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

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Docket No.: 50-305
License No.: DPR-43

DOMINION ENERGY KEWAUNEE, INC.
KEWAUNEE POWER STATION
LICENSE AMENDMENT REQUEST 249: KEWAUNEE POWER STATION
CONVERSION TO IMPROVED TECHNICAL SPECIFICATIONS (TAC NO. ME02467)
- REQUEST TO CHANGE PROPOSED SERVICE WATER AND MAIN STEAM
ISOLATION VALVE SPECIFICATIONS

Pursuant to 10 CFR 50.90, Dominion Energy Kewaunee, Inc. (DEK) requested an amendment to Facility Operating License Number DPR-43 for Kewaunee Power Station (Kewaunee) (reference 1). This amendment request would revise Kewaunee's current Technical Specifications (CTS) to Improved Technical Specifications (ITS) consistent with the Improved Standard Technical Specifications (ISTS) described in NUREG 1431, "Standard Technical Specifications - Westinghouse Plants," Revision 3.0. This supplemental letter requests changes to the proposed Technical Specifications 3.7.8, "Service Water (SW) System," and 3.7.2, "Main Steam Isolation Valves (MSIVs)."

The requested supplemental change to proposed Technical Specification 3.7.8, "Service Water (SW) System," adds the word "necessarily" to the Note contained in proposed surveillance requirement (SR) 3.7.8.1. The proposed SR 3.7.8.1 Note states; "Isolation of SW System flow to individual components does not render the SW System inoperable." DEK proposes to modify this proposed SR Note to state; "Isolation of SW System flow to individual components does not necessarily render the SW System inoperable."

The requested supplemental change to proposed Technical Specification 3.7.2, "Main Steam Isolation Valves (MSIVs)," revises the Note associated with proposed SR 3.7.2.1. The proposed SR requires verification that each MSIV isolation time is within limits while the Note states that the verification is only required to be performed in Modes 1 and 2. DEK proposes to change the Note to state that the verification of MSIV isolation time is; "Not required to be performed in Modes 2 and 3 until 12 hours after the MSIVs are open."

Attachment 1 of this letter contains a discussion and justification for these proposed changes. Attachment 2 contains the proposed changes to the Discussion of Changes (DOCs), proposed Technical Specification changes, and Justification for Deviations

A001
NRR

Attachments

1. Evaluation of Proposed Change
2. Modified Discussion of Changes (DOCs), Proposed Technical Specifications, and Justification for Deviations (JFDs)

Reference

1. Letter from Leslie N. Hartz (DEK) to Document Control Desk (NRC), "License Amendment Request 249: Kewaunee Power Station Conversion to Improved Technical Specifications (TAC NO. ME02467)," dated August 24, 2009. [ADAMS Accession No's ML092440371, ML092440416 through ML092440435, and ML092440441]

Commitments made by this letter: None

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ATTACHMENT 1

**LICENSE AMENDMENT REQUEST 249: KEWAUNEE POWER STATION
CONVERSION TO IMPROVED TECHNICAL SPECIFICATIONS (TAC NO. ME02467)
– REQUEST TO CHANGE PROPOSED SERVICE WATER AND MAIN STEAM
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EVALUATION OF PROPOSED CHANGE

**KEWAUNEE POWER STATION
DOMINION ENERGY KEWAUNEE, INC.**

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1.0 SUMMARY DESCRIPTION

This evaluation supports a request to amend Operating License DRP-43 for the Kewaunee Power Station (Kewaunee).

Pursuant to 10 CFR 50.90, Dominion Energy Kewaunee, Inc. (DEK) requested an amendment to Facility Operating License Number DPR-43 for Kewaunee (reference 1). This amendment request would revise Kewaunee's current Technical Specifications (CTS) to Improved Technical Specifications (ITS) consistent with the Improved Standard Technical Specifications (ISTS) described in NUREG 1431, "Standard Technical Specifications - Westinghouse Plants," Revision 3.0.

2.0 DETAILED DESCRIPTION

This supplement requests changes to the proposed ITS 3.7.8, "Service Water (SW) System," and 3.7.2, "Main Steam Isolation Valves (MSIVs)."

2.1 Detailed Description

The requested change to proposed ITS 3.7.8, "Service Water (SW) System," adds the word "necessarily" to a Note contained in proposed Surveillance Requirement (SR) 3.7.8.1. Proposed SR 3.7.8.1 Note states: "Isolation of SW System flow to individual components does not render the SW System inoperable." DEK proposes to modify this proposed SR Note to state; "Isolation of SW System flow to individual components does not necessarily render the SW System inoperable."

