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March 11, 2009
L-09-031

10 CFR 50.90

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

SUBJECT:
Perry Nuclear Power Plant
Docket No. 50-440, License No. NPF-58
Application for Technical Specification Change Regarding Revision of Control Rod Notch Surveillance Test Frequency and a Clarification of a Frequency Example

In accordance with the provisions of 10 CFR 50.90, FirstEnergy Nuclear Operating Company (FENOC) is submitting a request for an amendment to the technical specifications (TS) for the Perry Nuclear Power Plant (PNPP).

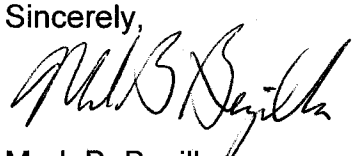
The proposed amendment would: (1) revise TS surveillance requirement (SR) frequency in TS 3.1.3, "Control Rod OPERABILITY," and (2) revise Example 1.4-3 in Section 1.4 "Frequency" to clarify the applicability of the 1.25 surveillance test interval extension. The enclosure provides the evaluation for the proposed amendment.

Approval of the license amendment is requested prior to August 29, 2009, with the amendment to be implemented within 90 days following its effective date.

Regulatory commitments associated with this submittal are included in the attachment. If there are any questions or if additional information is required, please contact Mr. Thomas A. Lentz, Manager – Fleet Licensing, at (330) 761-6071.

I declare under penalty of perjury that the foregoing is true and correct. Executed on March 11, 2009.

Sincerely,



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Mark B. Bezilla

Attachment:
Regulatory Commitment List

Enclosure:
Application for Technical Specification Change Regarding Revision of Control Rod Notch Surveillance Test Frequency and a Clarification of a Frequency Example

cc: NRC Region III Administrator
NRC Resident Inspector
NRR Project Manager
Executive Director, Ohio Emergency Management Agency, State of Ohio (NRC Liaison)
Utility Radiological Safety Board

Attachment
L-09-031

Regulatory Commitment List

The following list identifies those actions committed to by FirstEnergy Nuclear Operating Company (FENOC) for Perry Nuclear Power Plant in this document. Any other actions discussed in the submittal represent intended or planned actions by FENOC. They are described only as information and are not Regulatory Commitments. Please notify Mr. Thomas A. Lentz, Manager - Fleet Licensing, at (330) 761-6071 of any questions regarding this document or associated Regulatory Commitments.

Regulatory Commitment	Due Date
1. FENOC commits to revising Technical Specification Bases based on TSTF-475, Revision 1 as proposed in Attachment 2 to the Enclosure.	Concurrent with amendment implementation.

Application for Technical Specification Change Regarding
Revision of Control Rod Notch Surveillance Test Frequency and a
Clarification of a Frequency Example

Attachments:

1. Proposed Technical Specification Changes (Mark-Up)
2. Proposed Changes to Technical Specifications Bases
3. Proposed Technical Specification Changes (Retyped)

1.0 DESCRIPTION

The proposed amendment would: (1) revise the Technical Specification (TS) Surveillance Requirement (SR) 3.1.3.2 frequency in TS 3.1.3, "Control Rod OPERABILITY," and (2) revise Example 1.4-3 in Section 1.4, "Frequency," to clarify the applicability of the 1.25 surveillance test interval extension.

The changes are consistent with Nuclear Regulatory Commission (NRC) approved Industry/Technical Specification Task Force (TSTF) Standard Technical Specification (STS) change TSTF-475, Revision 1. The *Federal Register* notice published on November 13, 2007 announced the availability of this TS improvement through the consolidated line item improvement process (CLIIP).

2.0 ASSESSMENT

2.1 Applicability of Published Safety Evaluation

FirstEnergy Nuclear Operating Company (FENOC) has reviewed the safety evaluation dated November 5, 2007 as part of the CLIIP. This review included a review of the NRC staff's evaluation, as well as the background information provided to support TSTF-475, Revision 1. FENOC has concluded that the justifications presented in the TSTF proposal and the safety evaluation prepared by the NRC staff are applicable to Perry Nuclear Power Plant (PNPP), Unit 1 and justify this amendment for the incorporation of the changes to the PNPP TS.

