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July 31, 2001

2CAN070101

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D. C. 20555

Subject: Arkansas Nuclear One – Unit 2
Docket No. 50-368
License No. NPF-6
ANO-2 Technical Specification 4.0.5 Relocation and Modification

Gentlemen:

Attached for your review and approval is a proposed change to relocate and modify the Arkansas Nuclear One, Unit 2 (ANO-2) Technical Specification (TS) 4.0.5 to the administrative section of the Technical Specifications under 6.5.8. Several individual TSs, which reference TS 4.0.5, will also be changed. The relocation of TS 4.0.5 to the administrative section is consistent with the guidance contained in NUREG-1432, Revision 2, "*Standard Technical Specifications, Combustion Engineering Plants.*" The proposed change introduces no new commitments.

The proposed change has been evaluated in accordance with 10CFR50.91(a)(1) using criteria in 10CFR50.92(c) and it has been determined that this change involves no significant hazards considerations. The bases for these determinations are included in the attached submittal.

In the attachment to this letter the reactor coolant pump flywheel inspection (SR 4.4.10.1) is proposed for change. Entergy Operations is submitting a separate request to modify SR 4.4.10.1 to extend the flywheel inspection frequency and move the inspection to a new programs section of the TSs. To ensure the proposed changes are consistent with Entergy's desired results, approval of this letter (2CAN070101) is requested before the change to the flywheel inspection program.

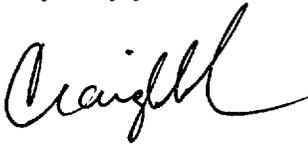
NRC approval for this letter is needed to support the upcoming ANO-2 refueling outage that will commence in April 2002. Therefore, Entergy Operations requests NRC approval of the proposed amendment in February 2002 with an effective date for this TS change to be within 60 days of approval.

ADD1

US NRC
2CAN070101

I declare under penalty of perjury that the foregoing is true and correct. Executed on July 31, 2001.

Very truly yours,



CGA/dm
Attachments

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ATTACHMENT 1

TO

2CAN070101

PROPOSED TECHNICAL SPECIFICATION

AND

RESPECTIVE SAFETY ANALYSES

IN THE MATTER OF AMENDING

LICENSE NO. NPF-6

ENTERGY OPERATIONS, INC.

DOCKET NO. 50-368

DESCRIPTION OF PROPOSED CHANGES

The proposed change will relocate Technical Specification (TS) 4.0.5 to TS 6.5.8 and modify the wording to be consistent with NUREG-1432, "*Standard Technical Specifications Combustion Engineering Plants.*" It should be noted that NUREG-1432 addresses only the inservice testing program, while the ANO-2 TS addressed both the inservice testing program and the inservice inspection program. For consistency with NUREG-1432, the proposed change will eliminate the inservice inspection portion of TS 4.0.5. This proposed change is an administrative change and no limiting conditions for operation, action statements or equipment specific surveillance requirements are being revised. The new TS paragraph number 6.5.8 is consistent with the location in NUREG-1432 and the ANO-1 proposed TS conversion. A place keeper for paragraphs 6.5.1 through 6.5.7 is being added for future changes to the administrative section of TSs.

TS 4.0.5.a.1 and a.2 will be deleted.

TS 4.0.5.b will become TS 6.5.8.a and be reworded like ITS 5.5.8.a. The proposed TS 6.5.8.a will delete the inservice inspection activities currently contained in TS 4.0.5.b.

TS 4.0.5.c will become the new TS 6.5.8.b and will be reworded like ITS 5.5.8.b. Inservice inspection activities currently included as part of TS 4.0.5.b will be deleted in the proposed TS 6.5.8.b.

TS 4.0.5.d will be deleted.

TS 4.0.5.e will become TS 6.5.8.d. The wording is currently consistent with ITS 5.5.8.d.

New TS 6.5.8.c will be added, which is consistent with NUREG-1432.

The following TS surveillance requirements (SR) will be modified to reflect the relocation of TS 4.0.5 by substituting "Specification 4.0.5" with "the Inservice Testing Program."

