability to take the system to manual mode would also be retained. The only thing this modification will do is take a single set of contacts that notifies the runback relay of an RCP trip and renders it in a state that the runback will think the RCP's are all running, regardless of actual RCP status. This does not affect the upstream devices which communicate RCP status to FW control, reactor control, turbine control, or other ICS logic which triggers cross limits, re-ratio, or other such functions. Nor does this change affect any other runback within the ICS system. To summarize, all of the system's functions will be maintained, except for the single function listed for the 50% per min runback rate to 75% power upon loss of a single RCP.

Thus, the modification disables just the physical relay contacts which actuate to indicate a single RCP pump failure within the runback logic only. This would block the 50% per minute rate of change function, however, the system could still reduce overall demand at either a maximum rate of 10% per minute with ICS in "full automatic", 20% per minute with ICS in "tracking mode", or 30% per minute from another triggered runback, depending on the plant operating mode at the time of the event. In any case, these rates are clearly below the 50% per minute that would be used for the loss of a single RCP.

Further analysis of the ICS system response with the modification installed identified that manual operator action is not required as an alternative to meet the intent of the design. ICS will still perform a runback, but not at a rate of 50% per minute. The rate of change in reduction will be limited to a maximum of 20% per minute in track. The Operator could support ensuring ICS enters tracking mode by placing it as such. Their role would be in support, but not credited in this evaluation. ICS retains the ability to go to track automatically when the mismatch between the primary and secondary side is detected from the loss of the single RCP pump (example: Feedwater cross-limits). As mentioned prior, it will also receive a status of the RCP pump's loss, as that portion of the logic will retain the RCP pump status signal to support ICS's overall plant demand reduction.

Within ICS, there is no operator interface that exists to place ICS into a 50% per minute runback manually. Operator action to replace that function cannot be credited because no interface exists. Per the NEI guidance, human factors were evaluated for any potential operator actions, but this review could not conceive of a way for an operator to place the system into a 50% per minute runback without significant system modification.

In summary, the ICS system design is to maintain the plant within the normal operating limits and will respond as such during accidents; but ICS is not credited as part of the accident analyses responses.

Thus, it is the conclusion of this evaluation that there will be no more than a minimal increase in the likelihood, frequency, or consequences of a malfunction of a structure, system, or component important to safety nor accident evaluated within the UFSAR. Nor will this change result in a design basis limit for a fission product barrier as described in the UFSAR being exceeded or altered, nor result in a departure from a method of evaluation described in the UFSAR used in establishing the design bases or in the safety analyses, nor create a possibility for an accident of a different type than any previously evaluated in the UFSAR.

Is the validity of this Evaluation dependent on any other change? Yes No

If "Yes," list the required changes/submittals. The changes covered by this 50.59 Evaluation cannot be implemented without approval of the other identified changes (e.g., license amendment request). Establish an appropriate notification mechanism to ensure this action is completed. N/A

Based on the results of this 50.59 Evaluation, does the proposed change require prior NRC approval? Yes No

Preparer²: Richard Blagbrough / Richard Blagbrough / Entergy / Engineering / 1/27/25
Digitally signed by Richard Blagbrough
 DN: cn=Richard Blagbrough, o=US, ou=Engineering, ou=EPN, email=rblag@entergy.com, Date: 2025.01.27 13:23:20 -0600

Reviewer²: Brad Miller / Brad Miller / Entergy / Engineering CDO / 1/30/25
Digitally signed by Brad Miller
 DN: cn=Brad Miller, c=US, o=ANO Electrical Design Operations Inc., email=brmiller@entergy.com, Date: 2025.01.30 13:26:15 -0600

Independent Review³: Not Required
Name (print) / Signature / Company / Department / Date

Responsible Manager Concurrence: Vimal Patel / Vimal Patel / Entergy and Strategic, 1/30/2025
Digitally signed by Vimal Patel
 DN: cn=Vimal Patel, c=US, o=ANO Engineering, ou=Systems and Strategic, email=vpatel1@entergy.com, Date: 2025.01.30 14:43:02 -0600

50.59 Program Coordinator Concurrence: Michael Hall / Michael Hall / Entergy, 01/30/25
Digitally signed by Michael Hall
 DN: cn=Michael Hall, c=US, o=Entergy, ou=ANO Regulatory Assurance, email=mhall10@entergy.com, Date: 2025.01.30 15:51:09 -0600

OSRC: Brian D. Patrick / Brian D. Patrick / Entergy, 01/30/25
Digitally signed by Brian D. Patrick
 Date: 2025.01.30 18:17:04 -0600
 Chairman's Name (print) / Signature / Date

OSRC-2025-001
 OSRC Meeting #

² Either the Preparer or Reviewer will be a current Entergy employee.
³ If required by Section 5.1[2].

