Entergy Operations, Inc.
1448 S.R. 333
Russellville, AR 72802
Tel 479-858-3110

Jeremy G. Browning
Vice President - Operations
Arkansas Nuclear One

2CAN031602

10 CFR 50.90
10 CFR 50.55a

March 25, 2016

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

SUBJECT: Application to Revise Technical Specifications to Adopt TSTF-545, Revision 3, "TS Inservice Testing Program Removal & Clarify SR Usage Rule Application to Section 5.5 Testing," and to Request an Alternative to the ASME Code
Arkansas Nuclear One, Unit 2
Docket No. 50-368
License No. NPF-6

Dear Sir or Madam:

Pursuant to 10 CFR 50.90, Entergy Operations, Inc. (Entergy) is submitting a request for an amendment to the Technical Specifications (TS) for Arkansas Nuclear One, Unit 2 (ANO-2). The proposed change revises the TSs to eliminate the Section 6.5, "Inservice Testing Program" (TS Section 5.5 of NUREG 1432, "Standard Technical Specifications – Combustion Engineering Plants," Revision 4, is referred to as TS Section 6.5 in the ANO-2 TSs). A new defined term, "Inservice Testing Program," is added to the TS Definitions section. This request is consistent with TSTF-545, Revision 3, "TS Inservice Testing Program Removal & Clarify SR Usage Rule Application to Section 5.5 Testing."

Pursuant to 10 CFR 50.55a(z), the application also proposes an alternative to the testing frequencies in the American Society of Mechanical Engineers (ASME) Operation and Maintenance (OM) Code, by adoption of approved Code Case OMN-20, "Inservice Test Frequency," for the current 10 year Inservice Testing (IST) interval.

Attachment 1 provides a description and assessment of the proposed changes. Attachment 2 provides the existing TS pages marked up to show the proposed changes. Attachment 3 provides revised (clean) TS pages. Attachment 4 provides TS Bases pages marked up to show the associated TS Bases changes and is provided for information only.

Approval of the proposed amendment and relief request is requested by May 1, 2017. Once approved, the amendment shall be implemented within 90 days.

In accordance with 10 CFR 50.91, a copy of this application, with attachments, is being provided to the designated Arkansas state official.

No new commitments have been identified in this letter.

I declare under penalty of perjury that the foregoing is true and correct. Executed on March 25, 2016.

If you have any questions or require additional information, please contact Stephenie Pyle at 479-858-4704.

Sincerely,

ORIGINAL SIGNED BY JEREMY G. BROWNING

JGB/dbb

Attachments:

1. Description and Assessment of Technical Specification Changes
2. Proposed Technical Specification Changes (Mark-Up)
3. Revised Technical Specification Pages
4. Proposed Technical Specification Bases Changes (Mark-Up) – Information Only
5. Description and Assessment of the Proposed Alternative to the ASME Code

cc: Mr. Marc L. Dapas
Regional Administrator
U. S. Nuclear Regulatory Commission
Region IV
1600 East Lamar Boulevard
Arlington, TX 76011-4511

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

U. S. Nuclear Regulatory Commission
Attn: Ms. Andrea E. George
MS O-8B1
One White Flint North
11555 Rockville Pike
Rockville, MD 20852

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

Attachment 1 to

2CAN031602

Description and Assessment of Technical Specification Changes

Description and Assessment of Technical Specification Changes

1.0 DESCRIPTION

The proposed change eliminates the Technical Specifications (TS), Section 5.5, “Inservice Testing (IST) Program,” to remove requirements duplicated in American Society of Mechanical Engineers (ASME) Code for Operations and Maintenance of Nuclear Power Plants (OM Code), Case OMN-20, “Inservice Test Frequency." A new defined term, "Inservice Testing Program," is added to TS Section 1.0, "Definitions.” The proposed change to the TS is consistent with TSTF-545, Revision 3, “TS Inservice Testing Program Removal & Clarify SR Usage Rule Application to Section 5.5 Testing.”

2.0 ASSESSMENT

2.1 Applicability of Published Safety Evaluation

Entergy Operations, Inc. (Entergy), has reviewed the model safety evaluation (SE) addressed to the Technical Specifications Task Force in a letter dated December 11, 2015 (ADAMS Accession No. ML15317A071). This review included a review of the NRC staff’s evaluation, as well as the information provided in TSTF-545. Entergy concluded that the justifications presented in TSTF-545, and the model safety evaluation prepared by the NRC staff are applicable to Arkansas Nuclear One, Unit 2 (ANO-2) and justify this amendment for the incorporation of the changes to the ANO-2 TS.

ANO-2 was issued a construction permit on December 6, 1972, and the provisions of 10 CFR 50.55a(f)(2) are applicable.

2.2 Variations

The ANO-2 TSs (NUREG 0336) are of an older standard version and have not been converted to the improved standard TSs (ISTSs) based on NUREG 1432, “Standard Technical Specifications – Combustion Engineering Plants,” Revision 4. Entergy performed a search of the entire ANO-2 TSs for the key phrase “inservice testing program” and “IST”. TS numbering generally differs from that of the ISTS. Actual TS wording may also differ. Therefore, each ANO-2 TS is listed in the following table, along with the ISTS listing from TSTF-545, with any differences or variations discussed individually. While Entergy has confirmed that TSTF-545 and its associated model SE are applicable to ANO-2, because of the non-ISTS ANO-2 version, it is understood that this amendment request will not be reviewed under the Consolidated Line Item Improvement Process (CLIIP). Minor page formatting/cleanup is performed where appropriate which is not discussed further in this submittal.

ANO-2	ISTS	Differences
New 1.34	Section 1.1	Unlike the ISTS, the ANO-2 TS Definitions are numbered and are not in alphabetical order. Therefore, the INSERVICE TESTING PROGRAM definition is added as new Definition 1.34 to TS Page 1-6, keeping the current ANO-2 TS formatting.