The requested change to proposed ITS 3.7.2, "Main Steam Isolation Valves (MSIVs)," revises the Note associated with proposed SR 3.7.2.1. The proposed SR requires verification that each MSIV isolation time is within limits while the Note states that the verification is; "Only required to be performed in Modes 1 and 2." DEK is proposing to change the Note to state that the verification of MSIV isolation time is; "Not required to be performed in Modes 2 and 3 until 12 hours after the MSIVs are open."

2.2 Condition Intended to Resolve

2.2.1 Specification 3.7.8, Service Water System

Some components at Kewaunee require cooling or ventilation in order to perform their function. For example, pumps may require cooling water to prevent overheating and rooms housing equipment may require ventilation to maintain the room environmental conditions within the design basis of the equipment. If a cooling or ventilation system cannot perform its related support function due to some type of failure or due to intentional removal from service to perform surveillances or maintenance, the supported system may become inoperable under the definition of OPERABILITY. If it is determined that the loss of cooling or ventilation renders the supported system

inoperable, the appropriate Limiting Condition for Operation (LCO) Action is entered and the applicable required actions and completion times are followed.

While reviewing Kewaunee's License Amendment Request (LAR) 249 (reference 1) an undesirable condition was discovered. This undesirable condition occurs if an area fan coil unit (AFCU) is discovered or rendered unable to perform its support function for the 480 volt engineered safety feature (ESF) buses or battery room equipment. If one of these AFCUs are non-functional the minimum completion time allowed under the proposed ITS specification is 2 hours (refer to ITS 3.8.7 Condition B and ITS 3.8.9 Conditions A, B, and C). Because repairs of non-functional AFCUs are estimated to be greater than 8 hours, a plant shutdown would be required (e.g., ITS LCO 3.8.9, Condition A).

Inserting "necessarily" in the Note for proposed ITS SR 3.7.8.1 makes another option available. If SW System flow is isolated to an individual component, the SW train servicing the component is declared inoperable and proposed ITS LCO 3.7.8 ACTION A entered. ITS LCO Condition A required action and completion time allows 72 hours to restore an inoperable SW train. The second option would be to declare the individual component (e.g., a DC electrical power distribution system) inoperable and follow its associated ACTIONS (e.g., proposed ITS LCO 3.8.9, Condition C, which is a 2 hours completion time) entered without declaring the SW System inoperable. Thus, instead of allowing a maximum of 2 hours to return an AFCU to service before commencing a plant shutdown, as much as 72 hours would be allowed if the SW system was declared inoperable.

2.2.2 Specification 3.7.2, Main Steam Isolation Valves

Kewaunee's Main Steam System directs steam in a 30-inch pipe from each of the two steam generators within the reactor containment through a swing-disc type isolation valve (main steam isolation valve) and a swing-disc type non-return valve to the turbine stop and control valves. When the reactor is not critical, these valves are normally closed to reduce the heat loss of maintaining the secondary system pressurized.

Current Kewaunee TS (CTS) do not have a specification for the main steam isolation valves (MSIVs) but do have specifications for the MSIV isolation circuit and for valve isolation timing. The MSIV isolation circuit is required to be operable [CTS Table TS 3.5-4, Function 2] when reactor coolant system temperature is greater than 200°F (equivalent to ITS Modes 1, 2, 3, and 4) and the MSIVs are required to close in ≤ 5 seconds [CTS 4.7]. The MSIV isolation circuit minimum operable channel requirements are modified by a Note, which states; "Steam Line Isolation channels are not required to be operable when both main steam isolation valves are closed and deactivated." To ensure the isolation time testing of the MSIVs is performed under operating conditions the isolation time testing is performed at the highest operating temperature of the secondary system, CTS Hot Shutdown mode (RCS Tavg 540°F to 547°F, reactor critical). The currently proposed ITS SR 3.7.2.1 Note states; "Only required to be performed in Modes 1 and 2." If Kewaunee were to adopt the currently proposed ITS

for the MSIVs [ITS 3.7.2] the MSIV isolation time test could not be performed in the same manner.

DEK is proposing to modify the currently proposed ITS surveillance requirement (SR) 3.7.2.1 Note to allow up to 12 hours after the MSIVs are opened to perform the MSIV isolation timing test. The currently proposed ITS SR states; "Verify the isolation time of each MSIV is within limits," and the associated Note states; "Only required to be performed in Modes 1 and 2." The proposed SR 3.7.2.1 and its associated Note would require the currently proposed SR to be performed before the reactor is critical. Kewaunee routinely requires the reactor to be critical to provide enough heat to equalize the pressure across the MSIVs and allow them to be opened. This is because these valves are reverse seating swing check valves, air assisted to open and lift the discs above the steam flowpath. With a large differential pressure across the swing disc, the air assist cannot open the valve. Thus, to perform the isolation-timing test the MSIV needs to be opened, and to open the valves the reactor needs to be critical, but the valves cannot be opened because the SR needs to be performed before the reactor can be brought critical. In other words, these are mutually exclusive conditions.