- SR 4.4.1.3.1 – shutdown cooling loops
- SR 4.4.2 – pressurizer code safety valves
- SR 4.4.3 – pressurizer code safety valves
- SR 4.4.12.4 – LTOP requirements

- SR 4.5.2.f – ECCS subsystems
- SR 4.6.2.1.b – containment spray systems
- SR 4.6.3.1.3 – containment isolation

- SR 4.7.1.1 – main steam line safety valves
- SR 4.7.1.2.b – emergency feedwater pumps
- SR 4.7.1.5 – main steam isolation valves

SR 4.9.8.2 – shutdown cooling loops

The reference to TS 4.0.5 will be deleted from the following:

SR 4.4.5.0 – steam generator inspections
SR 4.4.10.1 – RCS structural integrity
SR 4.7.8 – snubber inspection program

Additionally, the bases section associated with TS 4.0.5 will be deleted.

BASIS FOR PROPOSED CHANGE

This change is desired for two reasons: 1) to be consistent with the NUREG-1432 and with the proposed changes to the ANO-1 TSs; and 2) to eliminate the need to receive specific written relief from the NRC for alternatives to the ASME Code of Record for ANO.

10 CFR 50.55a, “*Codes and Standards*” governs inservice testing and inspection requirements. TS 4.0.5.a.1, 4.0.5.a.2 and the reference to the inservice inspection activities contained in paragraphs b and c of TS 4.0.5 will be removed in the proposed change since it is redundant to the requirements of 10CFR50.55a. Such duplication is unnecessary and results in additional administrative burden to change the duplicate TS when these regulations are revised. Since removal of the duplication results in no actual change in the requirements, this portion of the proposed change is considered administrative.

As a result of improved planning, refueling outages are becoming shorter in duration. The potential delay associated with the requirement to receive a written relief could impact that shorter schedule. The elimination of the need to receive specific written relief is consistent with the wording contained in 10 CFR 50.55a, Paragraph 6(i) of either section (f) or (g), which states: “*The Commission may grant relief and may impose such alternative requirements as it determines is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility.*” Due consideration is based on the merits of the basis for an alternative to the ASME Code and not the process for notifying licensees of ASME Code relief acceptability. This determination is not reduced as a result of granting requested Code relief verbally to the licensee. This removes any burden of timing for the NRC staff to complete the formal transmittal paperwork, which is required prior to implementation of a needed ASME alternative under the current TS wording. Therefore, the NRC can grant verbal relief to the licensee after the appropriate reviews and approval of the basis of the ASME Code alternative has been completed.

TS 4.0.5.d, “Performance of the above inservice inspection and testing activities shall be in addition to other specified Surveillance Requirements.” will be deleted. Deletion of

this paragraph will not eliminate any of the TS surveillance requirements or inservice inspection and testing (IST) activities. The intent of TS 4.0.5.d is clearly conveyed by the existing statements for the individual SRs that reference TS 4.0.5. The performance of TS surveillance requirements, in addition to the IST activities, are tracked and scheduled through the ANO-2 Surveillance Test Program. Removal of this paragraph is consistent with NUREG-1432.

For consistency with NUREG-1432, TS 5.5.8.c, “The provisions of SR 3.0.3 are applicable to inservice testing activities, and” will be added to the proposed TS 6.5.8 with “SR 3.0.3” changed to “SR 4.0.3.”

The following SRs currently reference TS 4.0.5: SR 4.4.1.3.1 – shutdown cooling loops, SR 4.4.2 – pressurizer code safety valves, SR 4.4.3 – pressurizer code safety valves, SR 4.4.12.4 – LTOP requirements, SR 4.5.2.f – ECCS subsystems, SR 4.6.2.1.b – containment spray systems, SR 4.6.3.1.3 – containment isolation, SR 4.7.1.1 – main steam line safety valves, SR 4.7.1.2.b – emergency feedwater pumps, SR 4.7.1.5 – main steam isolation valves, and SR 4.9.8.2 – shutdown cooling loops. The reference to TS 4.0.5 will be modified to reference “the Inservice Testing Program.”

SR 4.4.5.0, which defines the steam generators inspection program, references TS 4.0.5. The inspection frequencies are clearly stated in SR 4.4.5.3 and are not associated with the surveillance intervals contained in TS 4.0.5. Additionally, the requirements of the inservice testing program will continue to be governed by 10 CFR 50.55a. Therefore, the reference to TS 4.0.5 will be removed from this SR.