II. **50.59 EVALUATION** [10 CFR 50.59(c)(2)]

Does the proposed Change being evaluated represent a change to a method of evaluation **ONLY**? If "Yes," Questions 1 – 7 are not applicable; answer only Question 8. If "No," answer all questions below. Yes No

Does the proposed Change:

1. Result in more than a minimal increase in the frequency of occurrence of an accident previously evaluated in the UFSAR? Yes No

BASIS:

Within the ANO-1 UFSAR, the accidents and abnormalities previously evaluated that involve the ICS system are as follows:

- 14.1.2.1 Uncompensated Operating Reactivity Changes

This abnormality is described in the UFSAR as follows:

"The UORC (Uncompensated Operating Reactivity Changes) analysis was suggested for inclusion into the FSAR through AEC Regulatory Staff guidance when ANO-1 was licensed for operation. Subsequent Regulatory Staff guidance dropped this type of "abnormality" from the list of those events which should be analyzed".

The ICS operation during this event is described as follows:

"ICS (Integrated Control System) would compensate for any reactivity perturbations due to these normal core operating phenomena. If the ICS failed to operate properly and the operator failed to respond to the reactivity perturbations, the RPS (Reactor Protection System) would prevent the safety limits from being exceeded."

This event does not require further evaluation for disabling of the ICS 50% per minute Runback upon loss of a single RCP, as the accident evaluation already encompasses ICS's failure to operate properly as well as operation in both automatic and manual control. Furthermore, as stated, this type of abnormality is not required to be analyzed.

- 14.1.2.2 Startup Accident

This accident describes uncontrolled reactivity additions and the risk to the plant during plant startup. Primarily, the evaluation focuses on the Control Rod control system and limitations in place to minimize the impact. While ICS is not explicitly discussed in the accident analysis, the ICS system sends demand signals from the Reactor Control portion of ICS to the Control Rod Drive (CRD) system. This demand signal affects rod position while both systems are in automatic control, reference 7.2.3.2.5 Reactor Control for more details.

Above 75% plant power, the loss of a single RCP runback would trigger the rate limited Unit Load Demand to rapidly decrease. This would be processed through various portions of ICS, and ultimately result in a lowering demand signal to the control rods. Below 75% plant power, this function does not actuate.

As part of the UFSAR evaluation within the section, the following statement shows a focus on control rod withdraw as the initiating event:

"...design provisions (to) minimize the possibility of inadvertent continuous rod withdrawal and limit the potential power excursions..."

As noted, the accident evaluation pertains to rod withdraw versus rod insertion. Furthermore, the control systems for rod control are evaluated to be operational for this accident.

The RCP ICS runback affects control rod insertion via a reduction in demand, albeit only the rate of change of said reduction. While ICS will remain operational after the modification is installed, the specific portion of the circuit which would increase the rate of change upon single RCP failure would be removed. This portion of the logic provides additional insurance that rod insertion would occur quickly during startup given the single pump failure, but it would not prevent said insertion or cause a withdraw. Finally, the ICS circuit is not the primary or credited method of control within this accident analysis but provides an initial control function in support.

Furthermore, Section 14.1.2.2.1 states the following:

“It is concluded that the reactor is completely protected against any startup accident involving the withdrawal of any or all control rods, since in no case does the thermal power approach the design overpower condition and the peak pressure never exceeds code allowable limits”.

In conclusion, the modification to defeat the RCP Runback within ICS is deemed to cause no more than a minimal increase in the frequency of occurrence of a Startup Accident previously analyzed in the UFSAR given it will still result in a rod insertion should an RCP fail, it is not the credited method of protection, and the accident analysis deems any startup accidents to never exceed allowable limits.

- 14.1.2.3 Rod Withdrawal Accident at Rated Power Operation

This accident pre-supposes an operator error or equipment failure resulting in accidental withdrawal of a control rod group while the reactor is at rated power. As previously stated, ICS demand is an input into the CRD system. Demand increases (request to withdraw rods) due to an ICS equipment failure or operator error would be an initiator of the accident evaluated.

The current failure within the ICS system results in an undesired demand reduction. The modification solution would disable this demand reduction from accidentally occurring at rated power operation while also preventing it during a loss of a single RCP, should it occur. Neither condition should result in a demand increase, as worst case the demand would remain unchanged given no runback has been initiated. Normally however, demand would still be reduced given the failure due to reactor power changing from the pump trip, but at a much slower rate of reduction (10% per min to 20% per minute in normal control), since a runback which triggers the higher rate of change (50% per min) would not trigger.

In conclusion, since the modification resolution of defeating the single RCP pump runback is evaluated to not increase the position demand signal sent to the control rods in tandem with an actual RCP failure, this change is evaluated to not cause more than a minimal increase in the frequency of occurrence of a Rod Withdrawal Accident at Rated Power Operation that was previously evaluated in the UFSAR.

- 14.1.2.6 Loss of Coolant Flow

This accident involves the reactor coolant flow rate being reduced if one or more of the Reactor Coolant Pumps fail. ICS functions to respond to this scenario by performing a runback of the plant. As discussed within this accident evaluation:

“The reactor is protected from the consequences of Reactor Coolant Pump failure(s) by the Reactor Protection System and the ICS. The ICS initiates a power reduction upon

pump failure to prevent reactor power from exceeding that permissible for the available flow. The reactor is tripped if insufficient reactor coolant flow exists for the power level.”