2.2 Optional Changes and Variations

TSTF-475, Revision 1 proposes three changes to the STS. The proposed change: (1) revises the TS control rod notch surveillance frequency in TS 3.1.3, (2) clarifies the TS 3.3.1.2 requirement for fully inserting control rods for one or more inoperable SRMs in Mode 5, and (3) revises one example in Section 1.4, "Frequency," to clarify the applicability of the 1.25 surveillance test interval extension.

Only two of the changes are proposed for this amendment application. The change to TS 3.3.1.2, which is not included in this amendment application, would have incorporated the word "fully" into Required Action E.2, "Source Range Monitoring Instrumentation," as follows:

> Initiate action to *fully* insert all insertable control rods in core cells containing one or more fuel assemblies.

The word "fully" is already in PNPP TS 3.3.1.2, Required Action E.2, "Source Range Monitoring Instrumentation." Therefore, no change is necessary to incorporate this aspect of TSTF-475 into the PNPP TS.

FENOC is not proposing any other variations or deviations from the TS changes described in the modified TSTF-475, Revision 1 and the NRC staff's model safety evaluation dated November 5, 2007.

FENOC is proposing a variation relative to the proposed TS Bases changes contained in TSTF-475, Revision 1. The TSTF-475 proposed TS Bases discussion for SR 3.1.3.3 (previously identified as SR 3.1.3.4) would remove SR 3.1.4.4 from the listed SRs performed in conjunction with SR 3.1.3.3. Incorporation of this change would be inconsistent with TS SR 3.1.3.3, which includes SR 3.1.4.4 in the Frequency column.

3.0 REGULATORY ANALYSIS

3.1 No Significant Hazards Consideration Determination

FENOC has reviewed the proposed no significant hazards consideration determination (NSHCD) published in the *Federal Register* as part of the CLIIP. FENOC has concluded that the proposed NSHCD presented in the *Federal Register* notice is applicable to PNPP without need for modification despite the deviation described in Section 2.2 of this application and is hereby incorporated by reference to satisfy the requirements of 10 CFR 50.91(a).

3.2 Verification and Commitments

As discussed in the notice of availability published in the *Federal Register* on November 13, 2007 for this TS improvement, FENOC verifies the applicability of TSTF-475 to PNPP, and commits to revising Technical Specification Bases based on TSTF-475, Revision 1, as proposed in Attachment 2.

These changes are based on TSTF change traveler TSTF-475, Revision 1, which proposes revisions to the STS by: (1) revising the frequency of SR 3.1.3.2, notch testing of fully withdrawn control rod, from "7 days after the control rod is withdrawn and THERMAL POWER is greater than the [Low Power Setpoint] LPSP of [Rod Pattern Control System] RPCS" to "31 days after the control rod is withdrawn and THERMAL POWER is greater than the LPSP of the RPCS," and (2) revising Example 1.4-3 in Section 1.4, "Frequency," to clarify that the 1.25 surveillance test interval extension in SR 3.0.2 is applicable to time periods discussed in NOTES in the "SURVEILLANCE" column in addition to the time periods in the "FREQUENCY" column.

4.0 ENVIRONMENTAL EVALUATION

FENOC has reviewed the environmental evaluation included in the model safety evaluation dated November 5, 2007 as part of the CLIIP. FENOC has concluded that the staff's findings presented in that evaluation are applicable to PNPP without need for modification despite the deviation described in Section 2.2 of this application, and the evaluation is hereby incorporated by reference for this application.