SR 4.4.10.1, which defines the reactor coolant pump (RCP) flywheel inspection program, references TS 4.0.5. The reference to TS 4.0.5 will be deleted. The deletion of the reference to TS 4.0.5 will not change the RCP flywheel inspection program. The RCP flywheel inspection will continue to be performed as outlined in the specification.

SR 4.7.8, which defines the snubber inspection program, references TS 4.0.5. 10 CFR 50.55a as well as the surveillance requirements contained in the TS govern the inservice testing program. The deletion of the reference to TS 4.0.5 will not change the snubber inspection program. The snubbers will continue to be inspected based on these requirements.

DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATION

Energy Operations, Inc. is proposing that the Arkansas Nuclear One, Unit 2 Operating License be amended to relocate Technical Specification (TS) 4.0.5 to the administrative section of the Technical Specifications and make minor changes consistent with NUREG-1432, “*Standard Technical Specifications Combustion Engineering Plants.*” Additionally, changes are required to those specifications, which reference to TS 4.0.5.

An evaluation of the proposed change has been performed in accordance with 10CFR50.91(a)(1) regarding no significant hazards considerations using the standards in 10CFR50.92(c). A discussion of these standards as they relate to this amendment request follows.

1. Will operation of the facility in accordance with this proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

The proposed change relocates the requirements to test and inspect ASME Code Class 1, 2, and 3 components from TS 4.0.5 to the administrative section of the TSs and includes modifications to the wording to make it consistent with NUREG-1432. This change will not reduce the current testing and inspection requirements. The performance of a code inservice test is not an accident initiator. The proposed change for removing the statement for NRC granting written relief for ASME Code does not involve a significant increase in the probability or consequences of an accident. Verbally issuing relief to the ASME Code by the NRC does not reduce assurance of the health and safety of the public since the NRC still reviews the basis for the relief on its technical merit and the NRC Staff still obtains management approval prior to granting the relief.

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

2. Will operation of the facility in accordance with this proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

10 CFR 50.55a, "*Codes and Standards*" governs inservice testing and inspection requirements. The inspection requirements contained in 10 CFR 50.55a paragraph (g) are duplicated in TS 4.0.5. This duplication is unnecessary and therefore, the wording related to the inspection requirements will be deleted in the proposed change. No actual change to the inspection or testing activities are proposed as the requirements in 10 CFR 50.55a continue to govern these. Therefore, the testing and inspection requirements will remain the same as those presently required. The proposed change is administrative in nature in that it relocates testing requirements from one section of the TSs to another and modifies the wording to be consistent with NUREG-1432. The removal of the requirement to obtain written relief from the NRC staff will not create the possibility of any new or different types of accidents. Staff review is still required prior to granting the relief.

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

3. Will operation of the facility in accordance with this proposed change involve a significant reduction in a margin of safety?

The testing and inspection requirements contained in TS 4.0.5 are governed by 10CFR50.55a, "*Codes and Standards.*" The 10CFR requirements to perform the ASME code testing and inspections will not be reduced by the proposed change. The inspections and tests will continue to be performed as they are currently. This change moves the present requirements from one section of the TSs to another.

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

Therefore, based on the reasoning presented above and the previous discussion of the amendment request, Entergy Operations has determined that the requested change does not involve a significant hazards consideration.

ENVIRONMENTAL IMPACT EVALUATION

Pursuant to 10CFR51.22(b), an evaluation of the proposed amendment has been performed to determine whether or not it meets the criteria for categorical exclusion set forth in 10CFR 51.22 (c) (9) of the regulations. The proposed change meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). The basis for this determination is as follows:

1. The proposed license amendment does not involve a significant hazards consideration as described previously in the evaluation.
2. This change does not result in a significant change or significant increase in the radiological doses for any Design Basis Accident. The proposed license amendment does not result in a significant change in the types or a significant increase in the amounts of any effluents that may be released off-site.
3. The proposed license amendment does not result in a significant increase to the individual or cumulative occupational radiation exposure because this does not change any of the present testing requirements.