DEK is proposing to modify the currently proposed ITS SR 3.7.2.1 Note to state that the SR is; "Not required to be performed until 12 hours after the MSIVs are open" This modification will allow DEK to open the MSIV when the reactor is critical and < 5% RTP, and then perform the isolation timing test.

3.0 TECHNICAL EVALUATION

3.1 Specification 3.7.8, Service Water System

3.1.1 Service Water System Description

The Kewaunee Service Water System is described in the Basis section of proposed ITS LCO 3.7.8 contained in Reference 1.

3.1.2 Current Licensing Basis

The current licensing basis and associated acceptance criteria for the Kewaunee Service Water System are described in the Basis section of proposed ITS LCO 3.7.8 contained in Reference 1.

3.1.3 Technical Analysis

Kewaunee's Current Technical Specification (CTS) for the Service Water System is TS 3.3.e, "Service Water." CTS 3.3.e requires, in part, that the reactor shall not be made critical, except for low power physics testing, without two service water trains operable. If, during reactor critical operations, one train of service water is made or found inoperable, 72 hours is allowed to restore the inoperable train prior to taking action to shutdown the reactor. Because the area fan coil units (AFCUs) receive

cooling water from the service water system, their ability to perform their function must be evaluated and the operability of CTS required equipment that is supported by the AFCUs must be determined. If it is determined that AFCUs with a degraded or inoperable service water train cannot perform their support function for CTS-required equipment, then the CTS-required equipment must be declared inoperable and the appropriate CTS LCO Action is entered. This support / supported determination is made in accordance with CTS 1.0.e, "Operable-Operability."

Under NUREG 1431, Standard Technical Specifications - Westinghouse Plants, Revision 3.0 (reference 2) (ISTS), LCO 3.7.8 Condition A, if one SW System train is inoperable, action must be taken to restore the SW train to OPERABLE status within 72 hours. In this Condition, the remaining OPERABLE SW system train is adequate to perform the post-accident heat removal function. However, overall reliability is reduced because a single failure in the OPERABLE SW system train could result in loss of SW system function. Required Action A.1 is modified by two Notes. The first Note indicates that the applicable Conditions and Required Actions of LCO 3.8.1, "AC Sources - Operating," should be entered if an inoperable SW system train results in an inoperable emergency diesel generator. The second Note indicates that the applicable Conditions and Required Actions of LCO 3.4.6, "RCS Loops - MODE 4," should be entered if an inoperable SW system train results in an inoperable decay heat removal train. This is an exception to ISTS LCO 3.0.6 and ensures the proper actions are taken for these components. The 72-hour Completion Time is based on the redundant capabilities afforded by the OPERABLE train, and the low probability of a DBA occurring during this period.

ISTS LCO 3.0.6 establishes an exception to ISTS LCO 3.0.2 [Upon discovery of a failure to meet an LCO, the Required Actions of the associated Conditions shall be met, except as provided in LCO 3.0.5 and LCO 3.0.6] for support systems that have an LCO specified in the Technical Specifications (TS). This exception is provided because LCO 3.0.2 would require that the Conditions and Required Actions of the associated inoperable supported system LCO be entered solely due to the inoperability of the support system. The basis for ISTS LCO 3.0.6 states that this exception is justified because the actions that are required to ensure the unit is maintained in a safe condition are specified in the support system LCO's Required Actions. These Required Actions may include entering the supported system's Conditions and Required Actions or may specify other Required Actions. Thus, the design of ISTS is that the Required Actions and associated Completion Times of the directly affected SSCs are prescribed considering the indirect effects of the supported SSCs.

Additionally, the ISTS LCO 3.0.6 Bases state that when a support system is inoperable and there is an LCO specified for it in the TS, the supported system(s) are required to be declared inoperable if determined to be inoperable as a result of the support system inoperability. However, it is not necessary to enter into the supported systems' Conditions and Required Actions unless directed to do so by the support system's Required Actions. The potential confusion and inconsistency of requirements related to the entry into multiple support and supported systems' LCOs' Conditions and Required

Actions are eliminated by providing all the actions that are necessary to ensure the unit is maintained in a safe condition in the support system's Required Actions.

This modification of the proposed ITS SR 3.7.8.1 Note follows this same philosophy. Consider a condition where a Service Water System train is degraded to a point where the train is declared inoperable. The proposed ITS LCO 3.7.8 Condition A would be entered with a Required Action of, "Restore SW system train to OPERABLE status," within a Completion Time of "72 Hours". The SSCs that the inoperable SW train supports would be declared inoperable. However, only the Conditions and Required Actions of the supported systems listed in the Notes contained in ITS LOC 3.7.8, Required Action a.1 would be entered. Specifically in this case the following Conditions and Required Actions would be entered: LCO 3.8.1, "AC Sources - Operating," for the emergency diesel generator made inoperable by the loss of SW and LCO 3.4.6, "RCS Loops - MODE 4," for residual heat removal loops made inoperable by the loss of SW. Under this proposed modification, degradation of the AFCU could lead to declaring the associated SW train inoperable with the same actions followed.