PROPOSED TECHNICAL SPECIFICATION CHANGES

(MARK-UP)

EXAMPLES

EXAMPLE 1.4-2 (continued)

"Thereafter" indicates future performances must be established per SR 3.0.2, but only after a specified condition is first met (i.e., the "once" performance in this example). If reactor power decreases to < 25% RTP, the measurement of both intervals stops. New intervals start upon reactor power reaching 25% RTP.

EXAMPLE 1.4-3

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
----------NOTE---------- Not required to be performed until 12 hours after ≥ 25% RTP. ----------	
Perform channel adjustment.	7 days

The interval continues whether or not the unit operation is < 25% RTP between performances.

As the Note modifies the required performance of the Surveillance, it is construed to be part of the "specified Frequency." Should the 7 day interval be exceeded while operation is < 25% RTP, this Note allows 12 hours after power reaches ≥ 25% RTP to perform the Surveillance. The Surveillance is still considered to be within the "specified Frequency." Therefore, if the Surveillance were not performed within the 7 day (plus the extension allowed by SR 3.0.2) interval, but operation was < 25% RTP, it would not constitute a failure of the SR or failure to meet the LCO. Also, no violation of SR 3.0.4 occurs when changing MODES, even with the 7 day Frequency not met, provided operation does not exceed 12 hours with power ≥ 25% RTP.

(continued)

(plus the extension allowed by SR 3.0.2)

1.4 Frequency

EXAMPLES

EXAMPLE 1.4-3 (continued)

(plus the extension allowed by SR 3.0.2)

Once the unit reaches 25% RTP, 12 hours would be allowed for completing the Surveillance. If the Surveillance were not performed within this 12 hour interval, there would then be a failure to perform a Surveillance within the specified Frequency, and the provisions of SR 3.0.3 would apply.

EXAMPLE 1.4-4

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
----------NOTE---------- Only required to be met in MODE 1. ----------	
Verify leakage rates are within limits.	24 hours

Example 1.4-4 specifies that the requirements of this Surveillance do not have to be met until the unit is in MODE 1. The interval measurement for the Frequency of this Surveillance continues at all times, as described in Example 1.4-1. However, the Note constitutes an "otherwise stated" exception to the Applicability of this Surveillance. Therefore, if the Surveillance were not performed within the 24 hour (plus the extension allowed by SR 3.0.2) interval, but the unit was not in MODE 1, there would be no failure of the SR nor failure to meet the LCO. Therefore, no violation of SR 3.0.4 occurs when changing MODES, even with the 24 hour Frequency exceeded, provided the MODE change was not made into MODE 1. Prior to entering MODE 1 (assuming again that the 24 hour Frequency were not met), SR 3.0.4 would require satisfying the SR, except as provided by SR 3.0.3 and LCO 3.0.4.

3.1 REACTIVITY CONTROL SYSTEMS

3.1.3 Control Rod OPERABILITY

LCO 3.1.3 Each control rod shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTIONS

----------NOTE----------
Separate Condition entry is allowed for each control rod.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One withdrawn control rod stuck.	----------NOTE---------- A stuck rod may be bypassed in the Rod Action Control System (RACS) in accordance with SR 3.3.2.1.9 if required to allow continued operation. --- A.1 Verify stuck control rod separation criteria are met. AND A.2 Disarm the associated control rod drive (CRD). AND	Immediately 2 hours (continued)

No change proposed.
Included for context.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. (continued)	A.3	Perform SR 3.1.3.2 ~~and SR 3.1.3.3~~ for each withdrawn OPERABLE control rod.	24 hours from discovery of Condition A concurrent with THERMAL POWER greater than or equal to the low power setpoint (LPSP) of the Rod Pattern Control System (RPCS).
	AND		
	A.4	Perform SR 3.1.1.1.	72 hours
B. Two or more withdrawn control rods stuck.	B.1	Be in MODE 3.	12 hours
C. One or more control rods inoperable for reasons other than Condition A or B.	C.1	--------NOTE-------- Inoperable control rods may be bypassed in RACS in accordance with SR 3.3.2.1.9, if required, to allow insertion of inoperable control rod and continued operation. ---------- Fully insert inoperable control rod.	3 hours
	AND		
	C.2	Disarm the associated CRD.	4 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. ---------NOTE--------- Not applicable when THERMAL POWER > 19.0% RTP. ---------- Two or more inoperable control rods not in compliance with banked position withdrawal sequence (BPWS) and not separated by two or more OPERABLE control rods.	D.1 Restore compliance with BPWS. OR D.2 Restore control rod to OPERABLE status.	4 hours 4 hours
E. Required Action and associated Completion Time of Condition A. C. or D not met. OR Nine or more control rods inoperable.	E.1 Be in MODE 3.	12 hours

