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10 CFR 50.90

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

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2
DOCKET NOS. 50-325 AND 50-324 / RENEWED LICENSE NOS. DPR-71 AND DPR-62

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1
DOCKET NO. 50-400 / RENEWED LICENSE NO. NPF-63

CATAWBA NUCLEAR STATION, UNITS 1 AND 2
DOCKET NOS. 50-413 AND 50-414 / RENEWED LICENSE NOS. NPF-35 AND NPF-52

MCGUIRE NUCLEAR STATION, UNITS 1 AND 2
DOCKET NOS. 50-369 AND 50-370 / RENEWED LICENSE NOS. NPF-9 AND NPF-17

OCONEE NUCLEAR STATION, UNITS 1, 2, AND 3
DOCKET NOS. 50-269, 50-270 AND 50-287 / RENEWED LICENSE NOS. DPR-38, DPR-47 AND DPR-55

SUBJECT: APPLICATION TO REVISE TECHNICAL SPECIFICATIONS TO ADOPT TSTF-523, REVISION 2, "GENERIC LETTER 2008-01, MANAGING GAS ACCUMULATION," USING THE CONSOLIDATED LINE ITEM IMPROVEMENT PROCESS

REFERENCES:

1. Duke Energy letter, Brunswick Steam Electric Plant, Unit Nos. 1 and 2, *Schedule for Submittal of a License Amendment Request to Adopt Technical Specification Task Force Traveler 523*, dated October 13, 2014 (ADAMS Accession No. ML14296A380)
2. Duke Energy letter, Shearon Harris Nuclear Power Plant, Unit No. 1, *Schedule for Submittal of a License Amendment Request to Adopt Technical Specification Task Force Traveler 523*, dated October 13, 2014 (ADAMS Accession No. ML14286A097)
3. Duke Energy letter, Catawba Nuclear Station, Units 1 and 2, *Schedule for Submittal of a License Amendment Request to Adopt Technical Specification Task Force Traveler 523*, dated October 9, 2014 (ADAMS Accession No. ML14301A335)
4. Duke Energy letter, McGuire Nuclear Station Units 1 and 2, *Schedule for Submittal of a License Amendment Request to Adopt Technical Specification Task Force Traveler 523*, dated October 8, 2014 (ADAMS Accession No. ML14296A384)

REFERENCES (CONT'D):

5. Duke Energy letter, Oconee Nuclear Station, Units 1, 2 and 3, *Schedule for Submittal of a License Amendment Request to Adopt Technical Specification Task Force Traveler 523*, dated October 6, 2014 (ADAMS Accession No. ML14290A015)
6. Federal Register dated January 15, 2014 (79 FR 2700), *TSTF-523, "Generic Letter 2008-01, Managing Gas Accumulation," Using the Consolidated Line Item Improvement Process*

Pursuant to 10 CFR 50.90, Duke Energy Progress, Inc., and Duke Energy Carolinas, LLC, collectively referred to henceforth as "Duke Energy", is submitting a request for amendments to the Technical Specifications (TSs) for Brunswick Steam Electric Plant, Unit Nos. 1 and 2 (BSEP); Shearon Harris Nuclear Power Plant, Unit 1 (HNP); Catawba Nuclear Station, Units 1 and 2 (CNS); McGuire Nuclear Station, Units 1 and 2 (MNS); and Oconee Nuclear Station, Units 1, 2, and 3 (ONS).

The proposed amendments would modify TS requirements to address Generic Letter 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems," as described in TSTF-523, Revision 2, "Generic Letter 2008-01, Managing Gas Accumulation." Duke Energy committed to submit these proposed changes in References 1 through 5. The Notice of Availability for TSTF-523 was published in the Federal Register on January 15, 2014 (Reference 6).

Attachment 1 provides a description and assessment of the proposed change. Attachment 2 provides the existing TS pages marked up to show the proposed change. Attachment 3 provides existing TS Bases pages marked up to show the proposed change. Changes to the existing TS Bases, consistent with the technical and regulatory analyses, will be implemented under the Technical Specification Bases Control Program. They are provided in Attachment 3 for information only. Attachment 4 provides the retyped TS pages.

Approval of the proposed amendment is requested by June 24, 2016. Once approved, the amendment shall be implemented within one year. This extended implementation period is necessary to allow completion of various actions associated with incorporation of the proposed changes into the TS.

This submittal contains no new regulatory commitments. In accordance with 10 CFR 50.91, Duke Energy is notifying the States of North Carolina and South Carolina of this license amendment request by transmitting a copy of this letter and attachments to the designated State Officials. Should you have any questions concerning this letter, or require additional information, please contact Art Zaremba, Manager – Nuclear Fleet Licensing, at 980-373-2062.

I declare under penalty of perjury that the foregoing is true and correct. Executed on June 24, 2015.

Sincerely,

Regis T. Repko
Sr. Vice President – Governance, Projects, and Engineering

MKL

Attachments:
1. Description and Assessment
2. Proposed Technical Specification Changes (Mark-Up)
3. Proposed Technical Specification Bases Changes (Mark-Up) (For information only)
4. Retyped Technical Specification Pages

cc: USNRC Region II
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W. L. Cox, III, Chief, Division of Health Service Regulation, RP Section (NC)
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Chair – North Carolina Utilities Commission

Attachment 1

DESCRIPTION AND ASSESSMENT

Subject: License amendment application to revise Technical Specifications to adopt TSTF-523, Revision 2, "Generic Letter 2008-01, Managing Gas Accumulation"

1.0 DESCRIPTION

The proposed change revises or adds Surveillance Requirements to verify that the system locations susceptible to gas accumulation are sufficiently filled with water and to provide allowances which permit performance of the verification. The changes are being made to address the concerns discussed in NRC Generic Letter 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems."

The proposed amendment is consistent with TSTF-523, Revision 2, "Generic Letter 2008-01, Managing Gas Accumulation."