As discussed previously, ICS is described in this accident as performing the power reduction upon single pump failure. This modification would disable that function. As further described however, the reactor would be tripped should we have insufficient coolant flow for that power level as part of the Reactor Protection System. As such, the reactor protection system’s automatic plant trip would be the credited protection (i.e. design function) while ICS’s control is to prevent the need for the plant trip (i.e. system function).

In conclusion, the modification would disable the system function of the ICS runback contrary to what is currently described in the UFSAR, but the loss of coolant flow accident’s frequency, i.e. how often it occurs, would not be impacted. ICS’s non-safety related function is intended to mitigate the plant response to the accident by preventing the plant conditions from reaching an automatic plant trip, but does not affect the accident initiation. Thus, this change is evaluated to not cause more than a minimal increase in the frequency of occurrence of a Loss of Coolant Flow that was previously evaluated in the UFSAR.

- 14.1.2.9 Turbine Overspeed

The ICS system interfaces with the turbine control system by sending a demand signal for control of the main turbine valve positions and thus steam flow from the steam generator into the turbine. This modification affects the runback circuit of ICS which affects the rate limited Unit Load Demand. This load demand is first processed by the turbine load control portion of ICS, and as such, can affect overall turbine control.

Disabling the runback would prevent the turbine from quickly responding to the load change upon loss of a single RCP pump. The error between reactor power and megawatts processed by ICS would still denote the need for a change to the overall load demand, but the rate of change would be much slower than that of a runback (50% per min vs $\leq 20\%$ per min). The response would still be a reduction in overall steam flow to the turbine, and thus would not be a concern with respect to a turbine overspeed event, which would require an increase in demand and steam flow.

Thus, the modification is evaluated to not cause more than a minimal increase in the frequency of occurrence of a Turbine Overspeed that was previously evaluated in the UFSAR.

- 14.2.2.1 Steam Line Failure

This event is described as follows:

“The loss of secondary coolant due to a failure of a steam line between the steam generator and the turbine causes a decrease in steam pressure and thus places a demand on the control system for increased feedwater flow. Increased feedwater flow, accompanied by steam flow through the turbine stop valves and the break, lowers the average reactor coolant temperature.”

ICS is discussed within this accident as follows:

“(Note: Reactor power will also increase due to Integrated Control System (ICS) pulling rods to increase Tave).”

“The ICS will then cause control rod insertion in an attempt to limit reactor power to 102 percent.”

The important thing to note for this failure is that the RCP's are assumed to be in operation: "Offsite power was assumed to be available in this analysis due to the additional primary to secondary heat removal that will result from the RCPs running."

In this accident scenario, a runback is not credited to perform the ICS demand changes to the control rods nor to limit the plant power. Since the RCP's are analyzed as being in operation, the failure of an RCP to result in a runback would be a different type of accident. Furthermore, ICS and its runback are not an initiator of the event. The other control portions of the ICS system are instead responding during the event, and these portions will not be modified by the proposed modification.

As such, the modification is evaluated to not cause more than a minimal increase in the frequency of occurrence of a Steam Line Failure that was previously evaluated in the UFSAR.

Human Factors Consideration:

Disabling the automatic runback function and having Operations manually support the runback would increase the time it takes for the ICS system, and overall plant, to respond to the loss of a single RCP. However, as stated previously, the rate of change in demand after modification installation would be slower while in automatic, but it would not be prevented. Thus, manual action would likely speed up the demand change and act to better align the overall response to that of the original design.

While additional manual operator control would naturally introduce some increased complexity that might increase the potential for an operator error, that error would result in an identical situation as already being experienced, by modification installation, with the overall plant responding slower to the runback. The worst-case situation would result in tripping the plant via automatic or manual means, which would also place the plant in a safe condition. The method of control would remain identical to the existing method of a manual plant runback using the hand/auto stations to use different setpoints and rates of change.

Thus, the human factor analysis from transferring the automatic to manual control function with respect to the modification to disable the single pump RCP runback is evaluated to be no more than a minimal increase to the frequency of occurrence of an accident previously evaluated in the UFSAR.

Conclusion:

Based on each of the above analyses, the modification to disable the ICS runback on loss of a single RCP is evaluated to not cause more than a minimal increase in the frequency of occurrence of an accident that was previously evaluated in the UFSAR.

2. Result in more than a minimal increase in the likelihood of occurrence of a malfunction of a structure, system, or component important to safety previously evaluated in the UFSAR? Yes No

Basis:

The structure, system, or component in question are the ICS system and associated modules that are being altered by this change.

The ICS system falls into the definition per NEI 96-07 which states:

“The term "malfunction of an SSC important to safety" refers to the failure of structures, systems, and components (SSCs) to perform their intended design functions-including both non-safety-related and safety-related SSCs.”

ICS is a non-safety related SSC performing plant control and is included within this evaluation.

The proposed activity will disable a single module within ICS to prevent the runback from loss of a single RCP. The disabling will place the module in the state of failure. The malfunction in question would be a loss of the runback feature which is described in SAR section 7.2.3.2.2 as an ICS system function:

“Loss of any number of coolant pumps; runback at 50 percent per minute to the power corresponding to the remaining pumping capability.”