ANO-2	ISTS	Differences
SR 4.4.1.3.1	N/A	The IST program is listed in this ANO-2 SR associated with operable Shutdown Cooling loops. Because the IST program capitalization remains applicable, this TS page is included in the appropriate attachments of this amendment request.
SR 4.4.2	N/A	The IST program is listed in this ANO-2 SR associated with operable Pressurizer Safety Valves during operation in Mode 4 with Reactor Coolant System (RCS) cold leg temperature > 220 °F. The respective Mode 1-3 TS is included in the TSTF-545 markups (see next table entry below). Because the IST program capitalization remains applicable, this TS page is included in the appropriate attachments of this amendment request.
SR 4.4.3	SR 3.4.10.1	There are minor wording differences between the respective ANO-2 SR and the ISTS version of TSTF-545; however, the IST program capitalization remains applicable.
SR 4.4.6.2.3	SR 3.4.14.1	The respective ANO-2 SR lists specific requirements and does not refer to the IST program. Therefore, this TS page is not included in this amendment request.
SR 4.4.12.4	N/A	The IST program is listed in this ANO-2 SR associated with operable Low Temperature Overpressure relief valves. Because the IST program capitalization remains applicable, this TS page is included in the appropriate attachments of this amendment request.
SR 4.5.2.f	SR 3.5.2.4	There are minor wording differences between the respective ANO-2 SR and the ISTS version of TSTF-545; however, the IST program capitalization remains applicable.
N/A	SR 3.5.2.5	The ANO-2 Charging Pumps are non-TS; therefore, there is no comparable ANO-2 TSs and no change is required.
SR 4.6.2.1	SR 3.6.6A.5	There are minor wording differences between the respective ANO-2 SR and the ISTS version of TSTF-545; however, the IST program capitalization remains applicable.
SR 4.6.3.1.3	SR 3.6.3.5	There are minor wording differences between the respective ANO-2 SR and the ISTS version of TSTF-545; however, the IST program capitalization remains applicable.
N/A	SR 3.6.6B.5	This SR is associated with plants that <u>do</u> <u>not</u> credit Containment Spray for iodine removal and is not applicable to ANO-2. Therefore, no TS change is required.
N/A	SR 3.6.7.4	The ANO-2 Containment Spray additive is sodium tetraborate (NaTB) decahydrate and, therefore, the IST program is not applicable. No ANO-2 TS change is required.

ANO-2	ISTS	Differences
N/A	SR 3.6.12.1	This SR is associated with "dual" Containment Building designs and is not applicable to ANO-2. No comparable ANO-2 TS exists and, therefore, no TS change is applicable.
SR 4.7.1.1	SR 3.7.1.1	There are minor wording differences between the respective ANO-2 SR and the ISTS version of TSTF-545; however, the IST program capitalization remains applicable. Note that the as-left tolerance is listed at the end of ANO-2 TS Table 3.7-5 and is not included in the SR proper.
SR 4.7.1.2	SR 3.7.5.2	There are minor wording differences between the respective ANO-2 SR and the ISTS version of TSTF-545; however, the IST program capitalization remains applicable.
SR 4.7.1.5	SR 3.7.2.1	There are minor wording differences between the respective ANO-2 SR and the ISTS version of TSTF-545; however, the IST program capitalization remains applicable.
N/A	SR 3.7.3.1	ANO-2 does not have a TS associated with Main Feedwater valves; therefore, no TS change is applicable.
SR 4.9.8.2	SR N/A	The IST program is listed in this ANO-2 SR associated with operable Shutdown Cooling loops during operation in Mode 6 and RCS level is below 23 feet. Because the IST program capitalization remains applicable, this TS page is included in the appropriate attachments of this amendment request.
Various	Various	The ANO-2 TS Bases do not contain the detail included in the ISTS Bases. The IST program is mentioned only in TS Bases associated with RCS Vents. Therefore, this is the only TS Bases page included in Attachment 4. Note that the TS Bases markup is provided for information only.

TSTF-545 deletes the IST program TS 6.5.8 (ISTS 5.5.8) and re-numbers all subsequent TS programs. This also impacts several TS Bases references. Entergy proposes to retain the TS 6.5.8 reference, now shown as "DELETED", and not change the subsequent TS program numbers. These program numbers are referenced in a wealth of station procedures. By maintaining the current program numbering, excessive administrative burden is avoided. Based on this approach, several TSTF-545 TS Bases markup pages associated with the TSTF-545 program numbering are not included in Attachment 4 of this application.

The markup and clean (revised) ANO-2 TS Page 6-10 associated with the Containment Spray System includes changes proposed in an amendment requesting adoption of TSTF-426, "Revise or Add Actions to Preclude Entry Into LCO 3.0.3 - RITSTF Initiatives 6b & 6c," submitted in letter dated December 22, 2015 (2CAN121502, ML15356A657), which is currently under NRC review. Should this page be altered during NRC review of the TSTF-426 amendment request, Entergy will promptly provide a revised markup and clean TS page which continues to support adoption of TSTF-545 based on the current approved version at the time.

No technical variances are proposed in this amendment request. Therefore, Entergy has concluded the aforementioned variations are acceptable.

3.0 REGULATORY ANALYSIS

3.1 No Significant Hazards Consideration Analysis

Entergy Operations, Inc. (Entergy), requests adoption of the Technical Specification (TS) changes described in TSTF-545, “TS Inservice Testing Program Removal & Clarify SR Usage Rule Application to Section 5.5 Testing,” which is an approved change to the Improved Standard Technical Specifications (ISTS), into the Arkansas Nuclear One, Unit 2 (ANO-2) TS. The proposed change revises the TS Chapter 6, "Administrative Controls," Section 6.5, "Programs and Manuals," to delete the "Inservice Testing Program" specification. Requirements in the Inservice Testing (IST) Program are removed, as they are duplicative of requirements in the American Society of Mechanical Engineers (ASME) Operations and Maintenance (OM) Code, as clarified by Code Case OMN-20, “Inservice Test Frequency.” Note that TS Section 5.5 of NUREG 1432, “Standard Technical Specifications – Combustion Engineering Plants,” Revision 4, is referred to as TS Section 6.5 in the ANO-2 TSs. Other requirements in Section 6.5 are eliminated because the Nuclear Regulatory Commission (NRC) has determined their appearance in the TS is contrary to regulations. A new defined term, “Inservice Testing Program,” is added, which references the requirements of Title 10 of the Code of Federal Regulations (10 CFR), Part 50, paragraph 50.55a(f). Entergy has evaluated whether or not a significant hazards consideration is involved with the proposed amendment(s) by focusing on the three standards set forth in 10 CFR 50.92, “Issuance of amendment,” as discussed below:

1. Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

   Response: No.

   The proposed change revises TS Chapter 6, "Administrative Controls," Section 6.5, "Programs and Manuals," by eliminating the "Inservice Testing Program" specification. Most requirements in the IST Program are removed, as they are duplicative of requirements in the ASME OM Code, as clarified by Code Case OMN-20, “Inservice Test Frequency.” The remaining requirements in the Section 6.5 IST Program are eliminated because the NRC has determined their inclusion in the TS is contrary to regulations. A new defined term, “Inservice Testing Program,” is added to the TS, which references the requirements of 10 CFR 50.55a(f).

   Performance of inservice testing is not an initiator to any accident previously evaluated. As a result, the probability of occurrence of an accident is not significantly affected by the proposed change. Inservice test frequencies under Code Case OMN-20 are equivalent to the current testing period allowed by the TS with the exception that testing frequencies greater than 2 years may be extended by up to 6 months to facilitate test scheduling and consideration of plant operating conditions that may not be suitable for performance of the required testing. The testing frequency extension will not affect the ability of the components to mitigate any accident previously evaluated as the components are required to be operable during the testing period extension. Performance of inservice tests utilizing the allowances in OMN-20 will not significantly affect the reliability of the tested components. As a result, the availability of the affected components, as well as their ability to mitigate the consequences of accidents previously evaluated, is not affected.

   Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

   Response: No.

   The proposed change does not alter the design or configuration of the plant. The proposed change does not involve a physical alteration of the plant; no new or different kind of equipment will be installed. The proposed change does not alter the types of inservice testing performed. In most cases, the frequency of inservice testing is unchanged. However, the frequency of testing would not result in a new or different kind of accident from any previously evaluated since the testing methods are not altered.

   Therefore, the proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

3. Does the proposed change involve a significant reduction in a margin of safety?

   Response: No.

   The proposed change eliminates some requirements from the TS in lieu of requirements in the ASME Code, as modified by use of Code Case OMN-20. Compliance with the ASME Code is required by 10 CFR 50.55a. The proposed change also allows inservice tests with frequencies greater than 2 years to be extended by 6 months to facilitate test scheduling and consideration of plant operating conditions that may not be suitable for performance of the required testing. The testing frequency extension will not affect the ability of the components to respond to an accident as the components are required to be operable during the testing period extension. The proposed change will eliminate the existing TS Surveillance Requirement (SR) 4.0.3 (referenced as SR 3.0.3 in the ISTS) allowance to defer performance of missed inservice tests up to the duration of the specified testing frequency, and instead will require an assessment of the missed test on equipment operability. This assessment will consider the effect on a margin of safety (equipment operability). Should the component be inoperable, the Technical Specifications provide actions to ensure that the margin of safety is protected. The proposed change also eliminates a statement that nothing in the ASME Code should be construed to supersede the requirements of any TS. The NRC has determined that statement to be incorrect. However, elimination of the statement will have no effect on plant operation or safety.

   Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Based on the above, Entergy concludes that the proposed change presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

4.0 ENVIRONMENTAL EVALUATION

The proposed change would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. However, the proposed change does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluents that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed change meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed change.

5.0 PRECEDENCE

Because TSTF-545, Revision 3, was approved in December 2015, time has not permitted licensees to apply, and gain approval for, adoption of TSTF-545. Therefore, other than TSTF 545 itself, no other precedence exists at this time.

Attachment 2

2CAN031602

Proposed Technical Specification Changes (mark-up)

MEMBER(S) OF THE PUBLIC

1.29 MEMBER(S) OF THE PUBLIC shall include all persons who are not occupationally associated with the plant. This category does not include employees of the utility, its contractors or vendors. Also excluded from this category are persons who enter the site to service equipment or to make deliveries. This category does include persons who use portions of the site for recreational, occupational or other purposes not associated with the plant.

PURGE – PURGING

1.30 PURGE or PURGING is the controlled process of discharging air or gas from a confinement to reduce airborne radioactive concentrations in such a manner that replacement air or gas is required to purify the confinement.

EXCLUSION AREA

1.31 The EXCLUSION AREA is that area surrounding ANO within a minimum radius of .65 miles of the reactor buildings and controlled to the extent necessary by the licensee for purposes of protection of individuals from exposure to radiation and radioactive materials.

UNRESTRICTED AREA

1.32 An UNRESTRICTED AREA shall be any area at or beyond the exclusion area boundary.

CORE OPERATING LIMITS REPORT

1.33 The CORE OPERATING LIMITS REPORT is the ANO-2 specific document that provides core operating limits for the current operating reload cycle. These cycle-specific core operating limits shall be determined for each reload cycle in accordance with Technical Specification 6.6.5. Plant operation within these operating limits is addressed in individual specifications.

INSERVICE TESTING PROGRAM

1.34 The INSERVICE TESTING PROGRAM is the licensee program that fulfills the requirements of 10 CFR 50.55a(f).

SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.4.1.3 a. At least two of the coolant loops listed below shall be OPERABLE:

1. Reactor Coolant Loop (A) and its associated steam generator and at least one associated reactor coolant pump.
2. Reactor Coolant Loop (B) and its associated steam generator and at least one associated reactor coolant pump.
3. Shutdown Cooling Loop (A) #.
4. Shutdown Cooling Loop (B) #.

b. At least one of the above coolant loops shall be in operation.*

APPLICABILITY: Modes 4 and 5.

ACTION:

a. With less than the above required coolant loops OPERABLE, immediately initiate corrective action to return the required coolant loops to OPERABLE status as soon as possible and initiate action to make at least one steam generator available for decay heat removal via natural circulation. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.

b. With no coolant loop in operation, suspend all operations involving a reduction in boron concentration of the Reactor Coolant System and immediately initiate corrective action to return the required coolant loop to operation.

SURVEILLANCE REQUIREMENTS

4.4.1.3.1 The required shutdown cooling loop(s) shall be determined OPERABLE per the INSERVICE TESTING PROGRAM~~Inservice Testing Program~~.

4.4.1.3.2 The required reactor coolant pump(s), if not in operation, shall be determined to be OPERABLE once per 7 days by verifying correct breaker alignments and indicated power availability.

4.4.1.3.3 The required steam generator(s) shall be determined OPERABLE by verifying the secondary side water level to be $\geq$ 23% indicated level at least once per 12 hours.

4.4.1.3.4 At least one coolant loop shall be verified to be in operation and circulating reactor coolant at least once per 12 hours.

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* All reactor coolant pumps and decay heat removal pumps may be de-energized for up to 1 hour provided (1) no operations are permitted that would cause dilution of the reactor coolant system boron concentration, and (2) core outlet temperature is maintained at least 10°F below saturation temperature.

\# The normal or emergency power source may be inoperable in Mode 5.

REACTOR COOLANT SYSTEM

SAFETY VALVES – SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.4.2 A minimum of one pressurizer code safety valve shall be OPERABLE with a lift setting of 2500 PSIA ± 3%*.

APPLICABILITY: MODE 4 with Tc > 220 °F.

ACTION:

With no pressurizer code safety valve OPERABLE, reduce Tc to ≤ 220 °F within 12 hours.

SURVEILLANCE REQUIREMENTS

4.4.2 No additional Surveillance Requirements other than those required by the INSERVICE TESTING PROGRAM~~Inservice Testing Program~~.

* The lift setting pressure shall correspond to ambient conditions of the valve at nominal operating temperature and pressure. If found outside of a ± 1% tolerance band, the setting shall be adjusted to within ± 1% of the lift setting shown.

REACTOR COOLANT SYSTEM

SAFETY VALVES – OPERATING

LIMITING CONDITION FOR OPERATION

3.4.3 All pressurizer code safety valves shall be OPERABLE with a lift setting 2500 psia ± 3%*.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

a. With one pressurizer code safety valve inoperable, either restore the inoperable valve to OPERABLE status within 15 minutes or be in HOT SHUTDOWN within 12 hours.

b. The provisions of specification 3.0.4.c may be applied and the requirements of ACTION "a" suspended for one valve at a time for up to 18 hours for entry into and during operation in MODE 3 for the purpose of setting the pressurizer code safety valves under ambient (hot) conditions provided a preliminary cold setting was made prior to heatup.