2.0 ASSESSMENT

2.1 Applicability of Published Safety Evaluation

Duke Energy Progress, Inc., and Duke Energy Carolinas, LLC, collectively referred to henceforth as "Duke Energy", have reviewed the model safety evaluation, dated December 23, 2013, as part of the Federal Register Notice of Availability. This review included a review of the NRC staff's evaluation, as well as the information provided in TSTF-523. Duke Energy has concluded that the justifications presented in the TSTF-523 proposal and the model safety evaluation prepared by the NRC staff are applicable to Brunswick Steam Electric Plant, Unit Nos. 1 and 2 (BSEP), Shearon Harris Nuclear Power Plant, Unit 1 (HNP), Catawba Nuclear Station, Units 1 and 2 (CNS), McGuire Nuclear Station, Units 1 and 2 (MNS), and Oconee Nuclear Station, Units 1, 2, and 3 (ONS), and justify this amendment for the incorporation of the changes to the respective plant Technical Specifications (TS).

The Traveler and model Safety Evaluation discuss the applicable regulatory requirements and guidance, including the 10 CFR 50, Appendix A, General Design Criteria (GDC). BSEP and ONS were not licensed to 10 CFR 50, Appendix A, GDC. For BSEP and ONS, conformance to the applicable GDC is discussed in Section 3.1 of the respective Updated Final Safety Analysis Reports. This difference does not alter the conclusion that the proposed change is applicable to BSEP and ONS.

2.2 Optional Changes and Variations

Duke Energy is proposing the following variations from the TS changes described in the TSTF-523, Revision 2, or the applicable parts of the NRC staff's model safety evaluation dated December 23, 2013.

The following plant TS utilize different numbering or titles than the Standard Technical Specifications on which TSTF-523 was based:

Plant	TSTF-523 Reference[(2)]	Plant TS Reference
BSEP	TS 3.4.8, RHR Shutdown Cooling System – Hot Shutdown	TS 3.4.7, RHR Shutdown Cooling System – Hot Shutdown
BSEP	TS 3.4.9, RHR Shutdown Cooling System – Cold Shutdown	TS 3.4.8, RHR Shutdown Cooling System – Cold Shutdown

Plant	TSTF-523 Reference[2]	Plant TS Reference
BSEP	TS 3.9.8, RHR – High Water Level	TS 3.9.7, RHR – High Water Level
BSEP	TS 3.9.9, RHR – Low Water Level	TS 3.9.8, RHR – Low Water Level
HNP[1]	TS 3.4.6, RCS Loops – MODE 4	TS 3/4.4.1.3, Reactor Coolant System, Hot Shutdown
HNP[1]	TS 3.4.7, RCS Loops – MODE 5, Loops Filled	TS 3/4.4.1.4.1, Reactor Coolant System, Cold Shutdown – Loops Filled
HNP[1]	TS 3.4.8, RCS Loops – MODE 5, Loops Not Filled	TS 3/4.4.1.4.2, Reactor Coolant System, Cold Shutdown – Loops Not Filled
HNP[1]	TS 3.5.2, ECCS - Operating	TS 3/4.5.2, ECCS Subsystems – T_{avg} Greater Than or Equal to 350ºF
HNP[1]	TS 3.6.6, Containment Spray and Cooling Systems	TS 3/4.6.2.1, Containment Spray System
HNP[1]	TS 3.9.5, RHR and Coolant Circulation – High Water Level	TS 3/4.9.8.1, Residual Heat Removal and Coolant Circulation, High Water Level
HNP[1]	TS 3.9.6, RHR and Coolant Circulation – Low Water Level	TS 3/4.9.8.2, Refueling Operations, Low Water Level
CNS	TS 3.9.5, RHR and Coolant Circulation – High Water Level	TS 3.9.4, RHR and Coolant Circulation – High Water Level
CNS	TS 3.9.6, RHR and Coolant Circulation – Low Water Level	TS 3.9.5, RHR and Coolant Circulation – Low Water Level
ONS	TS 3.6.6, Containment Spray and Cooling Systems	TS 3.6.5, Reactor Building Spray and Cooling Systems
ONS	TS 3.9.5, RHR and Coolant Circulation – High Water Level	TS 3.9.4, DHR and Coolant Circulation – High Water Level
ONS	TS 3.9.6, RHR and Coolant Circulation – Low Water Level	TS 3.9.5, DHR and Coolant Circulation – Low Water Level

Table Notes:

(1) HNP has not converted to the NUREG-1431 improved Standard Technical Specifications (STS). The general format and numbering convention associated with the current TS has been retained.

(2) The General Electric BWR/4 STS (NUREG-1433) is applicable to BSEP. The Westinghouse STS (NUREG-1431) is applicable to HNP, CNS, and MNS. The Babcock & Wilcox STS (NUREG-1430) is applicable to ONS.

These differences, including the associated differences in the numbering of Surveillance Requirements (SRs), are administrative and do not affect the applicability of TSTF-523 to the individual plant TS.

Other variations include the following:

- The General Electric BWR/4 STS markup included in TSTF-523 for SR 3.5.1.2 includes a new note, which is a single note for this SR. The corresponding current BSEP SR 3.5.1.2 already has an existing note. Therefore, it is proposed that the existing note be retained but relabeled as Note 1, and the new note labeled as Note 2.
- The General Electric BWR/4 STS markup included in TSTF-523 for SR 3.5.2.4 includes a new note, which is a single note for this SR. The corresponding current BSEP SR 3.5.2.4 already has an existing note. Therefore, it is proposed that the existing note be retained but relabeled as Note 1, and the new note labeled as Note 2.
- The General Electric BWR/4 STS markup included in TSTF-523 includes changes for TS 3.6.2.4, RHR Suppression Pool Spray. BSEP does not have this TS; therefore, these TSTF changes are not applicable to BSEP.
- The proposed numbering of the SRs in CNS TS 3.6.6 is different than the numbering of the SRs in the Westinghouse markup included in TSTF-523 for TS 3.6.6, due to the existing CNS SRs being different than the STS SRs.
- The STS markups included in TSTF-523 for various TSs propose to insert a new SR in the middle of a string of SRs, and renumber the remaining existing SRs in the string. In lieu of this approach, it is proposed to insert new SRs at the end of the string of SRs, eliminating the need to renumber existing SRs. This proposed approach should minimize future implementation activities.
- ONS has separate TSs for HPI (TS 3.5.2) and LPI (TS 3.5.3), rather than a combined ECCS TS. Therefore, the Babcock & Wilcox STS markup included in TSTF-523 for SR 3.5.2.2 and SR 3.5.2.3 is captured in the proposed changes to ONS SR 3.5.2.1, SR 3.5.2.2, SR 3.5.3.1, and SR 3.5.3.2. The “HPI” or “LPI” nomenclature, as appropriate, is proposed in lieu of the “ECCS” nomenclature used in the TSTF.
- The current ONS SR 3.6.5.1 applies to both the reactor building spray system and the reactor building cooling system, whereas the Babcock & Wilcox STS markup included in TSTF-523 for SR 3.6.6.1 applies only to the containment spray system. Therefore, the new note is reworded to clarify that it applies only to the reactor building spray system, consistent with the intent of the TSTF.
- The Babcock & Wilcox STS markup included in TSTF-523 for SR 3.6.6.4 uses the nomenclature “containment spray.” Consistent with the remainder of ONS TS 3.6.5, the corresponding change that adds ONS SR 3.6.5.9 proposes the use of the nomenclature “reactor building spray.”