ISTS SR 3.7.8.1 includes a Note that states; "Isolation of SW System flow to individual components does not render the SW System inoperable." This Note implies that if the individual component is isolated from SW flow, then the SW System cannot be declared inoperable and the associated ACTIONS of ISTS 3.7.8 do not need to be taken. However, this Note should not preclude declaring the SW System inoperable if the SR is not met. Therefore, the Note has been modified in ITS SR 3.7.8.1 to add the amplifying word "necessarily." This allows the SW System to be declared inoperable when SW System flow to a component is isolated. Thus, if SW System flow is isolated to an individual component, either the SW System is declared inoperable and ITS 3.7.8 Condition A entered, or the individual component is declared inoperable (i.e., the SW System train is not declared inoperable in this case) and its associated ITS Conditions entered.

Under the proposed modification to proposed ITS SR 3.7.8.1 Note, the option to declare the Service Water train inoperable maintains safety of the plant by requiring entry into ITS LCO 3.7.8, Condition A. ITS LCO 3.7.8, Condition A envelopes a plant condition where an entire SW train is inoperable. With an entire SW train inoperable, the AFCUs in question also cannot perform their support functions (i.e., no cooling water). Thus a Condition, Required Action, and associated Completion Time, for an entire inoperable SW train bounds the condition where an individual component supported by the SW train is degraded or inoperable/non-functional. In addition, when a degraded or non-functional AFCU results in declaration of an inoperable SW train, the proposed ITS LCO 3.0.6 requires that an evaluation be performed in accordance with Specification ITS 5.5.13 "Safety Function Determination Program (SFDP)." Subsequently, if a loss of safety function is determined to exist by this program, the appropriate Conditions and Required Actions of the LCO in which the loss of safety function exists are required to be entered.

3.2 Specification 3.7.2, Main Steam Isolation Valves

3.1.1 Main Steam System Description

The Main Steam System is described in the Basis section of proposed ITS LCO 3.7.2 contained in Reference 1.

3.1.2 Current Licensing Basis

The current licensing basis and current licensing basis acceptance criteria for the Kewaunee Main Steam Isolation Valves (MSIVs) are described in the Bases section of proposed ITS LCO 3.7.2 contained in Reference 1.

3.1.3 Technical Analysis

Kewaunee's Current Technical Specification (CTS) 4.7 states that the MSIVs shall be tested once per operating cycle to verify a closure time of 5 seconds or less. The proposed conversion to Improved Technical Specifications (ITS) SR 3.7.2.1 (reference 1) requires a similar test, but a Note modifying ITS SR 3.7.2.1 states that the SR is only required to be performed in MODES 1 and 2. This changes the CTS by allowing operation in MODE 3 without performing the Surveillance Requirement. DEK is proposing to modify the proposed ITS SR 3.7.2.1 Note submitted in Reference 1 to require SR 3.7.2.1 to have been performed in Mode 1 and within 12 hours after the MSIVs are opened in Modes 2 and 3.

The purpose of CTS 4.7 is to demonstrate that the closure time of each MSIV is within the limits assumed in the containment and accident analyses. This test is normally conducted in MODE 2 with the unit at operating temperature and pressure. Addition of the NOTE modifying the Surveillance Requirement allows a delay in testing until 12 hours after the MSIVs are opened in Modes 2 or 3, to establish conditions consistent with those for which the acceptance criterion was generated. The limitations contained in the Note also prevent operating in Mode 1 without a current MSIVs isolation time test.

ISTS SR 3.7.2.1 (reference 2) includes a Note that allows entry into MODE 3 without the SR being performed. This would allow performance of the SR at temperatures and pressures closer to operating temperature and pressure. Normally, the isolation time test is performed while shutting down the plant. However, if maintenance is performed on the MSIVs while shutdown, the test needs to be re-performed sometime during the startup. Following maintenance, the MSIVs are stroked prior to entering MODE 4 to ensure they will close, if required. However, the actual isolation time test of record is not performed until MODE 2.

At Kewaunee, historical performance indicates that the steam lines cannot be kept warm with the MSIVs open in MODE 3 due to limited RCS heat inputs and secondary side heat losses. Thus, the MSIVs are normally kept closed (after the initial stroke test) in MODE 3 and in MODE 2 until after the unit is critical and physics tests are complete.

At that time, the MSIVs are opened and the isolation time test is performed. Therefore, Kewaunee is proposing to change the Note to state; "Not required to be performed in MODES 2 and 3 until 12 hours after the MSIVs are open."