SURVEILLANCE REQUIREMENTS

4.4.3 No additional Surveillance Requirements other than those required by the INSERVICE TESTING PROGRAM~~Inservice Testing Program~~.

* The lift setting pressure shall correspond to ambient conditions of the valve at nominal operating temperature and pressure. If found outside of a ± 1% tolerance band, the setting shall be adjusted to within ± 1% of the lift setting shown.

4.4.12.1 Verify both sets of LTOP relief valve isolation valves are open at least once per 72 hours when the LTOP relief valves are being used for overpressure protection.

4.4.12.2 The RCS vent path shall be verified to be open at least once per 12 hours** when the vent path is being used for overpressure protection.

4.4.12.3 Verify that each SIT is isolated, when required, once every 12 hours.

4.4.12.4 No additional LTOP relief valve Surveillance Requirements other than those required by the INSERVICE TESTING PROGRAM~~Inservice Testing Program~~.

** Except when the vent path is provided with a valve which is locked, sealed, or otherwise secured in the open position, then verify this valve is open at least once per 31 days.

f. By verifying that each of the following pumps develops the indicated differential pressure on recirculation flow when tested pursuant to the INSERVICE TESTING PROGRAM~~Inservice Testing Program~~:

1. High-Pressure Safety Injection pump ≥ 1360.4 psid with 90 °F water.

2. Low-Pressure Safety Injection pump ≥ 156.25 psid with 90 °F water.

g. At least once per 18 months by verifying the correct position of each electrical and/or mechanical position stop for the following ECCS throttle valves:

LPSI System Valve Number
a. 2CV-5037-1
b. 2CV-5017-1
c. 2CV-5077-2
d. 2CV-5057-2

h. By performing a flow balance test, during shutdown, following completion of modifications to the ECCS subsystem that alter the subsystem flow characteristics and verifying the following flow rates:

HPSI System – Single Pump	LPSI System – Single Pump
The sum of the injection line flow rates, excluding the highest flow rate is greater than or equal to 570 gpm.	a. Injection Leg 1, ≥ 1059 gpm b. Injection Leg 2, ≥ 1059 gpm c. Injection Leg 3, ≥ 1059 gpm d. Injection Leg 4, ≥ 1059 gpm

3/4.6.2 DEPRESSURIZATION, COOLING, AND pH CONTROL SYSTEMS

CONTAINMENT SPRAY SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.2.1 Two independent containment spray systems shall be OPERABLE with each spray system capable of taking suction from the RWT on a Containment Spray Actuation Signal (CSAS) and automatically transferring suction to the containment sump on a Recirculation Actuation Signal (RAS). Each spray system flow path from the containment sump shall be via an OPERABLE shutdown cooling heat exchanger.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

a. With one containment spray system inoperable, restore the inoperable spray system to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

b. With both containment spray systems inoperable (Note 1):

1. Within 1 hour verify both CREVS trains are OPERABLE, and

2. Restore at least one containment spray system to OPERABLE status within 24 hours.

Otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

SURVEILLANCE REQUIREMENTS

4.6.2.1 Each containment spray system shall be demonstrated OPERABLE:

a. At least once per 31 days by:

1. Verify each containment spray manual, power operated, and automatic valve in the flow path that is not locked, sealed, or otherwise secured in position is in the correct position.

2. Verifying that the system piping is full of water from the RWT to at least elevation 505' (equivalent to > 12.5% indicated narrow range level) in the risers within the containment.

b. Verify each containment spray pump's developed head at the flow test point is greater than or equal to the required developed head when tested pursuant to the INSERVICE TESTING PROGRAM~~Inservice Testing Program~~.

Note 1: ACTION b is not applicable when the second containment spray system is intentionally made inoperable.

SURVEILLANCE REQUIREMENTS (Continued)

4.6.3.1.2 Each containment isolation valve shall be demonstrated OPERABLE at least once per 18 months by verifying that on a containment isolation test signal, each isolation valve actuates to its isolation position.

4.6.3.1.3 The isolation time of each power operated or automatic containment isolation valve shall be determined to be within its limit when tested pursuant to the INSERVICE TESTING PROGRAM~~Inservice Testing Program~~.

4.6.3.1.4 The containment purge supply and exhaust isolation valves shall be demonstrated OPERABLE as specified in the Containment Leakage Rate Testing Program.

3/4.7 PLANT SYSTEMS

3/4.7.1 TURBINE CYCLE

SAFETY VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.1 All main steam line code safety valves shall be OPERABLE with lift settings as specified in Table 3.7-5.

APPLICABILITY: MODES 1, 2 and 3*

ACTION:

MODES 1 and 2

With one or more main steam line code safety valves inoperable, operation in MODES 1 and 2 may proceed provided that within 4 hours, power is reduced to less than or equal to the applicable percent of RATED THERMAL POWER as listed in Table 3.7-1 and within 12 hours, the Linear Power Level – High trip setpoint is reduced per Table 3.7-1; otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 12 hours.

MODE 3

With one or more main steam line code safety valves inoperable, operation in MODE 3 may proceed provided that at least 2 main steam line code safety valves are OPERABLE on each steam generator; otherwise, be in at least HOT SHUTDOWN within the next 12 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.1 No additional Surveillance Requirements other than those required by the INSERVICE TESTING PROGRAM~~Inservice Testing Program~~.

* Except that during hydrostatic testing in Mode 3, eight of the main steam line code safety valves may be gagged and two (one on each header) may be reset for the duration of the test to allow the required pressure for the test to be attained. The Reactor Trip Breakers shall be open for the duration of the test.

PLANT SYSTEMS

EMERGENCY FEEDWATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.1.2 Two emergency feedwater pumps and associated flow paths shall be OPERABLE with:

a. One motor driven pump capable of being powered from an OPERABLE emergency bus, and

b. One turbine driven pump capable of being powered from an OPERABLE steam supply system.

APPLICABILITY: MODES 1, 2, and 3

ACTION:

NOTE: Specification 3.0.4.b is not applicable.

With one emergency feedwater pump inoperable, restore the inoperable pump to OPERABLE status within 72 hours or be in HOT SHUTDOWN within the next 12 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.2 Each emergency feedwater pump shall be demonstrated OPERABLE:

a At least once per 31 days by:

1. Verifying that each valve (manual, power operated or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.

b. In accordance with the INSERVICE TESTING PROGRAM~~Inservice Testing Program~~ by:

1. Verifying the developed head of each EFW pump at the flow test point is greater than or equal to the required developed head. This surveillance requirement is not required to be performed for the turbine driven EFW pump until 24 hours after exceeding 700 psia in the steam generators.