None of these differences affect the applicability of TSTF-523 to the individual plant TS.

Under TSTF-523, new Surveillance Requirements (SR) are added to various systems, requiring that locations susceptible to gas accumulation are sufficiently filled with water, and the Surveillance Frequency is set at 31 days, or, if the plant has adopted the Surveillance Frequency Control Program (SFCP), the intent is that the initial frequency be established at 31 days under the SFCP. An alternative is proposed for the following systems:

Plant	System	Surveillance
BSEP	ECCS – Operating (TS 3.5.1)	SR 3.5.1.1
BSEP	RCIC System (TS 3.5.3)	SR 3.5.3.1
BSEP	RHR Suppression Pool Cooling (TS 3.6.2.3)	SR 3.6.2.3.3
HNP	Containment Spray System (TS 3.6.2.1)	SR 4.6.2.1.e
CNS	Containment Spray System (TS 3.6.6)	SR 3.6.6.8
MNS	Containment Spray System (TS 3.6.6)	SR 3.6.6.8
ONS	Reactor Building Spray (TS 3.6.5)	SR 3.6.5.9

Gas accumulation for these systems is currently monitored in accordance with each site's response to NRC Generic Letter (GL) 2008-01. Review of plant experience over a three year period ending on April 30, 2015 shows no instances of gas accumulation which would challenge the capability of these systems to perform their safety function. Specifically:

- At BSEP, a review of trending data collected in the three year period ending on April 30, 2015 indicates that no gas has been detected via venting. Venting is currently being performed on a monthly basis at eleven locations on each Unit: two locations on RHR loop "A", three locations on RHR loop "B", two locations on each loop of the Core Spray System, one location on the High Pressure Coolant Injection (HPCI) System, and one location on the Reactor Core Isolation Cooling (RCIC) System.

- At HNP, a review of trending data collected in the three year period ending on April 30, 2015 indicates no gas has been detected, with two exceptions (described below). UT has been performed on a quarterly basis during this period at five locations on Containment Spray System Train "A", five locations on the Containment Spray System Train "B", and on one location common to both trains.

    - At the location common to both trains, there is a small permanent void near valve 1CT-12 that was first identified in February 2008 and entered into the Corrective Action Program. The volume of the void was originally estimated as 257 in^3, but was subsequently reduced to approximately 10 in^3 with the installation of a local vent valve in 2010. It is believed that the void is air that was introduced during 2007 outage test conditions that have since been corrected to preclude air intrusion. An evaluation of the original void determined that the system remained able to perform its safety-related function. A design calculation was also performed to establish the allowable void size at this location. The allowable void size was greater than 257 in^3.

    - At the location near valve 1CT-50 on Train "A", there was a void of approximately 85 in^3 identified in August 2013 and entered into the Corrective Action Program. The cause of the void could not be determined conclusively. The void most likely formed from a collection of smaller voids created on the discharge of the "A" Containment Spray pump when the system was re-filled in May 2013. These

voids could have been too small to detect at the time, but then, over time, collectively migrated to the system high point at 1CT-50. The void was removed. An evaluation determined that the system remained capable of performing its safety-related function with this void present.

- At CNS, a review of trending data collected in the three year period ending on April 30, 2015 indicates that no gas has been detected via either UT or venting. UT is currently being performed on a quarterly basis at two locations on each of two trains of the Containment Spray System on Unit 1 and at three locations on each of two trains of the Containment Spray System on Unit 2. Prior to implementation of UT in July 2012 on Unit 1 and September 2012 on Unit 2, venting was performed.

- At MNS, a review of trending data collected in the three year period ending on April 30, 2015 indicates that no gas has been detected. UT has been performed on a quarterly basis during this period at a single location on each Containment Spray System train (two trains per unit).

- At ONS, a review of trending data collected in the three year period ending on April 30, 2015 indicates that no gas has been detected. UT has been performed on a monthly basis during this period (excluding outages) at seven locations on the Reactor Building Spray System of Unit 1 (two on Train "1A" and five on Train "1B"), eight locations on the Reactor Building Spray System of Unit 2 (two on Train "2A" and six on Train "2B"), and five locations on the Reactor Building Spray System of Unit 3 (two on Train "3A" and three on Train "3B").

Therefore, a Surveillance Frequency of 92 days is considered reasonable to provide assurance that these systems are sufficiently filled with water. For plants that have not adopted the SFCP (BSEP and HNP), the TS markups provided in Attachment 1 reflect this variation. For plants that have adopted the SFCP (CNS, MNS, and ONS), the initial frequency established under the SFCP will be 92 days, and subsequent changes will be controlled under the provisions of the SFCP.

Similar variations to the Surveillance Frequency have been proposed by other licensees in LARs proposing to adopt TSTF-523. See References 1, 2, and 3.