MARKUP OF CURRENT TECHNICAL SPECIFICATIONS

APPLICABILITY

SURVEILLANCE REQUIREMENTS (Continued)

4.0.1 Surveillance Requirements shall be applicable during the OPERATIONAL MODES or other conditions specified for individual Limiting CONDITIONS for Operation unless otherwise stated in an individual Surveillance Requirement.

4.0.2 Each Surveillance Requirement shall be performed within the specified surveillance interval with a maximum allowable extension not to exceed 25 percent of the specified surveillance interval.

4.0.3 Failure to perform a Surveillance Requirement within the allowed surveillance interval defined by Specification 4.0.2 shall constitute noncompliance with the OPERABILITY requirements for a Limiting Condition for Operation. The time limits of the ACTION requirements are applicable at the time it is identified that a Surveillance Requirement has not been performed. The time at which the ACTION is taken may be delayed for up to 24 hours to permit the completion of the surveillance when the allowable outage time limits of the ACTION requirements are less than 24 hours. Surveillance Requirements do not have to be performed on inoperable equipment.

4.0.4 Entry into an OPERATIONAL MODE or other specified applicability condition shall not be made unless the Surveillance Requirement(s) associated with the Limiting Condition for Operation have been performed within the stated surveillance interval or as otherwise specified. This provision shall not prevent passage through or to OPERATIONAL MODES as required to comply with ACTION requirements.

~~4.0.5 Surveillance Requirements for inservice inspection and testing of ASME Code Class 1, 2 and 3 components shall be applicable as follows:~~

~~a. During the time period:~~

~~1. From issuance of the Facility Operating License to the start of facility commercial operation, inservice testing of ASME Code Class 1, 2 and 3 pumps and valves shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code 1974 Edition, and Addenda through Summer 1975, except where specific written relief has been granted by the Commission.~~

~~2. Following start of facility commercial operation, inservice inspection of ASME Code Class 1, 2 and 3 components and inservice testing of ASME Code Class 1, 2 and 3 pumps and valves shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50, Section 50.55a(g), except where specific written relief has been granted by the Commission pursuant to 10 CFR 50, Section 50.55a(g)(6)(i).~~

APPLICABILITY

SURVEILLANCE REQUIREMENTS (Continued)

~~b. Surveillance intervals specified in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda for the inservice inspection and testing activities required by the ASME Boiler and Pressure Vessel Code and applicable Addenda shall be applicable as follows in these Technical Specification:~~

ASME Boiler and Pressure Vessel Code and applicable Addenda terminology for inservice inspection and testing criteria	Required frequencies for performing inservice inspection and testing activities
Weekly	At least once per 7 days
Monthly	At least once per 31 days
Quarterly or every 3 months	At least once per 92 days
Semiannually or every 6 months	At least once per 184 days
Yearly or annually	At least once per 366 days

~~c. The provisions of Specification 4.0.2 are applicable to the above required frequencies for performing inservice inspection and testing activities.~~

~~d. Performance of the above inservice inspection and testing activities shall be in addition to other specified Surveillance Requirements.~~

~~e. Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirements of any Technical Specification.~~

REACTOR COOLANT SYSTEM

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; be in COLD SHUTDOWN within 20 hours.
- 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 ~~Specification 4.0.5~~ 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.

* 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 \pm 3%*.

APPLICABILITY: MODE 4 with Tc > 220°F.

ACTION:

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

SURVEILLANCE REQUIREMENTS

4.4.2 No additional Surveillance Requirements other than those required by Specification 4.0.5 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 \pm 1% tolerance band, the setting shall be adjusted to within \pm 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 \pm 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 may be 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 Specification 4.0.5 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 \pm 1% tolerance band, the setting shall be adjusted to within \pm 1% of the lift setting shown.

REACTOR COOLANT SYSTEM

STEAM GENERATORS

LIMITING CONDITION FOR OPERATION

3.4.5 Each steam generator shall be OPERABLE.

APPLICABILITY: MODES 1,2, 3 and 4.

ACTION:

With one or more steam generators inoperable, restore the inoperable generator(s) to OPERABLE status prior to increasing Tavg above 200°F.