PLANT SYSTEMS

MAIN STEAM ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.5 Each main steam isolation valve shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

MODE 1	-	With one main steam isolation valve inoperable, POWER OPERATION may continue provided the inoperable valve is either restored to OPERABLE status or closed within 4 hours; otherwise, be in HOT SHUTDOWN within the next 12 hours.
MODES 2 and 3	-	With one main steam isolation valve inoperable, subsequent operation in MODES 1, 2 or 3 may proceed provided the isolation valve is maintained closed; otherwise, be in HOT SHUTDOWN within the next 12 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.5 Each main steam isolation valve shall be demonstrated OPERABLE by verifying full closure within 3 seconds when tested pursuant to the INSERVICE TESTING PROGRAM~~Inservice Testing Program~~.

REFUELING OPERATIONS

SHUTDOWN COOLING – TWO LOOPS

LIMITING CONDITION FOR OPERATION

3.9.8.2 Two independent shutdown cooling loops shall be OPERABLE.*

APPLICABILITY: MODE 6 when the water level above the top of the irradiated fuel assemblies seated within the reactor pressure vessel is less than 23 feet.

ACTION:

a. With less than the required shutdown cooling loops OPERABLE, immediately initiate corrective action to return the loops to OPERABLE status as soon as possible.

b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.8.2 The required shutdown cooling loops shall be determined OPERABLE per the INSERVICE TESTING PROGRAM~~Inservice Testing Program~~.

* The normal or emergency power source may be inoperable for each shutdown cooling loop.

6.5.7 Reactor Coolant Pump Flywheel Inspection Program

This program shall provide for the inspection of each reactor coolant pump flywheel per the recommendation of Regulatory Position C.4.b of Regulatory Guide 1.14, Revision 1, August 1975. The volumetric examination per Regulatory Position C.4.b.1 will be performed on approximately 10-year intervals.

6.5.8 ~~Inservice Testing Program~~DELETED

~~This program provides controls for inservice testing of ASME Code Class 1, 2, and 3 components. The program shall include the following:~~

~~a. Testing frequencies applicable to the ASME Code for Operation and Maintenance (OM) of Nuclear Power Plants and applicable Addenda as follows:~~

~~ASME OM Code terminology for inservice testing activities~~	~~Required frequencies for performing inservice testing activities~~
~~Weekly~~	~~At least once per 7 days~~
~~Monthly~~	~~At least once per 31 days~~
~~Every 6 weeks~~	~~At least once per 42 days~~
~~Quarterly or every 3 months~~	~~At least once per 92 days~~
~~Semiannually or every 6 months~~	~~At least once per 184 days~~
~~Every 9 months~~	~~At least once per 276 days~~
~~Yearly or annually~~	~~At least once per 366 days~~
~~Biennially or every 2 years~~	~~At least once per 731 days~~

~~b. The provisions of Specification 4.0.2 are applicable to the above required frequencies and to other normal and accelerated frequencies specified as 2 years or less in the Inservice Testing Program for performing inservice testing activities.~~

~~c. The provisions of Specification 4.0.3 are applicable to inservice testing activities, and~~

~~d. Nothing in the ASME OM Code shall be construed to supersede the requirements of any Technical Specification.~~

Attachment 3

2CAN031602

Revised Technical Specification Pages

MEMBER(S) OF THE PUBLIC

1.29 MEMBER(S) OF THE PUBLIC shall include all persons who are not occupationally associated with the plant. This category does not include employees of the utility, its contractors or vendors. Also excluded from this category are persons who enter the site to service equipment or to make deliveries. This category does include persons who use portions of the site for recreational, occupational or other purposes not associated with the plant.

PURGE – PURGING

1.30 PURGE or PURGING is the controlled process of discharging air or gas from a confinement to reduce airborne radioactive concentrations in such a manner that replacement air or gas is required to purify the confinement.

EXCLUSION AREA

1.31 The EXCLUSION AREA is that area surrounding ANO within a minimum radius of .65 miles of the reactor buildings and controlled to the extent necessary by the licensee for purposes of protection of individuals from exposure to radiation and radioactive materials.

UNRESTRICTED AREA

1.32 An UNRESTRICTED AREA shall be any area at or beyond the exclusion area boundary.

CORE OPERATING LIMITS REPORT

1.33 The CORE OPERATING LIMITS REPORT is the ANO-2 specific document that provides core operating limits for the current operating reload cycle. These cycle-specific core operating limits shall be determined for each reload cycle in accordance with Technical Specification 6.6.5. Plant operation within these operating limits is addressed in individual specifications.

INSERVICE TESTING PROGRAM

1.34 The INSERVICE TESTING PROGRAM is the licensee program that fulfills the requirements of 10 CFR 50.55a(f).

SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.4.1.3 a. At least two of the coolant loops listed below shall be OPERABLE:

1. Reactor Coolant Loop (A) and its associated steam generator and at least one associated reactor coolant pump.
2. Reactor Coolant Loop (B) and its associated steam generator and at least one associated reactor coolant pump.
3. Shutdown Cooling Loop (A) #.
4. Shutdown Cooling Loop (B) #.

b. At least one of the above coolant loops shall be in operation.*

APPLICABILITY: Modes 4 and 5.

ACTION:

a. With less than the above required coolant loops OPERABLE, immediately initiate corrective action to return the required coolant loops to OPERABLE status as soon as possible and initiate action to make at least one steam generator available for decay heat removal via natural circulation. LCO 3.0.4.a is not applicable when entering HOT SHUTDOWN.

b. With no coolant loop in operation, suspend all operations involving a reduction in boron concentration of the Reactor Coolant System and immediately initiate corrective action to return the required coolant loop to operation.

SURVEILLANCE REQUIREMENTS

4.4.1.3.1 The required shutdown cooling loop(s) shall be determined OPERABLE per the INSERVICE TESTING PROGRAM.

4.4.1.3.2 The required reactor coolant pump(s), if not in operation, shall be determined to be OPERABLE once per 7 days by verifying correct breaker alignments and indicated power availability.

4.4.1.3.3 The required steam generator(s) shall be determined OPERABLE by verifying the secondary side water level to be $\geq$ 23% indicated level at least once per 12 hours.

4.4.1.3.4 At least one coolant loop shall be verified to be in operation and circulating reactor coolant at least once per 12 hours.

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* All reactor coolant pumps and decay heat removal pumps may be de-energized for up to 1 hour provided (1) no operations are permitted that would cause dilution of the reactor coolant system boron concentration, and (2) core outlet temperature is maintained at least 10°F below saturation temperature.

\# The normal or emergency power source may be inoperable in Mode 5.

SAFETY VALVES – SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.4.2 A minimum of one pressurizer code safety valve shall be OPERABLE with a lift setting of 2500 PSIA ± 3%*.