Attachment 3 provides markups of the TS Bases pages, which correspond to the proposed TS changes. The TS Bases markups were developed using TSTF-523, but include enhancements. Specifically:

- For all plants, clarification is added that if the accumulated gas is eliminated or brought within the acceptance criteria limits as part of the Surveillance performance, the Surveillance is considered met and the system is OPERABLE; past operability is then evaluated under the Corrective Action program; and if it is suspected that a gas intrusion event is occurring, then this is evaluated under the Operability Determination Process.
- For the discussion of RHR Shutdown Cooling System SR 3.4.7.2, SR 3.4.8.2, SR 3.9.7.2, and SR 3.9.8.2 in the BSEP TS Bases, additional detail is added regarding how the surveillances are satisfied for the suction flow path, consistent with the site specific plant configuration and existing operational practices.

These TS Bases enhancements are administrative and do not affect the applicability of TSTF-523 to the individual plant TS. Changes to the existing TS Bases will be implemented under the Technical Specification Bases Control Program, and are provided in Attachment 3 for information only.

3.0 REGULATORY ANALYSIS

3.1 No Significant Hazards Consideration Determination

Duke Energy Progress, Inc., and Duke Energy Carolinas, LLC, collectively referred to henceforth as "Duke Energy", requests adoption of TSTF-523, Revision 2, "Generic Letter 2008-01, Managing Gas Accumulation," which is an approved change to the standard technical specifications (STS), into the Brunswick Steam Electric Plant, Unit Nos. 1 and 2; Shearon Harris Nuclear Power Plant, Unit 1; Catawba Nuclear Station, Units 1 and 2; McGuire Nuclear Station, Units 1 and 2; and Oconee Nuclear Station, Units 1, 2, and 3 Technical Specifications. The proposed change revises or adds Surveillance Requirements to verify that the system locations susceptible gas accumulation are sufficiently filled with water and to provide allowances which permit performance of the verification.

Duke Energy 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 or adds Surveillance Requirement(s) (SRs) that require verification that the Emergency Core Cooling System (ECCS), the Decay Heat Removal (DHR) / Residual Heat Removal (RHR) System, the Containment Spray / Reactor Building Spray System, and the Reactor Core Isolation Cooling (RCIC) System are not rendered inoperable due to accumulated gas and to provide allowances which permit performance of the revised verification. Gas accumulation in the subject systems is not an initiator of any accident previously evaluated. As a result, the probability of any accident previously evaluated is not significantly increased. The proposed SRs ensure that the subject systems continue to be capable to perform their assumed safety function and are not rendered inoperable due to gas accumulation. Thus, the consequences of any accident previously evaluated are not significantly increased.

   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 revises or adds SRs that require verification that the ECCS, the DHR / RHR System, the Containment Spray / Reactor Building Spray System, and the RCIC System are not rendered inoperable due to accumulated gas and to provide

allowances which permit performance of the revised verification. The proposed change does not involve a physical alteration of the plant (i.e., no new or different type of equipment will be installed) or a change in the methods governing normal plant operation. In addition, the proposed change does not impose any new or different requirements that could initiate an accident. The proposed change does not alter assumptions made in the safety analysis and is consistent with the safety analysis assumptions.

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

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

   Response: No.

   The proposed change revises or adds SRs that require verification that the ECCS, the DHR / RHR System, the Containment Spray / Reactor Building Spray System, and the RCIC System are not rendered inoperable due to accumulated gas and to provide allowances which permit performance of the revised verification. The proposed change adds new requirements to manage gas accumulation in order to ensure the subject systems are capable of performing their assumed safety functions. The proposed SRs are more comprehensive than the current SRs and will ensure that the assumptions of the safety analysis are protected. The proposed change does not adversely affect any current plant safety margins or the reliability of the equipment assumed in the safety analysis. Therefore, there are no changes being made to any safety analysis assumptions, safety limits or limiting safety system settings that would adversely affect plant safety as a result of the proposed change.

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

Based on the above, Duke Energy 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 a significant increase in the amounts of any effluent 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 REFERENCES

1. Wolf Creek Nuclear Operating Corporation letter, Wolf Creek Generating Station, *Application to Revise Technical Specifications to Adopt TSTF-523, Revision 2, "Generic Letter 2008-01, Managing Gas Accumulation," Using the Consolidated Line Item Improvement Process*, dated November 20, 2014 (ADAMS Accession No. ML14330A247)

2. Virginia Electric and Power Company letter, Surry Power Station Units 1 and 2, *Proposed License Amendment Request, Technical Specifications Surveillance Requirement and Basis, Revisions for Generic Letter 2008-01 (Gas Accumulation)*, dated January 14, 2015 (ADAMS Accession No. ML15021A130)

3. Dominion Nuclear Connecticut, Inc. letter, Millstone Power Station Units 2 and 3, *Proposed License Amendment Requests to Adopt TSTF-523, Revision 2, Generic Letter 2008-01, Managing Gas Accumulation*, dated January 15, 2015 (ADAMS Accession No. ML15021A128)

Attachment 2

Proposed Technical Specification Changes (Mark-up)

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.7.1	----------NOTE---------- Not required to be met until 2 hours after reactor steam dome pressure is less than the RHR shutdown cooling isolation pressure. ----------	
	Verify one required RHR shutdown cooling subsystem or recirculation pump is operating.	12 hours
SR 3.4.7.2	------ NOTE ------ Not required to be performed until 12 hours after reactor steam dome pressure is less than the RHR shutdown cooling isolation pressure. ----------	
	Verify RHR shutdown cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water.	31 days

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
B. No RHR shutdown cooling subsystem in operation. AND No recirculation pump in operation.	B.1	Verify reactor coolant circulating by an alternate method.	1 hour from discovery of no reactor coolant circulation AND Once per 12 hours thereafter
	AND		
	B.2	Monitor reactor coolant temperature.	Once per hour

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.8.1	Verify one required RHR shutdown cooling subsystem or recirculation pump is operating.	12 hours
SR 3.4.8.2	Verify RHR shutdown cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water.	31 days

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
J. Two or more low pressure ECCS injection/spray subsystems inoperable for reasons other than Condition A or B. OR HPCI System and two or more required ADS valves inoperable.	J.1 Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.5.1.1	Verify, for each ECCS injection/spray subsystem, ~~the piping is filled with water from the pump discharge valve to the injection valve~~.	~~31~~ 92 days

(continued)

, locations susceptible to gas accumulation are sufficiently filled with water.