When reviewing the accident and abnormality analyses, as performed under Question 1, the ICS RCP runback on a single pump failure was not listed as a design function within the analyses but was instead a system function to support operation and prevent a plant trip. As such, the loss of said function would constitute a system functional failure but not a design functional failure with respect to the licensing evaluations as other systems, such as the RPS, are credited for the design functions within the licensing for protection should non-safety systems, such as ICS, fail.

Note that said runback would still occur in the form of a normal power reduction, the rate of change would no longer be 50% per minute but a slower rate of change of 10% to 20% per minute based on ICS system status at the time of the event. Furthermore, as noted in SAR section 14.1.2.6 Loss of Coolant Flow, the RPS system is credited to trip the plant should insufficient coolant flow exist for that power level, as the design function. The RPS function is not impacted by the change proposed within the modification. RPS will still be capable of performing a trip due to any power, imbalance, or flow deviations during RCP coast down independent of the ICS automatic RCP runback at full speed.

Conclusion:

The modification to disable the ICS runback on loss of a single RCP is evaluated to not result in more than a minimal increase in the likelihood of occurrence of a malfunction of a structure, system, or component important to safety previously evaluated in the UFSAR.

3. Result in more than a minimal increase in the consequences of an accident previously evaluated in the UFSAR? Yes
 No

Basis:

As evaluated under Question 1, the following are the accidents and abnormalities which require evaluation for this analysis and their associated evaluations:

- 14.1.2.2 Startup Accident

This accident describes uncontrolled reactivity additions and the risk to the plant during plant startup. Section 14.1.2.2.1 states the following:

“It is concluded that the reactor is completely protected against any startup accident involving the withdrawal of any or all control rods, since in no case does the thermal power approach the design overpower condition and the peak pressure never exceeds code allowable limits”.

In conclusion, the modification to defeat the RCP Runback within ICS is deemed to cause no more than a minimal increase in the consequences of a Startup Accident previously analyzed in the UFSAR given the change will still result in a rod insertion should an RCP fail, it is not the credited method of protection, and the accident analysis deems any startup accidents to never exceed allowable limits.

- 14.1.2.3 Rod Withdrawal Accident at Rated Power Operation

This accident pre-supposes an operator error or equipment failure resulting in accidental withdrawal of a control rod group while the reactor is at rated power. As previously stated, ICS demand is an input into the CRD system. Demand increases (request to withdraw rods) due to an ICS equipment failure or operator error would be an initiator of the accident evaluated.

The current failure within the ICS system results in an undesired demand reduction. The modification solution would disable this demand reduction from accidentally occurring at rated power operation while also preventing it during a loss of a single RCP, should it occur. Neither condition should result in a demand increase, as worst case the demand would remain unchanged given no runback has been initiated.

In conclusion, since the modification resolution of defeating the single RCP pump runback is evaluated to not increase the position demand signal sent to the control rods in tandem with an actual RCP failure, this change is evaluated to not cause more than a minimal increase in the consequences of a Rod Withdrawal Accident at Rated Power Operation that was previously evaluated in the UFSAR.

- 14.1.2.6 Loss of Coolant Flow

This accident involves the reactor coolant flow rate being reduced if one or more of the Reactor Coolant Pumps fail. ICS functions to respond to this scenario by performing a runback of the plant. As discussed within this accident evaluation:

“The reactor is protected from the consequences of Reactor Coolant Pump failure(s) by the Reactor Protection System and the ICS. The ICS initiates a power reduction upon pump failure to prevent reactor power from exceeding that permissible for the available flow. The reactor is tripped if insufficient reactor coolant flow exists for the power level.”

As described, ICS is described in this accident as performing the power reduction upon single pump failure. This modification would disable that function. As further described however, the reactor would be tripped should we have insufficient coolant flow for that power level. As such, the reactor protection system’s automatic plant trip would be the credited protection (i.e. design function) while ICS’s control is to prevent the need for the plant trip (i.e. system function).

In conclusion, the modification would disable the system function of the ICS runback contrary to what is currently described in the UFSAR, but the loss of coolant flow accident’s consequences, i.e. impact to the plant, would remain unchanged. The credited RPS trip function is not impacted by the change proposed within the modification. RPS will still be capable of performing a trip due to any power, imbalance, or flow deviations during RCP coast down independent of the ICS automatic RCP runback at full speed. ICS’s non-safety related function is intended to mitigate the plant response to the accident by preventing the plant conditions from reaching an automatic trip setpoint within RPS.

Thus, this change is evaluated to not cause more than a minimal increase in the consequences of a Loss of Coolant Flow that was previously evaluated in the UFSAR as the worst consequences that the ICS system change via the modification would cause is a plant trip should a single RCP pump fail, which is already analyzed.

- 14.1.2.9 Turbine Overspeed

The ICS system demand to the turbine affects the overall turbine control but does not change the consequences of an overspeed condition nor the protective functions designed to prevent an overspeed. Thus, the modification change is evaluated to not cause more than a minimal increase in the consequences of a Turbine Overspeed that was previously evaluated in the UFSAR.