No change proposed.
Included for context.

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.1.3.1	Determine the position of each control rod.	24 hours
SR 3.1.3.2	----------NOTE---------- Not required to be performed until 7 days after the control rod is withdrawn and THERMAL POWER is greater than the LPSP of the RPCS. ---------- Insert each fully withdrawn control rod at least one notch.	7 days
SR 3.1.3.~~3~~ (2)	----------NOTE---------- Not required to be performed until 31 days after the control rod is withdrawn and THERMAL POWER is greater than the LPSP of the RPCS. ---------- Insert each ~~partially~~ withdrawn control rod at least one notch.	31 days
SR 3.1.3.~~4~~ (3)	Verify each control rod scram time from fully withdrawn to notch position 13 is $\leq$ 7 seconds.	In accordance with SR 3.1.4.1, SR 3.1.4.2, SR 3.1.4.3, and SR 3.1.4.4

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.1.3.~~8~~ 4 Verify each control rod does not go to the withdrawn overtravel position.	Each time the control rod is withdrawn to "full out" position AND Prior to declaring control rod OPERABLE after work on control rod or CRD System that could affect coupling

Table 3.1.4-1
Control Rod Scram Times

NOTES

1. OPERABLE control rods with scram times not within the limits of this Table are considered "slow."

2. Enter applicable Conditions and Required Actions of LCO 3.1.3, "Control Rod OPERABILITY," for control rods with scram times > 7 seconds to notch position 13. These control rods are inoperable, in accordance with SR 3.1.3.3, and are not considered "slow."

NOTCH POSITION	SCRAM TIMES(a)(b) (seconds)	
	REACTOR STEAM DOME PRESSURE(c) 950 psig	REACTOR STEAM DOME PRESSURE(c) 1050 psig
43	0.30	0.31
29	0.78	0.84
13	1.40	1.53

(a) Maximum scram time from fully withdrawn position, based on de-energization of scram pilot valve solenoids as time zero.

(b) Scram times as a function of reactor steam dome pressure when < 950 psig are within established limits.

(c) For intermediate reactor steam dome pressures, the scram time criteria are determined by linear interpolation.

PROPOSED CHANGES TO TECHNICAL SPECIFICATIONS BASES

(PROVIDED FOR INFORMATION)

BASES

LCO (continued)

satisfy the intended reactivity control requirements, strict control over the number and distribution of inoperable control rods is required to satisfy the assumptions of the DBA and transient analyses.

APPLICABILITY

In MODES 1 and 2, the control rods are assumed to function during a DBA or transient and are therefore required to be OPERABLE in these MODES. In MODES 3 and 4, control rods are not able to be withdrawn since the reactor mode switch is in Shutdown and a control rod block is applied. This provides adequate requirements for control rod OPERABILITY during these conditions. Control rod requirements in MODE 5 are located in LCO 3.9.5, "Control Rod OPERABILITY–Refueling."

ACTIONS

The ACTIONS table is modified by a Note indicating that a separate Condition entry is allowed for each control rod. This is acceptable, since the Required Actions for each Condition provide appropriate compensatory actions for each inoperable control rod. Complying with the Required Actions may allow for continued operation, and subsequent inoperable control rods are governed by subsequent Condition entry and application of associated Required Actions.