2. Not required to be met for system vent flow paths opened under administrative control.

SURVEILLANCE REQUIREMENTS (continued)

	SURVEILLANCE	FREQUENCY
SR 3.5.1.2	----------NOTE---------- 1. Low pressure coolant injection (LPCI) subsystems may be considered OPERABLE during alignment and operation for decay heat removal with reactor steam dome pressure less than the Residual Heat Removal (RHR) shutdown cooling isolation pressure in MODE 3, if capable of being manually realigned and not otherwise inoperable. ---------- Verify each ECCS injection/spray subsystem 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.	31 days
SR 3.5.1.3	Verify ADS pneumatic supply header pressure is ≥ 95 psig.	31 days
SR 3.5.1.4	Verify the RHR System cross tie valve is locked closed.	31 days
SR 3.5.1.5	----------NOTE---------- Not required to be performed if performed within the previous 31 days. ---------- Verify each recirculation pump discharge valve and bypass valve cycles through one complete cycle of full travel or is de-energized in the closed position.	Once each startup prior to exceeding 25% RTP

(continued)

SURVEILLANCE REQUIREMENTS (continued)

	SURVEILLANCE	FREQUENCY
SR 3.5.2.2	Verify, for each required core spray (CS) subsystem, the: a. Suppression pool water level is ≥ -31 inches; or b. ----------NOTE---------- Only one required CS subsystem may take credit for this option during OPDRVs. ---------- Condensate storage tank water volume is ≥ 228,200 gallons.	12 hours
SR 3.5.2.3	Verify, for each required ECCS injection/spray subsystem, ~~the piping is filled with water from the pump discharge valve to the injection valve.~~	31 days
SR 3.5.2.4	----------NOTE---------- 1. One LPCI subsystem may be considered OPERABLE during alignment and operation for decay heat removal if capable of being manually realigned and not otherwise inoperable. ---------- Verify each required ECCS injection/spray subsystem 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.	31 days

(continued)

, locations susceptible to gas accumulation are sufficiently filled with water.

2. Not required to be met for system vent flow paths opened under administrative control.

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.5.3.1	Verify the RCIC System ~~piping is filled with water from the pump discharge valve to the injection valve.~~ locations susceptible to gas accumulation are sufficiently filled with water.	~~31~~ 92 days
SR 3.5.3.2	Verify each RCIC System 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.	31 days
SR 3.5.3.3	----------NOTE---------- 1. Use of auxiliary steam for the performance of the SR is not allowed. 2. Not required to be performed until 24 hours after reactor steam pressure is adequate to perform the test. ---------- Verify, with reactor pressure ≥ 945 psig and ≤ 1045 psig, the RCIC pump can develop a flow rate ≥ 400 gpm against a system head corresponding to reactor pressure.	92 days

(continued)

---------- NOTE ----------
Not required to be met for system vent flow paths opened under administrative control.

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.6.2.3.1	Verify each RHR suppression pool cooling subsystem 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 or can be aligned to the correct position.	31 days
SR 3.6.2.3.2	Verify each RHR pump develops a flow rate ≥ 7700 gpm through the associated heat exchanger while operating in the suppression pool cooling mode.	92 days
SR 3.6.2.3.3	Verify RHR suppression pool cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water.	92 days

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.9.7.1	Verify one RHR shutdown cooling subsystem is operating.	12 hours
SR 3.9.7.2	Verify required RHR shutdown cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water.	31 days

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.9.8.1	Verify one RHR shutdown cooling subsystem is operating.	12 hours
SR 3.9.8.2	Verify RHR shutdown cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water.	31 days

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.7.1	----------NOTE---------- Not required to be met until 2 hours after reactor steam dome pressure is less than the RHR shutdown cooling isolation pressure. ---------- Verify one required RHR shutdown cooling subsystem or recirculation pump is operating.	12 hours
SR 3.4.7.2	----------NOTE---------- Not required to be performed until 12 hours after reactor steam dome pressure is less than the RHR shutdown cooling isolation pressure. ---------- Verify RHR shutdown cooling sub system locations susceptible to gas accumulation are sufficiently filled with water.	31 days

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. No RHR shutdown cooling subsystem in operation. AND No recirculation pump in operation.	B.1 Verify reactor coolant circulating by an alternate method.	1 hour from discovery of no reactor coolant circulation AND Once per 12 hours thereafter
	AND	
	B.2 Monitor reactor coolant temperature.	Once per hour

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.8.1	Verify one required RHR shutdown cooling subsystem or recirculation pump is operating.	12 hours
SR 3.4.8.2	Verify RHR shutdown cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water.	31 days

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
J. Two or more low pressure ECCS injection/spray subsystems inoperable for reasons other than Condition A or B. OR HPCI System and two or more required ADS valves inoperable.	J.1 Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.5.1.1	Verify, for each ECCS injection/spray subsystem, ~~the piping is filled with water from the pump discharge valve to the injection valve.~~ locations susceptible to gas accumulation are sufficiently filled with water.	~~31~~ 92 days

(continued)

2. Not required to be met for system vent flow paths opened under administrative control.

SURVEILLANCE REQUIREMENTS (continued)

	SURVEILLANCE (5)	FREQUENCY
SR 3.5.1.2 (1.)	----------NOTE---------- Low pressure coolant injection (LPCI) subsystems may be considered OPERABLE during alignment and operation for decay heat removal with reactor steam dome pressure less than the Residual Heat Removal (RHR) shutdown cooling isolation pressure in MODE 3, if capable of being manually realigned and not otherwise inoperable. ---------- Verify each ECCS injection/spray subsystem 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.	31 days
SR 3.5.1.3	Verify ADS pneumatic supply header pressure is ≥ 95 psig.	31 days
SR 3.5.1.4	Verify the RHR System cross tie valve is locked closed.	31 days
SR 3.5.1.5	----------NOTE---------- Not required to be performed if performed within the previous 31 days. ---------- Verify each recirculation pump discharge valve and bypass valve cycles through one complete cycle of full travel or is de-energized in the closed position.	Once each startup prior to exceeding 25% RTP