This proposed Note will allow entry into both MODES 2 and 3, provided the MSIVs are closed. Within 12 hours after opening the MSIVs in either MODE 2 or 3, performance of SR 3.7.2.1 will be required. This 12 hour time limit minimizes the time the MSIVs are open in both MODES 2 and 3 without the SR being performed while allowing a reasonable amount of time to perform the SR, if required. The Note does not discuss any exception to MODE 1, thus ITS SR 3.7.2.1 is required to be performed prior to entry into MODE 1 consistent with the ISTS Note. Furthermore, if the unit is started up with the MSIVs open (although not normally done), the SR must be performed within 12 hours after entering MODE 3. The modified Note is more restrictive than the ISTS Note, since it has no time limit to perform the SR after entering MODE 3.

This change is considered acceptable because the MSIVs must remain closed to use the allowance beyond the initial 12 hours after entry into Mode 3. ITS LCO 3.7.2 does not require the MSIVs to be OPERABLE in MODES 2 and 3 if they are closed and deactivated. While the MSIVs are not required to be deactivated in the Note, the MSIVs are closed and their operation is controlled by plant procedures. In addition, although not required to be deactivated, opening of the MSIVs requires a deliberate act by the operators to equalize the pressure across these reverse seated swing check valves.

Additionally, ITS section 1.0 discusses the difference in the use of the terms "perform" and "met". It states,

"Situations where a Surveillance could be required (i.e., its Frequency could expire), but where it is not possible or not desired that it be performed until sometime after the associated LCO is within its Applicability, represent potential SR 3.0.4 conflicts. To avoid these conflicts, the SR (i.e., the Surveillance or the Frequency) is stated such that it is only "required" when it can be and should be performed. With an SR satisfied, SR 3.0.4 imposes no restriction. The use of "met" or "performed" in these instances conveys specific meanings. A Surveillance is "met" only when the acceptance criteria are satisfied. Known failure of the requirements of a Surveillance, even without a Surveillance specifically being "performed," constitutes a Surveillance not "met." "Performance" refers only to the requirement to specifically determine the ability to meet the acceptance criteria."

Thus, DEK proposal to modify the Note for SR 3.7.2.1 is acceptable because:

1. If no maintenance is to be performed on the MSIV, the isolation time test is performed within its prescribed frequency and the MSIV is operable,
2. If maintenance has been performed on the MSIV, the MSIV is stroked prior to entering Mode 3 and the MSIV is considered operable (SR met) when opened. However, ITS SR 3.7.2.1 must be performed within 12 hours of opening the MSIV in order to maintain operability of the MSIV.

4.0 REGULATORY EVALUATION

The regulatory evaluation for this proposed change is contained in Reference 1.

5.0 REFERENCES:

1. Letter from Leslie N. Hartz (DEK) to Document Control Desk (NRC), "License Amendment Request 249: Kewaunee Power Station Conversion to Improved Technical Specifications (TAC NO. ME02467)," dated August 24, 2009. (ADAMS Accession No's ML092440371, ML092440416 through ML092440435, and ML092440441)
2. NUREG-1431, Volume 1, Rev. 3.0, "Standard Technical Specifications - Westinghouse Plants," Published June 2004.

ATTACHMENT 2

**LICENSE AMENDMENT REQUEST 249: KEWAUNEE POWER STATION
CONVERSION TO IMPROVED TECHNICAL SPECIFICATIONS (TAC NO. ME02467)
– REQUEST TO CHANGE PROPOSED SERVICE WATER AND MAIN STEAM
ISOLATION VALVE SPECIFICATIONS**

**MODIFIED DISCUSSION OF CHANGES (DOCS), PROPOSED TECHNICAL
SPECIFICATIONS, AND JUSTIFICATION FOR DEVIATIONS (JFDS)**

**KEWAUNEE POWER STATION
DOMINION ENERGY KEWAUNEE, INC.**

**DISCUSSION OF CHANGES
ITS 3.7.2, MAIN STEAM ISOLATION VALVES (MSIVs)**

systems, components are maintained in the MODES and other specified conditions assumed in the safety analyses and licensing basis. Due to this change in Applicability, the shutdown action has also been modified to only require entering MODE 4, which will exit the new Applicability. The proposed time to reach MODE 4 is reasonable, based on operating experience, to reach MODE 4 from full power conditions in an orderly manner and without challenging plant systems. This change is designated as less restrictive because the ITS LCO requirements are applicable in fewer operating conditions than in the CTS.

L02

(Category 7- *Relaxation Of Surveillance Frequency*) CTS 4.7 states that the main steam isolation valves shall be tested once per operating cycle to verify a closure time of 5 seconds or less. ITS SR 3.7.2.1 requires a similar test, but Note modifying ITS SR 3.7.2.1 allows that the SR is ~~only required to be performed in MODES 1 and 2~~. This changes the CTS by allowing entry into ~~MODE 3~~ without performing the Surveillance Requirement.

not required to be performed in MODES 2 and 3 until 12 hours after the MSIVs are open.