A.1, A.2, A.3, and A.4

A control rod is considered stuck if it will not insert (using all available insertion methods) by either CRD drive water or scram pressure. With a fully inserted control rod stuck, no actions are required as long as the control rod remains fully inserted. The Required Actions are modified by a Note that allows a stuck control rod to be bypassed in the Rod Action Control System (RACS) to allow continued operation. SR 3.3.2.1.9 provides additional requirements when control rods are bypassed in RACS to ensure compliance with the CRDA analysis. With one withdrawn control rod stuck, the local scram reactivity rate assumptions may not be met if the stuck control rod separation criteria are not met. Therefore, verification that the separation criteria

(continued)

Information Only

No change proposed. Included for context.

BASES

ACTIONS A.1, A.2, A.3, and A.4 (continued)

are met must be performed immediately. The stuck control rod separation criteria are that the stuck control rod may not occupy a location adjacent to a "slow" control rod. The description of "slow" control rods is provided in LCO 3.1.4 "Control Rod Scram Times". In addition, the control rod must be disarmed within 2 hours. The allowed Completion Time of 2 hours is acceptable, considering the reactor can still be shut down, assuming no additional control rods fail to insert, and provides a reasonable amount of time to perform the Required Action in an orderly manner. Isolating the control rod from scram prevents damage to the CRDM. The control rod can be

(continued)

Information Only

No change proposed. Included for context.

BASES

ACTIONS

A.1, A.2, A.3, and A.4 (continued)

isolated from scram by isolating the hydraulic control unit from scram and normal drive and withdraw pressure, yet still maintain cooling water to the CRD. A control rod can be hydraulically disarmed by closing the drive water and exhaust water isolation valves. Electrically, the control rod can be disarmed by disconnecting power from all four directional control valve solenoids.

Monitoring of the insertion capability for each withdrawn control rod must also be performed within 24 hours. (5) SR 3.1.3.2 and SR 3.1.3.3 perform periodic tests of the control rod insertion capability of withdrawn control rods. Testing each withdrawn control rod ensures that a generic problem does not exist. The allowed Completion Time of 24 hours provides a reasonable time to test the control rods, considering the potential for a need to reduce power to perform the tests. Required Action A.2 has a modified time zero Completion Time. The 24 hour Completion Time for this Required Action starts when the withdrawn control rod is discovered to be stuck and THERMAL POWER is greater than the actual low power setpoint (LPSP) of the rod pattern controller (RPC), since the notch insertions may not be compatible with the requirements of rod pattern control (LCO 3.1.6) and the RPC (LCO 3.3.2.1, "Control Rod Block Instrumentation").

To allow continued operation with a withdrawn control rod stuck, an evaluation of adequate SDM is also required within 72 hours. Should a DBA or transient require a shutdown, to preserve the single failure criterion an additional control rod would have to be assumed to have failed to insert when required. Therefore, the original SDM demonstration may not be valid. The SDM must therefore be evaluated (by measurement or analysis) with the stuck control rod at its stuck position and the highest worth OPERABLE control rod assumed to be fully withdrawn.

The allowed Completion Time of 72 hours to verify SDM is adequate, considering that with a single control rod stuck in a withdrawn position, the remaining OPERABLE control rods are capable of providing the required scram and shutdown reactivity. Failure to reach MODE 4 is only likely if an additional control rod adjacent to the stuck control rod

(continued)

Information Only

BASES

ACTIONS

A.1, A.2, A.3, and A.4 (continued)

also fails to insert during a required scram. Even with the postulated additional single failure of an adjacent control rod to insert, sufficient reactivity control remains to reach and maintain MODE 3 conditions (Ref. 7).

B.1

With two or more withdrawn control rods stuck, the plant should be brought to MODE 3 within 12 hours. Isolating the control rod from scram prevents damage to the CRDM. The occurrence of more than one control rod stuck at a withdrawn position increases the probability that the reactor cannot be shut down if required. Insertion of all insertable control rods eliminates the possibility of an additional failure of a control rod to insert. The allowed Completion Time of 12 hours is reasonable, based on operating experience, to reach MODE 3 from full power conditions in an orderly manner and without challenging plant systems.