(continued)

SURVEILLANCE REQUIREMENTS (continued)

	SURVEILLANCE	FREQUENCY
SR 3.5.2.2	Verify, for each required core spray (CS) subsystem, the: a. Suppression pool water level is ≥ -31 inches; or b. ----------NOTE---------- Only one required CS subsystem may take credit for this option during OPDRVs. ---------- Condensate storage tank water volume is ≥ 228,200 gallons.	12 hours
SR 3.5.2.3	Verify, for each required ECCS injection/spray subsystem, ~~the piping is filled with water from the pump discharge valve to the injection valve.~~	31 days
SR 3.5.2.4	----------NOTE---------- 1. One LPCI subsystem may be considered OPERABLE during alignment and operation for decay heat removal if capable of being manually realigned and not otherwise inoperable. ---------- Verify each required ECCS injection/spray subsystem 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.	31 days

(continued)

locations susceptible to gas accumulation are sufficiently filled with water.

2. Not required to be met for system vent flow paths opened under administrative control.

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.5.3.1	Verify the RCIC System ~~piping is filled with water from the pump discharge valve to the injection valve.~~ locations susceptible to gas accumulation are sufficiently filled with water.	~~31~~ 92 days
SR 3.5.3.2	Verify each RCIC System 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.	31 days
SR 3.5.3.3	----------NOTES---------- 1. Use of auxiliary steam for the performance of the SR is not allowed. 2. Not required to be performed until 24 hours after reactor steam pressure is adequate to perform the test. ---------- Verify, with reactor pressure ≥ 945 psig and ≤ 1045 psig, the RCIC pump can develop a flow rate ≥ 400 gpm against a system head corresponding to reactor pressure.	92 days

(continued)

NOTE
Not required to be met for system vent flow paths opened under administrative control.

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.6.2.3.1	Verify each RHR suppression pool cooling subsystem 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 or can be aligned to the correct position.	31 days
SR 3.6.2.3.2	Verify each RHR pump develops a flow rate ≥ 7700 gpm through the associated heat exchanger while operating in the suppression pool cooling mode.	92 days
SR 3.6.2.3.3	Verify RHR suppression pool cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water.	92 days

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.9.7.1	Verify one RHR shutdown cooling subsystem is operating.	12 hours
SR 3.9.7.2	Verify required RHR shutdown cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water.	31 days

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.9.8.1	Verify one RHR shutdown cooling subsystem is operating.	12 hours
SR 3.9.8.2	Verify RHR shutdown cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water.	31 days

SURVEILLANCE REQUIREMENTS

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

4.4.1.3.2 The required steam generator(s) shall be determined OPERABLE by verifying wide range (WR) secondary side water level is greater than 74% or narrow range (NR) secondary side water level is greater than 30% at least once per 12 hours.

4.4.1.3.3 At least one reactor coolant or RHR loop shall be verified in operation and circulating reactor coolant at least once per 12 hours.

4.4.1.3.4 Verify required RHR loop locations susceptible to gas accumulation are sufficiently filled with water at least once per 31 days.*

* Not required to be performed until 12 hours after entering MODE 4.

COLD SHUTDOWN - LOOPS FILLED

LIMITING CONDITION FOR OPERATION

3.4.1.4.1 At least one residual heat removal (RHR) loop shall be OPERABLE and in operation*, and either:

a. One additional RHR loop shall be OPERABLE**, or

b. The secondary side water level of at least two steam generators shall be greater than 74% wide range (WR) or greater than 30% narrow range (NR).

APPLICABILITY: MODE 5 with reactor coolant loops filled***.

ACTION:

a. With one of the RHR loops inoperable and with less than the required steam generator water level, immediately initiate corrective action to return the inoperable RHR loop to OPERABLE status or restore the required steam generator water level as soon as possible.

b. With no RHR 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 RHR loop to operation.

SURVEILLANCE REQUIREMENTS

4.4.1.4.1.1 The secondary side water level of at least two steam generators when required shall be determined to be within limits at least once per 12 hours.

4.4.1.4.1.2 At least one RHR loop shall be determined to be in operation and circulating reactor coolant at least once per 12 hours.

INSERT SR 4.4.1.4.1.3 (attached)

*The RHR pump may be deenergized 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.

**One RHR loop may be inoperable for up to 2 hours for surveillance testing provided the other RHR loop is OPERABLE and in operation.

***A reactor coolant pump shall not be started with one or more of the Reactor Coolant System cold leg temperatures less than or equal to 325°F unless the secondary water temperature of each steam generator is less than 50°F above each of the Reactor Coolant System cold leg temperatures.

SHEARON HARRIS - UNIT 1

INSERT SR 4.4.1.4.1.3

4.4.1.4.1.3 Verify required RHR loop locations susceptible to gas accumulation are sufficiently filled with water at least once per 31 days.

COLD SHUTDOWN - LOOPS NOT FILLED

LIMITING CONDITION FOR OPERATION

3.4.1.4.2 Two residual heat removal (RHR) loops shall be OPERABLE* and at least one RHR loop shall be in operation.**

APPLICABILITY: MODE 5 with reactor coolant loops not filled.

ACTION:

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

b. With no RHR 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 RHR loop to operation.

SURVEILLANCE REQUIREMENTS

4.4.1.4.2.1 At least one RHR loop shall be determined to be in operation and circulating reactor coolant at least once per 12 hours.

4.4.1.4.2.2 Verify required RHR loop locations susceptible to gas accumulation are sufficiently filled with water at least once per 31 days

*One RHR loop may be inoperable for up to 2 hours for surveillance testing provided the other RHR loop is OPERABLE and in operation.