APPLICABILITY: MODE 4 with Tc > 220 °F.

ACTION:

With no pressurizer code safety valve OPERABLE, reduce Tc to ≤ 220 °F within 12 hours.

SURVEILLANCE REQUIREMENTS

4.4.2 No additional Surveillance Requirements other than those required by the INSERVICE TESTING PROGRAM.

* The lift setting pressure shall correspond to ambient conditions of the valve at nominal operating temperature and pressure. If found outside of a ± 1% tolerance band, the setting shall be adjusted to within ± 1% of the lift setting shown.

REACTOR COOLANT SYSTEM

SAFETY VALVES – OPERATING

LIMITING CONDITION FOR OPERATION

3.4.3 All pressurizer code safety valves shall be OPERABLE with a lift setting 2500 psia ± 3%*.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

a. With one pressurizer code safety valve inoperable, either restore the inoperable valve to OPERABLE status within 15 minutes or be in HOT SHUTDOWN within 12 hours.

b. The provisions of specification 3.0.4.c may be applied and the requirements of ACTION "a" suspended for one valve at a time for up to 18 hours for entry into and during operation in MODE 3 for the purpose of setting the pressurizer code safety valves under ambient (hot) conditions provided a preliminary cold setting was made prior to heatup.

SURVEILLANCE REQUIREMENTS

4.4.3 No additional Surveillance Requirements other than those required by the INSERVICE TESTING PROGRAM.

* The lift setting pressure shall correspond to ambient conditions of the valve at nominal operating temperature and pressure. If found outside of a ± 1% tolerance band, the setting shall be adjusted to within ± 1% of the lift setting shown.

4.4.12.1 Verify both sets of LTOP relief valve isolation valves are open at least once per 72 hours when the LTOP relief valves are being used for overpressure protection.

4.4.12.2 The RCS vent path shall be verified to be open at least once per 12 hours** when the vent path is being used for overpressure protection.

4.4.12.3 Verify that each SIT is isolated, when required, once every 12 hours.

4.4.12.4 No additional LTOP relief valve Surveillance Requirements other than those required by the INSERVICE TESTING PROGRAM.

** Except when the vent path is provided with a valve which is locked, sealed, or otherwise secured in the open position, then verify this valve is open at least once per 31 days.

f. By verifying that each of the following pumps develops the indicated differential pressure on recirculation flow when tested pursuant to the INSERVICE TESTING PROGRAM:

1. High-Pressure Safety Injection pump ≥ 1360.4 psid with 90 °F water.

2. Low-Pressure Safety Injection pump ≥ 156.25 psid with 90 °F water.

g. At least once per 18 months by verifying the correct position of each electrical and/or mechanical position stop for the following ECCS throttle valves:

LPSI System Valve Number
a. 2CV-5037-1
b. 2CV-5017-1
c. 2CV-5077-2
d. 2CV-5057-2

h. By performing a flow balance test, during shutdown, following completion of modifications to the ECCS subsystem that alter the subsystem flow characteristics and verifying the following flow rates:

HPSI System – Single Pump	LPSI System – Single Pump
The sum of the injection line flow rates, excluding the highest flow rate is greater than or equal to 570 gpm.	a. Injection Leg 1, ≥ 1059 gpm b. Injection Leg 2, ≥ 1059 gpm c. Injection Leg 3, ≥ 1059 gpm d. Injection Leg 4, ≥ 1059 gpm

3/4.6.2 DEPRESSURIZATION, COOLING, AND pH CONTROL SYSTEMS

CONTAINMENT SPRAY SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.2.1 Two independent containment spray systems shall be OPERABLE with each spray system capable of taking suction from the RWT on a Containment Spray Actuation Signal (CSAS) and automatically transferring suction to the containment sump on a Recirculation Actuation Signal (RAS). Each spray system flow path from the containment sump shall be via an OPERABLE shutdown cooling heat exchanger.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

a. With one containment spray system inoperable, restore the inoperable spray system to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

b. With both containment spray systems inoperable (Note 1):

1. Within 1 hour verify both CREVS trains are OPERABLE, and

2. Restore at least one containment spray system to OPERABLE status within 24 hours.

Otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

SURVEILLANCE REQUIREMENTS

4.6.2.1 Each containment spray system shall be demonstrated OPERABLE:

a. At least once per 31 days by:

1. Verify each containment spray manual, power operated, and automatic valve in the flow path that is not locked, sealed, or otherwise secured in position is in the correct position.

2. Verifying that the system piping is full of water from the RWT to at least elevation 505' (equivalent to > 12.5% indicated narrow range level) in the risers within the containment.

b. Verify each containment spray pump's developed head at the flow test point is greater than or equal to the required developed head when tested pursuant to the INSERVICE TESTING PROGRAM.

Note 1: ACTION b is not applicable when the second containment spray system is intentionally made inoperable.

SURVEILLANCE REQUIREMENTS (Continued)

4.6.3.1.2 Each containment isolation valve shall be demonstrated OPERABLE at least once per 18 months by verifying that on a containment isolation test signal, each isolation valve actuates to its isolation position.

4.6.3.1.3 The isolation time of each power operated or automatic containment isolation valve shall be determined to be within its limit when tested pursuant to the INSERVICE TESTING PROGRAM.

4.6.3.1.4 The containment purge supply and exhaust isolation valves shall be demonstrated OPERABLE as specified in the Containment Leakage Rate Testing Program.

3/4.7 PLANT SYSTEMS

3/4.7.1 TURBINE CYCLE

SAFETY VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.1 All main steam line code safety valves shall be OPERABLE with lift settings as specified in Table 3.7-5.

APPLICABILITY: MODES 1, 2 and 3*

ACTION:

MODES 1 and 2

With one or more main steam line code safety valves inoperable, operation in MODES 1 and 2 may proceed provided that within 4 hours, power is reduced to less than or equal to the applicable percent of RATED THERMAL POWER as listed in Table 3.7-1 and within 12 hours, the Linear Power Level – High trip setpoint is reduced per Table 3.7-1; otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 12 hours.

MODE 3

With one or more main steam line code safety valves inoperable, operation in MODE 3 may proceed provided that at least 2 main steam line code safety valves are OPERABLE on each steam generator; otherwise, be in at least HOT SHUTDOWN within the next 12 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.1 No additional Surveillance Requirements other than those required by the INSERVICE TESTING PROGRAM.

* Except that during hydrostatic testing in Mode 3, eight of the main steam line code safety valves may be gagged and two (one on each header) may be reset for the duration of the test to allow the required pressure for the test to be attained. The Reactor Trip Breakers shall be open for the duration of the test.

PLANT SYSTEMS

EMERGENCY FEEDWATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.1.2 Two emergency feedwater pumps and associated flow paths shall be OPERABLE with:

a. One motor driven pump capable of being powered from an OPERABLE emergency bus, and

b. One turbine driven pump capable of being powered from an OPERABLE steam supply system.