MODES 2 and 3 under certain conditions

The purpose of CTS 4.7 is to demonstrate that the closure time of each MSIV is within the limits assumed in the containment and accident analyses. This test is normally conducted in ~~MODE 3~~ with the unit at operating temperature and pressure. Addition of the NOTE modifying the Surveillance Requirement allows a delay in testing until ~~MODE 3~~, to establish conditions consistent with those for which the acceptance criterion was generated. ~~This change is designated as less restrictive because the ITS Surveillance Requirement is required to be performed in fewer operating conditions than in the CTS.~~

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Once the MSIVs are opened when in MODE 2 or 3, 12 hours is allowed to perform the SR. This provides the necessary time to perform the SR, but restricts the time the SR is not performed with the MSIVs open when in these MODES.

CTS

All changes are (1)
unless otherwise noted

MSIVs
3.7.2

SURVEILLANCE REQUIREMENTS

		SURVEILLANCE	FREQUENCY
4.7	SR 3.7.2.1	<p>-----NOTE-----</p> <p>Only required to be performed in MODES 1 and 2.</p> <p>Verify the isolation time of each MSIV is ≤ 4.6 seconds. within limits</p>	<p>Not required to be performed in MODES 2 and 3 until 12 hours after the MSIVs are open.</p> <p>In accordance with the Inservice Testing Program</p>
DOC M05	SR 3.7.2.2	<p>-----NOTE-----</p> <p>Only required to be performed in MODES 1 and 2.</p> <p>Verify each MSIV actuates to the isolation position on an actual or simulated actuation signal.</p>	<p>18 months</p>

(3)

TSTF-491-A

JUSTIFICATION FOR DEVIATIONS
ITS 3.7.2, MAIN STEAM ISOLATION VALVES (MSIVs)

1. The ISTS contains bracketed information and/or values that are generic to all Westinghouse vintage plants. The brackets are removed and the proper plant specific information/value is provided. This is acceptable since the generic specific information/value is revised to reflect the current plant design.
2. ISTS 3.7.2 Required Actions A.1 and C.1 provide a bracketed 8 hours to restore an inoperable MSIV to OPERABLE status (A.1) or to close the MSIV (C.1). CTS 3.6.b.3.C provides the Actions for an inoperable MSIV, since the MSIVs are containment isolation valves that isolate closed system penetrations. The CTS provides a 72 hour time to either restore the inoperable MSIV or to isolate the affected penetration. This allowance was approved by the NRC in Amendment No. 155, as documented in the NRC Safety Evaluation, dated June 8, 2001 (ADAMS accession No. ML011650102). Since the currently allowed 72 hours is much longer than the bracketed 8 hour time in the ISTS, and to bring the Completion Time more in line with the ISTS, Dominion Energy Kewaunee (DEK) has decided to reduce the Completion Time to 24 hours, consistent with the containment isolation valves associated with non-closed system penetrations.

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| <ol style="list-style-type: none"> 3. ISTS SR 3.7.2.1 includes a Note that allows entry into MODE 3 without the SR being performed. This allows the SR to be performed at temperatures and pressures closer to operating temperature and pressure, in order to more closely match the conditions under which the MSIVs need to be closed within the 5 second time limit. Normally, the stroke time test is performed during a shutdown. However, if maintenance is performed on the MSIVs, the test needs to be re-performed sometime during the startup. Following maintenance, the MSIVs are stroked prior to entering MODE 3 to ensure they are OPERABLE and will close if required. However, the actual stroke time test of record is not performed until MODE 2. At KPS, the steam lines cannot be kept warm with the MSIVs open in MODE 3. Thus, the MSIVs are normally kept closed (after the initial stroke test) in MODE 3 and in MODE 2 until after the unit is critical in MODE 2 and physics tests are complete. At that time, the MSIVs are opened and the timing test is performed. Therefore, KPS is changing the Note to state "Not required to be performed in MODES 2 and 3 until 12 hours after the MSIVs are open." This proposed Note will allow entry into both MODES 2 and 3, provided the MSIVs are closed. Within 12 hours after opening the MSIVs in either MODE 2 or 3, SR 3.7.2.1 will be required to be performed. This 12 hour time limits the time the MSIVs are open in both MODES 2 and 3 without the SR being performed. The Note also does not discuss any exception to MODE 1, thus the SR is required to be performed prior to entry into MODE 1, consistent with the ISTS Note. Furthermore, if the unit is started up with the MSIVs open (which while not normally done, can be done this way), the SR must be performed within 12 hours after entering MODE 3. This is actually more restrictive than the ISTS Note, since it has no time limit to perform the SR after entering MODE 3. This change is acceptable since the MSIVs must remain closed to use the allowance. The LCO does not require the MSIVs to be OPERABLE in MODES 2 and 3 if they are closed and deactivated. While the MSIVs are not required to be deactivated in the Note, the MSIVs are closed and their operation is closely controlled by plant procedures. |
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BASES