**The RHR pump may be deenergized 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.

SURVEILLANCE REQUIREMENTS (Continued)

CP&L Valve No.	EBASCO Valve No.	Valve Function	Valve Position
1SI-107	2SI-V500SA-1	High Head Safety Injection to Reactor Coolant System Hot Legs	Closed
1SI-86	2SI-V501SB-1	High Head Safety Injection to Reactor Coolant System Hot Legs	Closed
1SI-52	2SI-V502SA-1	High Head Safety Injection to Reactor Coolant System Cold Legs	Closed
1SI-340	2SI-V579SA-1	Low Head Safety Injection to Reactor Coolant System Cold Legs	Open
1SI-341	2SI-V578SB-1	Low Head Safety Injection to Reactor Coolant System Cold Legs	Open
1SI-359	2SI-V587SA-1	Low Head Safety Injection to Reactor Coolant System Hot Legs	Closed

b. At least once per 31 days by:

1. Verifying that ~~the EGGS piping is full of water by venting accessible discharge piping high points~~ ECCS locations susceptible to gas accumulation are sufficiently filled with water, and

2. 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.*

c. By a visual inspection which verifies that no loose debris (rags, trash, clothing, etc.) is present in the containment which could be transported to the containment sump and cause restriction of the pump suctions during LOCA conditions. This visual inspection shall be performed:

1. For all accessible areas of the containment prior to establishing CONTAINMENT INTEGRITY, and

2. Of the areas affected within containment at the completion of each containment entry when CONTAINMENT INTEGRITY is established.

* Not required to be met for system vent flow paths opened under administrative control.

3/4.6.2 DEPRESSURIZATION AND COOLING 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 RWST and transferring suction to the containment sump.

APPLICABILITY: MODES 1, 2, 3, and 4.

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; restore the inoperable Spray System to OPERABLE status within the next 48 hours or be in COLD SHUTDOWN within the following 30 hours. Refer also to Specification 3.6.2.3 Action.

SURVEILLANCE REQUIREMENTS

4.6.2.1 Each Containment Spray System shall be demonstrated OPERABLE:

a. At least once per 31 days by 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. By verifying that, on an indicated recirculation flow of at least 1832 gpm, each pump develops a differential pressure of greater than or equal to 186 psi when tested pursuant to the Inservice Testing Program;

c. At least once per 18 months by:

   1. Verifying that each automatic valve in the flow path actuates to its correct position on a containment spray actuation test signal and

   2. Verifying that each spray pump starts automatically on a containment spray actuation test signal.

   3. Verifying that, coincident with an indication of containment spray pump running, each automatic valve from the sump and RWST actuates to its appropriate position following an RWST Lo-Lo test signal.

d. At least once per 10 years by performing an air or smoke flow test through each spray header and verifying each spray nozzle is unobstructed.

INSERT SR 4.6.2.1 (attached)

SHEARON HARRIS - UNIT 1

INSERT SR 4.6.2.1

e. At least once per 92 days by verifying that containment spray locations susceptible to gas accumulation are sufficiently filled with water.

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* Not required to be met for system vent flow paths opened under administrative control.

REFUELING OPERATIONS

3/4.9.8 RESIDUAL HEAT REMOVAL AND COOLANT CIRCULATION

HIGH WATER LEVEL

LIMITING CONDITION FOR OPERATION

3.9.8.1 At least one residual heat removal (RHR) loop shall be OPERABLE and in operation.*

APPLICABILITY: MODE 6, with irradiated fuel in the vessel when the water level above the top of the reactor vessel flange is greater than or equal to 23 feet.

ACTION:

With no RHR loop OPERABLE and in operation, suspend all operations involving an increase in the reactor decay heat load or a reduction in boron concentration of the Reactor Coolant System and immediately initiate corrective action to return the required RHR loop to OPERABLE and operating status as soon as possible. Close all containment penetrations providing direct access from the containment atmosphere to the outside atmosphere within 4 hours.

SURVEILLANCE REQUIREMENTS

4.9.8.1.1 At least one RHR loop shall be verified in operation and circulating reactor coolant at a flow rate of greater than or equal to 2500 gpm at least once per 12 hours.

4.9.8.1.2 Verify required RHR loop locations susceptible to gas accumulation are sufficiently filled with water at least once per 31 days.

* The RHR loop may be removed from operation for up to 1 hour per 2-hour period during the performance of CORE ALTERATIONS and core loading verification in the vicinity of the reactor vessel hot legs.

LOW WATER LEVEL

LIMITING CONDITION FOR OPERATION

3.9.8.2 Two independent residual heat removal (RHR) loops shall be OPERABLE and at least one RHR loop shall be in operation.*

APPLICABILITY: MODE 6, with irradiated fuel in the vessel when the water level above the top of the reactor vessel flange is less than 23 feet.

ACTION:

a. With less than the required RHR loops OPERABLE, immediately initiate corrective action to return the required RHR loops to OPERABLE status or to establish greater than or equal to 23 feet of water above the reactor vessel flange as soon as possible.

b. With no RHR 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 RHR loop to operation. Close all containment penetrations providing direct access from the containment atmosphere to the outside atmosphere within 4 hours.

SURVEILLANCE REQUIREMENTS

4.9.8.2.1 At least one RHR loop shall be verified in operation and circulating reactor coolant at a flow rate of greater than or equal to 2500 gpm at least once per 12 hours whenever the water level is at or above the reactor vessel flange.

4.9.8.2.2 At least one RHR loop shall be verified in operation and circulating reactor coolant at a flow rate of greater than or equal to 900 gpm at least once per 12 hours whenever the water level is below the reactor vessel flange.

4.9.8.2.3 Verify RHR loop locations susceptible to gas accumulation are sufficiently filled with water at least once per 31 days.

* The operating RHR loop may be removed from operation for up to 1 hour per 2-hour period during the performance of CORE ALTERATIONS and core loading verification in the vicinity of the reactor vessel hot legs.