APPLICABILITY: MODES 1, 2, and 3

ACTION:

NOTE: Specification 3.0.4.b is not applicable.

With one emergency feedwater pump inoperable, restore the inoperable pump to OPERABLE status within 72 hours or be in HOT SHUTDOWN within the next 12 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.2 Each emergency feedwater pump shall be demonstrated OPERABLE:

a At least once per 31 days by:

1. Verifying that each valve (manual, power operated or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.

b. In accordance with the INSERVICE TESTING PROGRAM by:

1. Verifying the developed head of each EFW pump at the flow test point is greater than or equal to the required developed head. This surveillance requirement is not required to be performed for the turbine driven EFW pump until 24 hours after exceeding 700 psia in the steam generators.

PLANT SYSTEMS

MAIN STEAM ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.5 Each main steam isolation valve shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

MODE 1 - With one main steam isolation valve inoperable, POWER OPERATION may continue provided the inoperable valve is either restored to OPERABLE status or closed within 4 hours; otherwise, be in HOT SHUTDOWN within the next 12 hours.

MODES 2 and 3 - With one main steam isolation valve inoperable, subsequent operation in MODES 1, 2 or 3 may proceed provided the isolation valve is maintained closed; otherwise, be in HOT SHUTDOWN within the next 12 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.5 Each main steam isolation valve shall be demonstrated OPERABLE by verifying full closure within 3 seconds when tested pursuant to the INSERVICE TESTING PROGRAM.

REFUELING OPERATIONS

SHUTDOWN COOLING – TWO LOOPS

LIMITING CONDITION FOR OPERATION

3.9.8.2 Two independent shutdown cooling loops shall be OPERABLE.*

APPLICABILITY: MODE 6 when the water level above the top of the irradiated fuel assemblies seated within the reactor pressure vessel is less than 23 feet.

ACTION:

a. With less than the required shutdown cooling loops OPERABLE, immediately initiate corrective action to return the loops to OPERABLE status as soon as possible.

b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.8.2 The required shutdown cooling loops shall be determined OPERABLE per the INSERVICE TESTING PROGRAM.

* The normal or emergency power source may be inoperable for each shutdown cooling loop.

6.5.7 Reactor Coolant Pump Flywheel Inspection Program

This program shall provide for the inspection of each reactor coolant pump flywheel per the recommendation of Regulatory Position C.4.b of Regulatory Guide 1.14, Revision 1, August 1975. The volumetric examination per Regulatory Position C.4.b.1 will be performed on approximately 10-year intervals.

6.5.8 DELETED

Attachment 4

2CAN031602

Proposed Technical Specification Bases Changes (Mark-Up) – Information Only

3/4.4.9 PRESSURE/TEMPERATURE LIMITS (continued)

The number of reactor vessel irradiation surveillance specimens and the frequencies for removing and testing these specimens are provided SAR Table 5.2-12 to assure compliance with the requirements of Appendix H to 10 CFR Part 50.

3/4.4.11 REACTOR COOLANT SYSTEM VENTS

The reactor coolant vents are provided to exhaust noncondensible gases and/or steam from the primary system that could inhibit natural circulation core cooling. The OPERABILITY of at least one vent path from the reactor vessel head and the reactor coolant system high point ensures the capability exists to perform this function. The valve redundancy of the vent paths serves to minimize the probability of inadvertent actuation and breach of reactor coolant pressure boundary while ensuring that a single failure of a vent valve, power supply, or control system does not prevent isolation of the vent path. Testing requirements are in addition to the valve testing required by the ~~Inservice Testing Program~~INSERVICE TESTING PROGRAM.

3/4.4.12 LOW TEMPERATURE OVERPRESSURE PROTECTION SYSTEM

Low temperature overpressure protection (LTOP) of the RCS, including the reactor vessel, is provided by redundant relief valves on the pressurizer which discharge from a single discharge header. Each relief valve is isolated from the RCS by two motor operated block valves. Each LTOP relief valve is a direct action, spring-loaded relief valve, with orifice area of 6.38 in^2 and a lift setting of $\leq$ 430 psig, and is capable of protecting the RCS from overpressurization from the limiting transient. The relief valves will be able to mitigate (1) the starting of the first reactor coolant pump when the pressurizer water volume is < 910 ft^3, and when the secondary water temperature of the steam generator is less than or equal to 100 °F above the RCS cold leg temperature (energy addition event), or (2) the simultaneous injection of one HPSI pump and all three charging pumps (mass addition event). The action to prevent the capability of injection of more than one HPSI pump into the RCS will typically be accomplished by placing the HPSI pumps in pull-to-lock. The limiting LTOP design basis event is the energy addition event. The analyses assume that the safety injection tanks (SITs) are either isolated or depressurized such that they are unable to challenge the LTOP relief setpoints.

Since neither the LTOP relief valves nor the RCS vent is analyzed for the pressure transient produced from SIT injection, the LCO requires each SIT that is pressurized to $\geq$ 300 psig to be isolated. The isolated SITs must have their discharge valves closed and the associated MOV power supply breaker in the open position. The individual SITs may be unisolated when pressurized to < 300 psig. The associated instrumentation uncertainty is not included in the 300 psig value and therefore, the procedural value for unisolating the SITs with the LTOPs in service will be reduced.

The LTOP system, in combination with the RCS heatup and cooldown limitations of LCO 3.4.9.1 and restrictions on RCP operation, provides assurance that the reactor vessel non-ductile fracture limits are not exceeded during the design basis event at low RCS temperatures. These non-ductile fracture limits are identified as LTOP pressure-temperature (P/T) limits, which were specifically developed to provide a basis for the LTOP system. These LTOP P/T limits, along with the LTOP enable temperature, were developed using guidance provided in ASME Code Section XI, Division 1, Code Case N-641. This code case allows using an alternate means of determining LTOP P/T condition but limits “the maximum pressure in the vessel to 100% of the pressure” using the K_{1C} approach allowed by the Code Case.

Attachment 5

2CAN031602

Description and Assessment of the Proposed Alternative to the ASME Code

DESCRIPTION AND ASSESSMENT OF THE PROPOSED ALTERNATIVE TO THE ASME CODE

Request in Accordance with 10 CFR 50.55a(z)(2)

Alternative Due To Hardship Without a Compensating Increase in Quality and Safety

1.0 DESCRIPTION

The request is to adopt a proposed alternative to the American Society of Mechanical Engineers (ASME) Operation and Maintenance (OM) Code by adoption of approved Code Case OMN-20, "Inservice Test Frequency."

2.0 ASSESSMENT

Technical Evaluation of the Proposed Alternative to the OM Code

Section IST of Division 1 of the OM Code, which is incorporated by reference in 10 CFR 50.55a(a), specifies component test frequencies based either on elapsed time periods (e.g., quarterly, 2 years) or on the occurrence of a plant condition or event (e.g., cold shutdown, refueling outage).