- 14.2.2.1 Steam Line Failure

As noted in the SAR, ICS will perform a control rod insertion to attempt to limit reactor power to 102 percent.

The important thing to note for this failure is that the RCP's are assumed to be in operation: "Offsite power was assumed to be available in this analysis due to the additional primary to secondary heat removal that will result from the RCPs running."

In this accident scenario, a failure of a single RCP pump and an associated runback is not analyzed. The ICS demand changes to the control rods and associated limits the plant power will remain unaffected by the modification change. Since the RCP's are analyzed as being in operation, the failure of an RCP to result in a runback would be a different type of accident.

As such, the modification is evaluated to not cause more than a minimal increase in the consequences of occurrence of a Steam Line Failure that was previously evaluated in the UFSAR.

Conclusion:

Per NEI 96-07 4.3.3, an increase in consequences must involve an increase in radiological doses to the public or to control room operators. As described previously, this change's impact did not identify any impact to radiation release, as such, the modification is evaluated to not cause more than a minimal increase in the consequences of an accident that was previously evaluated in the UFSAR.

4. Result in more than a minimal increase in the consequences of a malfunction of a structure, system, or component important to safety previously evaluated in the UFSAR? Yes No

Basis:

The proposed change to the ICS runback upon loss of a single RCP, as stated prior, would result in a slower rate of change in overall plant demands to the turbine, feedwater, and reactor controls. In response to an accident, ICS's function is to perform support by reducing overall plant demand signals to each of the aforementioned systems. This in turn helps ensure rods are inserted, steam flow is reduced, and overall power is reduced to prevent the need for a plant trip from the credited reactor protection system.

This change will not disable the ability of the ICS system to perform a reduction in demand, nor will it adversely impact the credited reactor protection, control rod drive, or other safety system's ability to mitigate the consequences of said accidents. As such, the overall malfunctions evaluated in the UFSAR will not have their radiological consequences affected as a result of the proposed activity.

Conclusion:

The modification to disable the runback from the loss of a single RCP is evaluated to not result in more than a minimal increase in the consequences of a malfunction of a structure, system, or component important to safety previously evaluated in the UFSAR.

5. Create a possibility for an accident of a different type than any previously evaluated in the UFSAR? Yes No

Basis:

The proposed change to the ICS runback upon loss of a single RCP, as stated prior, would result in the system retaining all functionality except for the use of the specific rate of change of 50% per minute should an RCP fail. The inability for ICS to reduce overall plant demand at a higher rate would increase the potential for the evaluated plant trip by the RPS system but would not introduce a new type of accident. As such, the existing accident analyses are evaluated to be bounding.

Conclusion:

Thus, the modification is evaluated to not create a possibility for an accident of a different type than any previously evaluated in the UFSAR, as the existing evaluations are deemed bounding.

6. Create a possibility for a malfunction of a structure, system, or component important to safety with a different result than any previously evaluated in the UFSAR? Yes No

Basis:

The structure, system, or component in question is the ICS system and associated module that is being altered by this change. The proposed activity will disable a single set of contacts on a relay module within ICS to prevent a 50% per minute runback from loss of a single RCP. The disabling action will place the module contacts in the state of failure with respect to RCP pump status for runback initiation (failed to running status vs tripped status). No new failure mechanism is being introduced. The result of the runback rate not being fast enough would still result in the RPS system tripping the plant on an imbalance should it occur. Thus, this would not introduce a malfunction with a different result.

Conclusion:

This modification is evaluated to not create a possibility for a malfunction of a structure, system, or component important to safety with a different result than any previously evaluated in the UFSAR as the result of a plant trip would be bounded by the existing evaluations in the UFSAR.

7. Result in a design basis limit for a fission product barrier as described in the UFSAR being exceeded or altered? Yes No

Basis:

Section 14.1.2.6.4 in the UFSAR states:

"ICS initiates a power reduction upon pump failure to prevent reactor power from exceeding the permissible for the available flow. However, the reactor is tripped if insufficient reactor coolant flow exists for the power level."

This trip occurs via the RPS system and not the ICS system. The modification will not alter any reactor control setpoints, logic, protective setpoints, or other changes as they pertain to fission product barriers. This change is isolated to an overall plant runback rate given a single RCP pump failure. As such, the review concludes that no design basis limits are either directly or indirectly affected.

Conclusion:

This change does not result in a design basis limit for a fission product barrier as described in the UFSAR from being exceeded or altered.

8. Result in a departure from a method of evaluation described in the UFSAR used in establishing the design bases or in the safety analyses? Yes No

Basis:

The removal of the 50% rate of change runback for loss of a single RCP pump would result in the same results from the analyses of record within the UFSAR, as the ICS system is not credited to perform any safety related functions.

Conclusion:

As such, this change does not result in a departure from a method of evaluation described in the UFSAR used in establishing the design bases or in the safety analyses.

If any of the above questions is checked "Yes," obtain NRC approval prior to implementing the change by initiating a change to the Operating License in accordance with NMM Procedure EN-LI-103.