SURVEILLANCE REQUIREMENTS

4.4.5.0 Each steam generator shall be demonstrated OPERABLE by performance of the following augmented inservice inspection program. ~~and the requirements of Specification 4.0.5.~~

NOTE: The requirements for inservice inspection do not apply during the steam generator replacement outage (2R14).

4.4.5.1 Steam Generator Sample Selection and Inspection - Each steam generator shall be determined OPERABLE during shutdown by selecting and inspecting at least the minimum number of steam generators specified in Table 4.4-1.

4.4.5.2 Steam Generator Tube Sample Selection and Inspection - The steam generator tube minimum sample size, inspection result classification, and the corresponding action required shall be as specified in Table 4.4-2. The inservice inspection of steam generator tubes shall be performed at the frequencies specified in specification 4.4.5.3 and the inspected tubes shall be verified acceptable per the acceptance criteria of Specification 4.4.5.4. The tubes selected for each inservice inspection shall include at least 3% of the total number of tubes in all steam generators; the tubes selected for these inspections shall be selected on a random basis except:

- a. Where experience in similar plants with similar water chemistry indicates critical areas to be inspected, then at least 50% of the tubes inspected shall be from these critical areas.
- b. The first sample of tubes selected for each inservice inspection (subsequent to the preservice inspection) of each steam generator shall include:

REACTOR COOLANT SYSTEM

3/4.4.10 STRUCTURAL INTEGRITY

ASME CODE CLASS 1, 2 AND 3 COMPONENTS

LIMITING CONDITION FOR OPERATION

3.4.10.1 The structural integrity of ASME Code Class 1, 2 and 3 components shall be maintained in accordance with Specification 4.4.10.1.

APPLICABILITY: ALL MODES

ACTION:

- a. With the structural integrity of any ASME Code Class 1 component(s) not conforming to the above requirements, restore the structural integrity of the affected component(s) to within its limit or isolate the affected component(s) prior to increasing the Reactor Coolant System temperature more than 50°F above the minimum temperature required by NDT considerations.
- b. With the structural integrity of any ASME Code Class 2 component(s) not conforming to the above requirements, restore the structural integrity of the affected component(s) to within its limit or isolate the affected component(s) prior to increasing the Reactor Coolant System temperature above 200°F.
- c. With the structural integrity of any ASME Code Class 3 component(s) not conforming to the above requirements, restore the structural integrity of the affected component to within its limit or isolate the affected component from service.

SURVEILLANCE REQUIREMENTS

4.4.10.1 ~~In addition to the requirements of Specification 4.0.5,~~ Each Reactor Coolant Pump flywheel shall be inspected per the recommendations of Regulatory Position C.4.b of Regulatory Guide 1.14, Revision 1, August 1975.*

* The ultrasonic volumetric examination of the areas of higher stress concentration at the bore and keyway of the flywheels for all four reactor coolant pumps may be extended through completion of the 2R13 refueling outage.

SURVEILLANCE REQUIREMENTS

- 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 ~~Specification 4.0.5~~ 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.

EMERGENCY CORE COOLING SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- f. By verifying that each of the following pumps develops the indicated differential pressure on recirculation flow when tested pursuant to ~~Specification 4.0.5~~ the Inservice Testing Program:
1. High-Pressure Safety Injection pump \geq 1360.4 psid with 90°F water.
 2. Low-Pressure Safety Injection pump \geq 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

The sum of the injection line flow rates, excluding the highest flow rate is greater than or equal to 570 gpm.

LPSI System - Single Pump

- a. Injection Leg 1, \geq 1059 gpm
- b. Injection Leg 2, \geq 1059 gpm
- c. Injection Leg 3, \geq 1059 gpm
- d. Injection Leg 4, \geq 1059 gpm

CONTAINMENT SYSTEMS

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:

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 COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.2.1 Each containment spray system 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 is positioned to take suction from the RWT on a Containment Pressure-High-High test signal.
 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. By verifying that each pump demonstrates degradation of $\leq 6.3\%$ from its original acceptance test pump performance curve when tested pursuant to ~~Specification 4.0.5~~ the Inservice Testing Program.