ACTIONS (continued)

D.1 and D.2

If the MSIVs ~~cannot be restored to OPERABLE status or~~ are not closed within the associated Completion Time, the unit must be placed in a MODE in which the LCO does not apply. To achieve this status, the unit must be placed at least in MODE 3 within 6 hours, and in MODE 4 within 12 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from MODE 2 conditions in an orderly manner and without challenging unit systems.

5

SURVEILLANCE REQUIREMENTS

SR 3.7.2.1

This SR verifies that ~~the~~ MSIV closure time is ~~≤ [4.6] seconds~~. The MSIV isolation time is assumed in the accident and containment analyses. This Surveillance is normally performed upon returning the unit to operation following a refueling outage. The MSIVs should not be tested at power, since even a part stroke exercise increases the risk of a valve closure when the unit is generating power. As the MSIVs are not tested at power, they are exempt from the ASME Code (Ref. 5), requirements during operation in MODE 1 or 2.

of each MSIV within the limit given in Reference 4 and is within that

SR

TSTF-491-A

This SR also verifies the valve closure time is in accordance with the Inservice Testing Program.

The Frequency is in accordance with the Inservice Testing Program.

This test is conducted ~~in MODE 3~~ with the unit at operating temperature and pressure. This SR is modified by a Note that allows entry into and operation in ~~MODE 3~~ prior to performing the SR. This allows a delay of testing until ~~MODE 3~~, to establish conditions consistent with those under which the acceptance criterion was generated.

MODES 2 and 3

3

12 hours after the MSIVs are opened in MODE 2 or 3

, provided the MSIVs are closed. Once the MSIVs are opened in MODE 2 or 3, the SR must be performed within 12 hours. In addition, if the MSIVs are open when entering MODE 3, then the SR must be performed within 12 hours after entering MODE 3.

SR 3.7.2.2

This SR verifies that each MSIV can close on an actual or simulated actuation signal. This Surveillance is normally performed upon returning the plant to operation following a refueling outage. The Frequency of MSIV testing is every [18] months. The [18] month Frequency for testing is based on the refueling cycle. Operating experience has shown that these components usually pass the Surveillance when performed at the [18] month Frequency. Therefore, this Frequency is acceptable from a reliability standpoint.

2

2

CTS

All changes are (1) unless otherwise noted

System SW 3.7.8

3.7 PLANT SYSTEMS

3.7.8 Service Water System (SW)

3.3.e.1.A LCO 3.7.8 Two SW trains shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
3.3.e.2 A. One SW train inoperable.	<p>A.1</p> <p>-----NOTES-----</p> <p>1. Enter applicable and Required Actions of LCO 3.8.1, "AC Sources - Operating," for emergency diesel generator made inoperable by SW.</p> <p>2. Enter applicable Conditions and Required Actions of LCO 3.4.6, "RCS Loops - MODE 4," for residual heat removal loops made inoperable by SW.</p> <p>-----</p> <p>Restore SW train to OPERABLE status.</p>	<p>Conditions</p> <p>72 hours</p>
3.3.e.2 B. Required Action and associated Completion Time of Condition A not met.	<p>B.1 Be in MODE 3.</p> <p><u>AND</u></p> <p>B.2 Be in MODE 5.</p>	<p>6 hours</p> <p>36 hours</p>

CTS

All changes are (1)
unless otherwise noted

System SW 3.7.8

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY	
DOC M03	<p>SR 3.7.8.1</p> <p>NOTE----- Isolation of SW flow to individual components does not render the SW inoperable. -----</p> <p>necessarily</p> <p>Verify each SW manual, power operated, and automatic valve in the flow path servicing safety related equipment, that is not locked, sealed, or otherwise secured in position, is in the correct position.</p>	31 days	6
DOC M03	<p>INSERT 1</p> <p>SR 3.7.8.2</p> <p>Verify each SW automatic valve in the flow path that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.</p>	18 months	3, 5
DOC M03	<p>SR 3.7.8.3</p> <p>Verify each SW pump starts automatically on an actual or simulated actuation signal.</p>	18 months	3
			4