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.4.6.3	Verify correct breaker alignment and indicated power are available to the required pump that is not in operation.	In accordance with the Surveillance Frequency Control Program
SR 3.4.6.4	---- NOTE ---- Not required to be performed until 12 hours after entering MODE 4. ---------- Verify required RHR loop locations susceptible to gas accumulation are sufficiently filled with water.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.4.7.3	Verify correct breaker alignment and indicated power are available to the required RHR pump that is not in operation.	In accordance with the Surveillance Frequency Control Program
SR 3.4.7.4	Verify required RHR loop locations susceptible to gas accumulation are sufficiently filled with water.	In accordance with the Surveillance Frequency Control Program

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Required RHR loops inoperable. OR No RHR loop in operation.	B.1 Suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet SDM of LCO 3.1.1. AND B.2 Initiate action to restore one RHR loop to OPERABLE status and operation.	Immediately Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.8.1	Verify one RHR loop is in operation.	In accordance with the Surveillance Frequency Control Program
SR 3.4.8.2	Verify correct breaker alignment and indicated power are available to the required RHR pump that is not in operation.	In accordance with the Surveillance Frequency Control Program
SR 3.4.8.3	Verify RHR loop locations susceptible to gas accumulation are sufficiently filled with water.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

SURVEILLANCE				FREQUENCY
SR 3.5.2.1	Verify the following valves are in the listed position with power to the valve operator removed.			In accordance with the Surveillance Frequency Control Program
	Number	Position	Function	
	NI162A	Open	SI Cold Leg Injection	
	NI121A	Closed	SI Hot Leg Injection	
	NI152B	Closed	SI Hot Leg Injection	
	NI183B	Closed	RHR Hot Leg Injection	
	NI173A	Open	RHR Cold Leg Injection	
	NI178B	Open	RHR Cold Leg Injection	
	NI100B	Open	SI Pump Suction from RWST	
	NI147B	Open	SI Pump Mini-Flow	
SR 3.5.2.2	Verify each ECCS 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.			In accordance with the Surveillance Frequency Control Program
SR 3.5.2.3	~~Verify ECCS piping is full of water.~~ Verify ECCS locations susceptible to gas accumulation are sufficiently filled with water.			In accordance with the Surveillance Frequency Control Program
SR 3.5.2.4	Verify each ECCS pump's developed head at the test flow point is greater than or equal to the required developed head.			In accordance with the Inservice Testing Program

(continued)

NOTE
Not required to be met for system vent flow paths opened under administrative control.

3.6 CONTAINMENT SYSTEMS

3.6.6 Containment Spray System

LCO 3.6.6 Two containment spray trains shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One containment spray train inoperable.	A.1 Restore containment spray train to OPERABLE status.	72 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 5.	6 hours 84 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.6.1	Verify each containment spray manual and power operated valve in the flow path that is not locked, sealed, or otherwise secured in position is in the correct position.	In accordance with the Surveillance Frequency Control Program

(continued)

NOTE
Not required to be met for system vent flow paths opened under administrative control.

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.6.2	Verify each containment spray pump's developed head at the flow test point is greater than or equal to the required developed head.	In accordance with the Inservice Testing Program
SR 3.6.6.3	Deleted.	
SR 3.6.6.4	Deleted.	
SR 3.6.6.5	Verify that each spray pump is de-energized and prevented from starting upon receipt of a terminate signal and is allowed to manually start upon receipt of a start permissive from the Containment Pressure Control System (CPCS).	In accordance with the Surveillance Frequency Control Program
SR 3.6.6.6	Verify that each spray pump discharge valve closes or is prevented from opening upon receipt of a terminate signal and is allowed to manually open upon receipt of a start permissive from the Containment Pressure Control System (CPCS).	In accordance with the Surveillance Frequency Control Program
SR 3.6.6.7	Verify each spray nozzle is unobstructed.	Following activities which could result in nozzle blockage
SR 3.6.6.8	Verify containment spray locations susceptible to gas accumulation are sufficiently filled with water.	In accordance with the Surveillance Frequency Control Program

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (continued)	A.4 Close all containment penetrations providing direct access from containment atmosphere to outside atmosphere.	4 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.9.4.1	Verify one RHR loop is in operation and circulating reactor coolant at a flow rate of ≥ 1000 gpm and RCS temperature is ≤ 140°F.	In accordance with the Surveillance Frequency Control Program
SR 3.9.4.2	Verify required RHR loop locations susceptible to gas accumulation are sufficiently filled with water.	In accordance with the Surveillance Frequency Control Program

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. (continued)	B.2 Initiate action to restore one RHR loop to operation. AND	Immediately
	B.3 Close all containment penetrations providing direct access from containment atmosphere to outside atmosphere.	4 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.9.5.1	Verify one RHR loop is in operation and circulating reactor coolant at a flow rate of ≥ 1000 gpm and RCS temperature is ≤ 140°F.	In accordance with the Surveillance Frequency Control Program
SR 3.9.5.2	Verify correct breaker alignment and indicated power available to the required RHR pump that is not in operation.	In accordance with the Surveillance Frequency Control Program
SR 3.9.5.3	Verify RHR loop locations susceptible to gas accumulation are sufficiently filled with water.	In accordance with the Surveillance Frequency Control Program

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. One RHR loop OPERABLE. AND ALL RCS loops inoperable.	B.1 Be in MODE 5.	24 hours
C. Both required RCS or RHR loops inoperable. OR No RCS or RHR loop in operation.	C.1 Suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet the SDM of LCO 3.1.1 and maintain Keff < 0.99. AND C.2 Initiate action to restore one loop to OPERABLE status and operation.	Immediately Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.6.1	Verify one RHR or RCS loop is in operation.	In accordance with the Surveillance Frequency Control Program
SR 3.4.6.2	Verify SG secondary side water levels are ≥ 12% narrow range for required RCS loops.	In accordance with the Surveillance Frequency Control Program
SR 3.4.6.3	Verify correct breaker alignment and indicated power are available to the required pump that is not in operation.	In accordance with the Surveillance Frequency Control Program

INSERT SR 3.4.6.4 (attached)

McGuire Units 1 and 2

INSERT SR 3.4.6.4

SR 3.4.6.4	----NOTE---------- Not required to be performed until 12 hours after entering MODE 4. ---------- Verify required RHR loop locations susceptible to gas accumulation are sufficiently filled with water.	In accordance with the Surveillance Frequency Control Program