ASME Code Case OMN-20, “Inservice Test Frequency,” has been approved for use by the ASME OM committee as an alternative to the test frequencies for pumps and valves specified in ASME OM Division: 1 Section IST 2009 Edition through OMa-2011 Addenda, and all earlier editions and addenda of ASME OM Code.

Code Case OMN-20 is not referenced in the latest revision of Regulatory Guide 1.192 (August 2014) as an acceptable OM Code Case to comply with 10 CFR 50.55a(f) requirements as allowed by 10 CFR 50.55a(b)(6). The proposed alternative is to use Code Case OMN-20 to extend or reduce the IST frequency requirements for the fourth 10-year IST interval or until OMN-20 is incorporated into the next revision of Regulatory Guide 1.192.

ASME Code Components Affected

The Code Case applies to pumps and valves specified in ASME OM Division: 1 Section IST 2009 Edition through OMa-2011 Addenda and all earlier editions and addenda of ASME OM Code. Frequency extensions may also be applied to accelerated test frequencies (e.g., pumps in Alert Range) as specified in OMN-20.

For pumps and valves with test periods of 2 years of less, the test frequency allowed by OMN-20 and the current Technical Specification (TS) Inservice Testing Program (as modified by SR 3.0.2 and EGM 2012-001) are the same. For pumps and valves with test frequencies greater than 2 years, OMN-20 allows the test frequency to be extended by 6 months. The current TS Inservice Testing (IST) Program does not allow extension of test frequencies that are greater than 2 years.

Applicable Code Edition and Addenda

ASME Code Case OMN-20 applies to ASME OM Division: 1 Section IST 2009 Edition through OMa-2011Addenda and all earlier editions and addenda of ASME OM Code.

The Arkansas Nuclear One, Unit 2 (ANO-2) Code Edition and Addenda that are applicable to the program interval are the ASME OM Code 2004 Edition with no addenda (reference Entergy Letter 2CAN031006 dated March 25, 2010, “Inservice Testing Plan for the Fourth 10-Year Interval,” ADAMS Accession No. ML100880262). The ANO-2 current interval ends March 25, 2020.

Applicable Code Requirement

This request is made in accordance with 10 CFR 50.55a(z)(2), and proposes an alternative to the requirements of 10 CFR 50.55a(f), which requires pumps and valves to meet the test requirements set forth in specific documents incorporated by reference in 10 CFR 50.55a(a). ASME Code Case OMN-20 applies to Division 1, Section IST of the ASME OM Code and associated addenda incorporated by reference in 10 CFR 50.55a(a).

Reason for Request

NOTE: The discussions within this request for alternative refer to NUREG 1432, “Standard Technical Specifications – Combustion Engineering Plants,” Revision 4, SR numbering. The equivalent ANO-2 SRs are 4.0.2 and 4.0.3.

The IST Program controls specified in Section 5.5 of TS provide: a) a table specifying certain IST frequencies; b) an allowance to apply SR 3.0.2 to inservice tests required by the OM Code and with frequencies of two years or less; c) an allowance to apply SR 3.0.3 to inservice tests required by the OM Code; and d) a statement that, “Nothing in the ASME OM Code shall be construed to supersede the requirements of any TS.” In Regulatory Issue Summary (RIS) 2012-10, "NRC Staff Position on Applying Surveillance Requirement 3.0.2 and 3.0.3 to Administrative Controls Program Tests," and Enforcement Guidance Memorandum (EGM) 2012-001, "Dispositioning Noncompliance with Administrative Controls Technical Specifications Programmatic Requirements that Extend Test Frequencies and Allow Performance of Missed Tests," the NRC stated that items b, c, and d of the TS IST Program were inappropriately added to the TS and may not be applied (although the EGM allows licensees to continue to apply those paragraphs pending a generic resolution of the issue).

In RIS 2012-10 and EGM 2012-001, the NRC stated that the current TS allowance to apply Surveillance Requirements (SR) 3.0.2 and SR 3.0.3 to the IST Program would no longer be permitted. In response, OMN-20, which provides allowances similar to SR 3.0.2, was approved and is proposed to be used as an alternative to the test periods specified in the OM code. The proposed alternative substitutes an approved Code Case for the existing TS requirements that the NRC has determined are not legally acceptable as a TS allowance. This proposed alternative provides an equivalent level of safety as the existing TS allowance, while maintaining consistency with 10 CFR 50.55a and the ASME OM Code.

Proposed Alternative and Basis for Use

The proposed alternative is OMN-20, "Inservice Test Frequency," which addresses testing periods for pumps and valves specified in ASME OM Division 1, Section IST, 2009 Edition through OMa-2011 Addenda, and all earlier editions and addenda of ASME OM Code.

This request is being made in accordance with 10 CFR 50.55a(z)(2), in that the existing requirements are considered a hardship without a compensating increase in quality and safety for the following reasons:

1) For IST testing periods up to and including 2 years, Code Case OMN-20 provides an allowance to extend the IST testing periods by up to 25%. The period extension is to facilitate test scheduling and considers plant operating conditions that may not be suitable for performance of the required testing (e.g., performance of the test would cause an unacceptable increase in the plant risk profile due to transient conditions or other ongoing surveillance, test or maintenance activities). Period extensions are not intended to be used repeatedly merely as an operational convenience to extend test intervals beyond those specified. The test period extension and the statements regarding the appropriate use of the period extension are equivalent to the existing TS SR 3.0.2 allowance and the statements regarding its use in the SR 3.0.2 Bases. Use of the SR 3.0.2 period extension has been a practice in the nuclear industry for many decades and elimination of this allowance would place a hardship on Entergy Operations, Inc. (Entergy), when there is no evidence that the period extensions affect component reliability.

2) For IST testing periods of greater than 2 years, OMN-20 allows an extension of up to 6 months. The ASME OM Committee determined that such an extension is appropriate. The 6-month extension will have a minimal impact on component reliability considering that the most probable result of performing any inservice test is satisfactory verification of the test acceptance criteria. As such, pumps and valves will continue to be adequately assessed for operational readiness when tested in accordance with the requirements specified in 10 CFR 50.55a(f) with the frequency extensions allowed by Code Case OMN-20.

3) As stated in EGM 2012-001, if an inservice test is not performed within its frequency, SR 3.0.3 will not be applied. The effect of a missed inservice test on the operability of TS equipment will be assessed under the licensee's Operability Determination Program.

Duration of Proposed Alternative

The proposed alternative is requested for the current 10-year IST interval or until Code Case OMN-20 is incorporated into a future revision of Regulatory Guide 1.192, referenced by a future revision of 10 CFR 50.55a, whichever occurs first.

Precedents

The NRC approved the use of OMN-20 for North Anna on March 27, 2014 (NRC ADAMS Accession Number ML14084A407).