**JUSTIFICATION FOR DEVIATIONS
ITS 3.7.8, SERVICE WATER (SW) SYSTEM**

1. Changes are made (additions, deletions, and/or changes) to the ISTS Specification which reflect the plant specific nomenclature, number, reference, system description, analysis, or licensing basis description.
2. Note 1 of Required Action A.1 is missing the word "Conditions". The correct titles of the ACTIONS Table Headers are "CONDITION" and "REQUIRED ACTION". The word "Conditions" is inserted in the Note at the applicable place. This change is considered a typographical error of the ISTS.
3. The ISTS contains bracketed information and/or values that are generic to all Westinghouse vintage plants. The brackets are removed and the proper plant specific information/value is provided. This is acceptable since the generic specific information/value is revised to reflect the current plant design.
4. A new Surveillance Requirement (SR 3.7.8.4) has been added to perform a CHANNEL CALIBRATION in the Forebay Water Level instrumentation. The new Surveillance serves as a means to prove that the Forebay Water Level instrumentation is OPERABLE, consistent with the current licensing requirements. Additionally, a new Surveillance Requirement (SR 3.7.8.5) has been added to ensure the Circulating Water pump breakers trip on an actual or simulated Forebay Water Level Low-Low signal. The new SR serves as a means to prove the operability of the Forebay Water Level Trip System, consistent with the current licensing requirements.
5. ISTS SR 3.7.8.2 has been modified by a Note that allows the turbine building header isolation valve actuation to not be required provided the valve is closed and deactivated. This is consistent with the CTS 3.3.e.1.A.3 allowance and is acceptable since with the valve in the closed position, it is in its accident condition.

6. ISTS SR 3.7.8.1 includes a Note that states isolation of SW System flow to individual components does not render the SW System inoperable. This Note implies that if the individual component is isolated from SW flow, then the SW System cannot be declared inoperable and the associated ACTIONS of ITS 3.7.8 taken. However, this Note should not preclude the licensee from declaring the SW System inoperable if the SR is not met, in lieu of considering the SW System OPERABLE. Therefore, the Note has been modified to add the amplifying word "necessarily." This allows the licensee to decide whether or not to declare the SW System inoperable when SW System flow to a component is isolated.

OPTION 1

All changes are (1) unless otherwise noted

System SW B 3.7.8

BASES

ACTIONS (continued)

LCO 3.0.6 and ensures the proper actions are taken for these components. The 72 hour Completion Time is based on the redundant capabilities afforded by the OPERABLE train, and the low probability of a DBA occurring during this time period.

B.1 and B.2

If the SW train cannot be restored to OPERABLE status within the associated Completion Time, the unit must be placed in a MODE in which the LCO does not apply. To achieve this status, the unit must be placed in at least MODE 3 within 6 hours and in MODE 5 within 36 hours.

The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

SURVEILLANCE REQUIREMENTS

SR 3.7.8.1

This SR is modified by a Note indicating that the isolation of the SW components or systems may render those components inoperable, but does not affect the OPERABILITY of the SW System necessarily

6

That is, if SW System flow is isolated to an individual component, either the SW System is declared inoperable and ACTION A entered, or the individual component is declared inoperable and its associated ACTIONS entered (i.e., the SW System is not declared inoperable in this case).

Verifying the correct alignment for manual, power operated, and automatic valves in the SW flow path provides assurance that the proper flow paths exist for SW operation. This SR does not apply to valves that are locked, sealed, or otherwise secured in position, since they are verified to be in the correct position prior to being locked, sealed, or secured. This SR does not require any testing or valve manipulation; rather, it involves verification that those valves capable of being mispositioned are in the correct position. This SR does not apply to valves that cannot be inadvertently misaligned, such as check valves.

The 31 day Frequency is based on engineering judgment, is consistent with the procedural controls governing valve operation, and ensures correct valve positions.

**JUSTIFICATION FOR DEVIATIONS
ITS 3.7.8 BASES, SERVICE WATER (SW) SYSTEM**

1. Changes are made (additions, deletions, and/or changes) to the ISTS Bases which reflect the plant specific nomenclature, number, reference, system description, analysis, or licensing basis description.
2. The ISTS contains bracketed information and/or values that are generic to all Westinghouse vintage plants. The brackets are removed and the proper plant specific information/value is provided. This is acceptable since the generic specific information/value is revised to reflect the current plant design.
3. A new Surveillance Requirement (SR 3.7.8.4) has been added to ensure the Circulating Water System pumps trip on an actual or simulated Forebay Water Level Low-Low signal. The CTS requires the Forebay Water Level Trip System be OPERABLE however there is no Surveillance Requirement to prove operability. The new SR serves as a means to prove the operability of the Forebay Water Level Trip System.
4. The term "safety related function" has been change to "safety function" to be consistent with terminology in the definition of OPERABLE – OPERABILITY.
5. Changes made to reflect changes made to the Specifications.
6. Changes have been made to be consistent with changes made to the ISTS. Specifically, the word "necessarily" has been added to the Note to ISTS SR 3.7.8.1, and an explanation of how the Note is to be applied has been added.