Attachment 5

1CAN2026-00012

ANO-1 and ANO-2 Commitment Change Summary Report

1CAN2026-00012

Attachment 5

Page 1 of 7

ANO-1 and ANO-2 Commitment Change Summary Report

Number	Original Date	Changed Date	Original Commitment	Revised Commitment	Justification of Change
2250	08/09/1991	12/18/2024	<p>COMMENT #19: Relief Request GR-1: The licensee has requested relief from the Code valve position indicator verification requirements for rapid-acting solenoid operated valves with stroke times less than or equal to 2 seconds and has proposed to verify open and shut positions using system parameters. This has been further qualified to state that verification of either valve position satisfies the Section XI requirements. This relief request is unacceptable as written and requires more clarification to show compliance with GL 89-04, Position 6 and Section XI requirements.</p> <p>RESPONSE: This relief request was revised to state that ANO will monitor system parameters to verify a valve's safety function. This monitoring will be performed at least once every two years.</p>	<p>The following valves have been classified as Low Safety Significant (RISC-3 and RISC-4) under the requirements of 10 CFR 50.69; therefore, they are being removed from the ANO-2 Inservice Testing Program. This commitment is no longer applicable to them.</p> <p>2SV-5005A, Nitrogen to SI Tank 2T-2A; 2SV-5005B, Nitrogen to SI Tank 2T-2A; 2SV-5006, Vent SI 2T-2A to Atmosphere ; 2SV-5025A, Nitrogen to SI Tank 2T-2B; 2SV-5025B, Nitrogen to SI Tank 2T-2B; 2SV-5026, Vent SI 2T-2B to Atmosphere; 2SV-5045A, Nitrogen to SI Tank 2T-2C; 2SV-5045B, Nitrogen to SI Tank 2T-2C; 2SV-5046, Vent SI 2T-2C to Atmosphere; 2SV-5065A, Nitrogen to SI Tank 2T-2D; 2SV-5065B, Nitrogen to SI Tank 2T-2D; and 2SV-5066, Vent SI 2T-2D to Atmosphere</p>	<p>10 CFR 50.69 allows licensees to voluntarily comply with the requirements in this section as an alternative to compliance with the Inservice Testing (IST) requirements in 10 CFR 50.55a(f) for RISC-3 and RISC-4 SSCs. EC-0054139465, "10 CFR 50.69 System Categorization," provides the results of multiple systems for ANO-2 that were categorized in accordance with 10 CFR 50.69. The categorization of these Unit 2 systems was performed in accordance with the industry guidance available in NEI 00-04 (endorsed by NRC in RG 1.201) and the ANO-2 passive categorization method to assess passive component risk for Class 2 and 3 SSCs and their associated supports. Both methods are part of the overall methodology assessed by the Safety Evaluation Report (SER) issued by the NRC to allow 50.69 at ANO.</p> <p>The Safety Injection Tank (SIT) System was one of the systems categorized in accordance with 10 CFR 50.69 and the results of the categorization are documented in the aforementioned EC. The SIT system is a sub-system of the Low-Pressure Safety Injection (LPSI) system; however, the LPSI system was not included in this scope. The Unit 2 SIT components identified in the Asset Suite Database define the scope of the components within the system being categorized. The system, as defined, consists of 269 components. Four of these components were excluded from categorization.</p> <p>These valves were classified as LSS (RISC-3 and RISC-4) (See EC-0054139465). Because these valves are LSS they will be removed from the ANO-2 IST program (SEP-ANO-2-IST-1 and -2). In addition, OP-2305.006, "COLD SHUTDOWN VALVE TESTING," Supplement 4, "REMOTE POSITION INDICATION TEST," will be revised to delete the IST requirement for these valves. Specific IST related requirements stated in the IST Program inspection and test procedures will be used as alternative treatment until a new alternative treatment can be devised for these components. New alternative treatment will be processed/documentated using the Preventive Maintenance/STCR process.</p>

Number	Original Date	Changed Date	Original Commitment	Revised Commitment	Justification of Change
18546	07/13/2006	02/04/2025	Implement procedural changes for the industry proposed fuel dispersal Strategy prior to next refueling for ANO-1	Commitment Cancelled	Per EC-0054113283 and accompanying PAD: Following rulemaking that established 10 CFR 50.54 license conditions, the NRC rescinded requirements of Order EA-02-026 that resulted in the current fuel dispersion measure (OCNA051901). The license conditions associated with 10 CFR 50.54 and 10 CFR 50.155 do not specifically require dispersion or air cooling. Since SAMG and FLEX procedures have validated capability to place SFP makeup and spray in service within two hours, the need to disperse heat load for convective air cooling is no longer necessary technically or required from a regulatory perspective to mitigate potential for fuel damage in the SFP from security or beyond design basis events. Therefore, it is acceptable to cancel commitment P-18546. Regardless, storing fuel in an undispersed configuration with spray capable of being established within two hours is still consistent with the intent of original commitments to implement NEI 06-12 guidelines. Those guidelines assumed SFP spray would be established within 2 hours of determination of need when fuel was not dispersed and within 5 hours with fuel in a dispersed configuration.