CONTAINMENT SYSTEMS

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 ~~Specification 4.0.5~~ the Inservice Testing Program.
- 4.6.3.1.4 Prior to exceeding conditions which require establishment of reactor building integrity per TS 3.6.1.1, the leak rate of the containment purge supply and exhaust isolation valves shall be verified to be within acceptable limits per TS 4.6.1.2, unless the test has been successfully completed within the last three months.

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 ~~Specification 4.0.5~~ 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:

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 ~~Specification 4.0.5~~ 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:

- a. The isolation valve is maintained closed.
- b. The provisions of Specification 3.0.4 are not applicable.

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 ~~Specification 4.0.5~~ the Inservice Testing Program.

PLANT SYSTEMS

3/4.7.8 SHOCK SUPPRESSORS (SNUBBERS)

LIMITING CONDITION FOR OPERATION

3.7.8 All snubbers shall be OPERABLE. The only snubbers excluded from this requirement are those installed on nonsafety-related systems and then only if their failure or failure of the system on which they are installed, would have no adverse effect on any safety-related system.

APPLICABILITY: MODES 1, 2, 3 and 4. MODES 5 and 6 for snubbers located on systems required OPERABLE in those MODES.

ACTION: With one or more applicable snubber inoperable, within 72 hours either:

- a. Replace or restore the inoperable snubber(s) to an OPERABLE status and perform an engineering evaluation of the attached component(s) per Specification 4.7.8.f or,
- b. Perform a review and evaluation which justifies continued operation with the inoperable snubber(s) and perform an engineering evaluation of the attached component(s) per Specification 4.7.8.f or,
- c. Declare the attached system inoperable and follow the appropriate ACTION statement for that system.

SURVEILLANCE REQUIREMENTS

4.7.8 Each applicable snubber shall be demonstrated OPERABLE by performance of the following augmented inservice inspection program, ~~and the requirements of Specification 4.0.5.~~

a. Inspection Types

As used in this specification, type of snubber shall mean snubbers of the same design and manufacturer, irrespective of capacity.

b. Visual Inspections

Snubbers may be categorized as inaccessible or accessible during reactor operation. Each of these categories (inaccessible and accessible) may be inspected independently according to the schedule determined by Table 4.7.8-1. The visual inspection interval for each category of snubber shall be determined based upon criteria provided in Table 4.7.8-1.

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 ~~Specification 4.0.5~~ the Inservice Testing Program.

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

ADMINISTRATIVE CONTROLS

6.3 UNIT STAFF QUALIFICATIONS

6.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications of ANSI N18.1-1971 for comparable positions, except for (1) the designated radiation protection manager, who shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975

6.4 DELETED

6.5 DELETED PROGRAMS

6.5.1 through 6.5.7 will be used later.

6.5.8 Inservice Testing Program

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 specified in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as follows:

<u>ASME Boiler and Pressure Vessel Code and applicable Addenda terminology for inservice testing activities</u>	<u>Required frequencies for performing inservice testing activities</u>
<u>Weekly</u>	<u>At least once per 7 days</u>
<u>Monthly</u>	<u>At least once per 31 days</u>
<u>Every 6 weeks</u>	<u>At least once per 42 days</u>
<u>Quarterly or every 3 months</u>	<u>At least once per 92 days</u>
<u>Semiannually or every 6 months</u>	<u>At least once per 184 days</u>
<u>Every 9 months</u>	<u>At least once per 276 days</u>
<u>Yearly or annually</u>	<u>At least once per 366 days</u>
<u>Biennially or every 2 years</u>	<u>At least once per 731 days</u>

b. The provisions of Specification 4.0.2 are applicable to the above required frequencies 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 Boiler and Pressure Vessel Code shall be construed to supersede the requirements of any Technical Specification.

MARKUP OF TECHNICAL SPECIFICATION BASES

APPLICABILITY

BASES (Continued)

the trip function from occurring during the performance of an SR on another channel in the other trip system. A similar example of demonstrating the OPERABILITY of other equipment is taking an inoperable channel or trip system out of the tripped condition to permit the logic to function and indicate the appropriate response during the performance of an SR on another channel in the same trip system.