Number	Original Date	Changed Date	Original Commitment	Revised Commitment	Justification of Change
18547	07/13/2006	02/04/2025	Implement procedural changes for the industry proposed fuel dispersal Strategy prior to next refueling for ANO-1	Commitment Cancelled	Per EC0054113283 and accompanying PAD: Following rulemaking that established 10 CFR 50.54 license conditions, the NRC rescinded requirements of Order EA-02-026 that resulted in the current fuel dispersion measure (OCNA051901). The license conditions associated with 10 CFR 50.54 and 10 CFR 50.155 do not specifically require dispersion or air cooling. Since SAMG and FLEX procedures have validated capability to place SFP makeup and spray in service within two hours, the need to disperse heat load for convective air cooling is no longer necessary technically or required from a regulatory perspective to mitigate potential for fuel damage in the SFP from security or beyond design basis events. Therefore, it is acceptable to cancel commitment A-18547. Regardless, storing fuel in an un-dispersed configuration with spray capable of being established within two hours is still consistent with the intent of original commitments to implement NEI 06-12 guidelines. Those guidelines assumed SFP spray would be established within 2 hours of determination of need when fuel was not dispersed and within 5 hours with fuel in a dispersed configuration.
19755	06/28/2016	03/19/2025	VO-10 Evaluate Span of Control with regard to responsible oversight of vendors and place actions to address identified weaknesses in the CAP.	Responsible oversight of vendors will be enforced through span of control and oversight structure. Ratios are established in Oversight Plan and Oversight Structure is displayed through the Oversight Plan approval chain.	Entergy has conducted benchmarking with industry peers. In the course of these benchmarks it was identified that the ratios used by our industry peers were a higher rate of supplemental craft to supervisors than Entergy has been using historically. Combing the benchmark learnings with the performances seen in the recent conduct of supplemental workers and to support the business by opening opportunities for efficiency, we are changing the Standard Entergy Ratio in EN-OM-126 to 10 to 1.

<p>9088 / 9089</p>	<p>06/14/1984</p>	<p>03/18/2026</p>	<p>ANO-1 and 2 committed to implement RG 1.97 Rev. 3, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident" requirements which was tracked via ANO commitment A-9088. This commitment was closed to the applicable Unit's letter that submitted the schedule to implement these requirements - 1CAN068402 for ANO-1 and 2CAN948404 for ANO-2. Additionally, ANO-1 and ANO-2 are both committed to NUREG-0737 Supplement 1, "Clarification of TMI Action Plan Requirements, Requirements for Emergency Response Capability" via ANO commitment A-9089.</p>	<p>This Commitment Change Evaluation Form revises the obligation descriptions for ANO-1 and 2 RG 1.97 Rev. 3 Category 1 and 2 components that have been evaluated and are qualified within the scope of the EQ Program, presently in compliance with 10 CFR 50.49. This is being performed to take credit of 10 CFR 50.69 "Risk-Informed Categorization and Treatment of Structures, Systems and Components for Nuclear Power Reactors" which gives the licensee the option to voluntarily comply with requirements in 10 CFR 50.69(b) as an alternative to 50.49 for the components that have been categorized as RISC-3 and RISC-4 SSCs per 50.69.</p> <p>Applicable sections of the ANO-1 and 2 UFSARs, and ANO-2 TS will be updated with the following text (or similar) to clarify environmental qualification and obligation to RG 1.97 and NUREG-0737:</p> <p>ANO-1: The components associated with the systems identified in UFSAR Table 1-7 that have been categorized as RISC -3 and RISC-4 (as discussed in UFSAR Section</p>	<p>ANO-1 and 2 have both implemented 10 CFR 50.69, "Risk-Informed Categorization and Treatment of Structures, Systems and Components for Nuclear Power Reactors". 10 CFR 50.69 provides a means for appropriately focusing attention on SSCs that are most important to safety, while maintaining reasonable confidence that other SSCs will be capable of performing their design basis functions. 10 CFR 50.69 permits relaxation of the special treatment specified in certain other sections of the regulations for SSCs that are categorized as low safety significant (LSS). The process for categorizing SSCs as high safety significant (HSS) or LSS is specified in NEI guidance documents (particularly, NEI 00-04 and NEI 16-09), as well as other implementation guidance that has been published by EPRI and the Owners Groups. The HSS/LSS categorization process involves multiple evaluation methods which combine a review of all system functions and the components which support each function, importance measures, passive failure considerations, defense-in-depth evaluations, consideration of component operating experience (OE) and insights from the plant's integrated decision-making panel (IDP). As stated above, 10 CFR 50.69(b)(1) allows voluntary compliance with alternative requirements in lieu of the specific treatment requirements referred to in this regulation, for SSCs determined to be LSS. The programs or processes that implement the special treatments requirements are revised to recognize that the special treatments no longer apply to RISC-3 and RISC-4 SSCs. The programs or processes either allow continued application of the special treatments or acceptable alternative treatments, as applicable, to provide reasonable confidence that these SSCs would perform their safety-related function under design basis conditions.</p> <p>10 CFR 50.69 specifically states that a licensee may voluntarily comply with this regulation as an alternative to compliance with certain regulations for RISC-3 and RISC-4 components. These certain regulations include 10 CFR 50.49 (Environmental Qualification), 10 CFR 50.69(d)(2) requires the licensee to provide reasonable confidence the component will perform its</p>
--------------------	-------------------	-------------------	--	---	--