4.0.1 through 4.0.5 ~~4.0.4~~ establish the general requirements applicable to Surveillance Requirements. These requirements are based on the Surveillance Requirements stated in the Code of Federal Regulations, 10CFR 50.36(c) (3):

"Surveillance Requirements are requirements relating to test, calibration, or inspection to ensure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions of operation will be met."

4.0.1 establishes the requirement that surveillances must be performed during the OPERATIONAL MODES or other conditions for which the requirements of the Limiting Conditions for Operation apply unless otherwise stated in an individual Surveillance Requirement. The purpose of this specification is to ensure that surveillances are performed to verify the operational status of systems and components and that parameters are within specified limits to ensure safe operation of the facility when the plant is in a mode or other specified condition for which the associated Limiting Conditions for Operation are applicable. Surveillance Requirements do not have to be performed when the facility is in an OPERATIONAL MODE for which the requirements of the associated Limiting Condition for Operation do not apply unless otherwise specified. The Surveillance Requirements associated with a Special Test Exception are only applicable when the Special Test Exception is used as an allowable exception to the requirements of a specification.

4.0.2 establishes the limit for which the specified time interval for Surveillance Requirements may be extended. It permits an allowable extension of the normal surveillance interval to facilitate surveillance scheduling and consideration of plant operating conditions that may not be suitable for conducting the surveillance; e.g., transient conditions or other ongoing surveillance or maintenance activities. It also provides flexibility to accommodate the length of a fuel cycle for surveillances that are performed at each refueling outage and are specified with an 18-month surveillance interval. It is not intended that this provision be used repeatedly as a convenience to extend surveillance intervals beyond that specified for surveillances that are not performed during refueling outages. The limitation of Specification 4.0.2 is based on engineering judgement and the recognition that the most probable result of any particular surveillance being performed is the verification of conformance with the Surveillance Requirements. This provision is sufficient to ensure that the reliability ensured through surveillance activities is not significantly degraded beyond that obtained from the specified surveillance intervals.

BASES (Continued)

Surveillance Requirements do not have to be performed on inoperable equipment because the ACTION requirements define the remedial measures that apply. However, the Surveillance Requirements have to be met to demonstrate that inoperable equipment has been restored to OPERABLE status.

4.0.4 establishes the requirement that all applicable surveillances must be met before entry into an OPERATIONAL MODE or other condition of operation specified in the Applicability statement. The purpose of this specification is to ensure that system and component OPERABILITY requirements or parameter limits are met before entry into a mode or condition for which these systems and components ensure safe operation of the facility. This provision applies to changes in OPERATIONAL MODES or other specified conditions associated with plant shutdown as well as startup.

Under the provisions of this specification, the applicable Surveillance Requirements must be performed within the specified surveillance interval to ensure that the Limiting Conditions for Operation are met during initial plant startup or following a plant outage.

When a shutdown is required to comply with ACTION requirements, the provision of Specification 4.0.4 do not apply because this would delay placing the facility in a lower mode of operation.

~~4.0.5 establishes the requirement that inservice inspection of ASME Code Class 1,2, and 3 components and inservice testing of ASME Code Class 1,2, and 3 pumps and valves shall be performed in accordance with a periodically updated version of Section XI of the ASME Boiler and Pressure Vessel Code and Addenda as required by 10 CFR 50.55a. These requirements apply except when relief has been provided in writing by the Commission.~~

~~This specification includes a clarification of the frequencies for performing the inservice inspection and testing activities required by Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda. This clarification is provided to ensure consistency in surveillance intervals throughout Technical Specifications and to remove any ambiguities relative to the frequencies for performing the required inservice inspection and testing activities.~~

~~Under the terms of this specification, the more restrictive requirements of the Technical Specifications take precedence over the ASME Boiler and Pressure Vessel Code and applicable Addenda. The requirements of Specification 4.0.4 to perform surveillance activities before entry into an OPERATIONAL MODE or other specified applicability condition takes precedence over the ASME Boiler and Pressure Vessel Code provision which allows pumps to be tested up to one week after return to normal operation. And for example, the Technical Specification definition of OPERABLE does not grant a grace period before a device that is not capable of performing its specified function is declared inoperable and takes precedence over the ASME Boiler and Pressure Vessel Code provision which allows a valve to be incapable of performing its specified function for up to 24 hours before being declared inoperable.~~