Number	Original Date	Changed Date	Original Commitment	Revised Commitment	Justification of Change
				<p>1.4.1) may invoke the requirements of 10 CFR 50.69 as an alternative to environmental qualification.</p> <p>ANO-2: The components associated with the systems identified in UFSAR Table 3.1-1 that have been categorized as RISC -3 and RISC-4 (as discussed in UFSAR Section 3.1.1) may invoke the requirements of 10 CFR 50.69 as an alternative to environmental qualification.</p>	<p>safety function under design basis conditions, including seismic conditions and environmental conditions and effects throughout their service life. As such, the intent of the RG 1.97 commitment related to environmental qualification to ensure components can adequately survive their environment is satisfied. Additionally, appropriate measures are taken to ensure component quality through 10 CFR 50.69(d)(2)(i) and (ii) to provide inspection, testing, and corrective action.</p> <p>Instrumentation equipment located in harsh environments at ANO-1 and 2 that were originally provided for RG 1.97 remote monitoring of accident conditions and that are now classified as RISC-3 & RISC-4 equipment, in accordance with 10 CFR 50.69, no longer need to be included in the environmental qualification program. This allows improved focus on equipment that has high safety significance resulting in improved plant safety.</p>

List of Acronyms

ANO	Arkansas Nuclear One
ANO-1	Arkansas Nuclear One, Unit 1
ANO-2	Arkansas Nuclear One, Unit 2
CAP	Corrective Action Program
CFR	Code of Federal Regulations
EC	Engineering Change
EPRI	Electric Power Research Institute
EQ	Environmental Qualification
FLEX	Diverse and Flexible Coping Strategies
GL	Generic Letter
NEI	Nuclear Energy Institute
PAD	Process Applicability Determination
RISC	Risk-Informed Safety Class
SAMG	Severe Accident Management Guidelines
SFP	Spent Fuel Pool
SI	Safety Injection
SSC	System, Structure, or Component
STCR	Surveillance Test Change Request
TMI	Three Mile Island
TS	Technical Specifications
UFSAR	Updated Final Safety Analysis Report

Attachment 6

1CAN2026-00012

List of Affected SAR Pages

List of Affected SAR Pages

The following is a list of Safety Analysis Report (SAR) pages revised in Amendment 33 to support corrections, modifications, implementation of licensing basis changes, etc., as described in the Table of Contents of each SAR chapter (reference Enclosure 1 of this letter). Information relocated from one page to another in support of the aforementioned revisions is not considered a change; therefore, these pages are not included in the following list. In addition, pages associated with the individual Table of Contents are not listed below as related revisions are administrative only changes.

Cover Page	3A.11-4	Figure 3A-13B	7.1-25
1.1-1	3A.11-5	Figure 3A-13C	7.2-12
1.2-1	3A.11-6	Figure 3A-14A	7.3-15
1.10-1	3A.11-7	Figure 3A-14B	7.5-1
3.4-5	3A.11-8	Figure 3A-14C	7.6-30
3A.1-1	3A.11-9	Figure 3A-15A	Figure 7-6
3A.2-1	3A.11-10	Figure 3A-15B	Figure 7-12
3A.3-1	3A.11-11	Figure 3A-15C	Figure 7-14
3A.4-1	3A.11-12	Figure 3A-16A	Figure 7-22
3A.4-2	3A.11-13	Figure 3A-16B	8.2-1
3A.4-3	3A.11-14	Figure 3A-16C	9.5-4
3A.4-4	3A.11-15	Figure 3A-17	Figure 9-4
3A.5-1	Figure 3A-1	Figure 3A-18	Figure 9-16
3A.5-2	Figure 3A-2	4.2-11	10.2-1
3A.6-1	Figure 3A-3	4.2-17	10.3-3
3A.7-1	Figure 3A-4	5.1-18	14.1-12
3A.7-2	Figure 3A-5	5.3-6	14.1-18
3A.7-3	Figure 3A-6	5.5-1	14.1-19
3A.8-1	Figure 3A-7	5.5-3	14.1-21
3A.8-2	Figure 3A-8	5.5-4	14.2-11
3A.10-1	Figure 3A-9	5.5-5	14.4-3
3A.10-2	Figure 3A-10	5.5-7	14.4-4
3A.11-1	Figure 3A-11	5.5-10	14.4-6
3A.11-2	Figure 3A-12	7.1-9	14.5-8
3A.11-3	Figure 3A-13A	7.1-17	A.7-10

SECURITY RELATED INFORMATION – WITHHOLD UNDER 10 CFR 2.390
This letter is decontrolled when separated from Enclosure 1

Enclosure 1

1CAN2026-00012

ANO-1 SAR Amendment 33
Un-redacted Version

Enclosure 2

1CAN2026-00012

**ANO-1 SAR Amendment 33
Redacted Version**

Enclosure 3

1CAN2026-00012

ANO-1 TRM

Enclosure 4

1CAN2026-00012

ANO-1 TS Table of Contents and TS Bases

492 Pages