C.1 and C.2

With one or more control rods inoperable for reasons other than being stuck in the withdrawn position, operation may continue, provided the control rods are fully inserted within 3 hours and disarmed (electrically or hydraulically) within 4 hours. Inserting a control rod ensures the shutdown and scram capabilities are not adversely affected. The control rod is disarmed to prevent inadvertent withdrawal during subsequent operations. The control rods can be hydraulically disarmed by closing the drive water and exhaust water isolation valves. Electrically, the control rods can be disarmed by disconnecting power from all four directional control valve solenoids. With a control rod not coupled to its associated drive mechanism, insert the control rod drive mechanism to accomplish recoupling. Verify recoupling by withdrawing the control rod and observing any indicated response of the nuclear instrumentation and demonstrating that the control rod drive will not go to the overtravel position. Required Action C.1 is modified by a Note that allows control rods to be bypassed in the RACS if required to allow insertion of the inoperable control rods and continued operation. SR 3.3.2.1.9 provides additional requirements when the control rods are bypassed to ensure compliance with the CRDA analysis.

(continued)

Information Only

No change proposed. Included for context.

BASES (continued)

SURVEILLANCE REQUIREMENTS

SR 3.1.3.1

The position of each control rod must be determined, to ensure adequate information on control rod position is available to the operator for determining control rod OPERABILITY and controlling rod patterns. Control rod position may be determined by the use of at least one OPERABLE position indicator, by moving control rods to a position with an OPERABLE indicator, or by the use of other appropriate methods. The 24 hour Frequency of this SR is based on operating experience related to expected changes in control rod position and the availability of control rod position indications in the control room.

SR 3.1.3.2 ~~and SR 3.1.3.3~~

Control rod insertion capability is demonstrated by inserting each partially or fully withdrawn control rod at least one notch and observing that the control rod moves. The control rod may then be returned to its original position. Observation of changes in indicated control rod position provides evidence that the control rod position indication is OPERABLE. This ensures the control rod is not stuck and is free to insert on a scram signal. When plant procedures permit, these SRs may also be met by rod scram. These Surveillances are not required when THERMAL POWER is less than or equal to the actual LPSP of the RPC since the notch insertions may not be compatible with the requirements of the BPWS (LCO 3.1.6) and the RPC (LCO 3.3.2.1). ~~The 7 day Frequency of SR 3.1.3.2 is based on operating experience related to the changes in CRD performance and the ease of performing notch testing for fully withdrawn control rods.~~ Partially withdrawn control rods are tested at a 31 day Frequency, based on the potential power reduction required to allow the control rod movement ~~and considering the large testing sample of SR 3.1.3.2~~. Furthermore, the 31 day Frequency takes into account operating experience related to changes in CRD performance. At any time, if a control rod is immovable, a determination of that control rod's trippability (OPERABILITY) must be made and appropriate action taken.

SR 3.1.3.~~3~~ 4

Verifying the scram time for each control rod to notch position 13 is $\leq$ 7 seconds provides reasonable assurance that the control rod will insert when required during a DBA or transient, thereby completing its shutdown function.

(continued)

Information Only

BASES

SURVEILLANCE REQUIREMENTS

SR 3.1.3.~~4~~3 (continued)

This SR is performed in conjunction with the control rod scram time testing of SR 3.1.4.1, SR 3.1.4.2, SR 3.1.4.3, and SR 3.1.4.4. The LOGIC SYSTEM FUNCTIONAL TEST in LCO 3.3.1.1, "Reactor Protection System (RPS) Instrumentation," and the functional testing of SDV vent and drain valves in LCO 3.1.8, "Scram Discharge Volume (SDV) Vent and Drain Valves," overlap this Surveillance to provide complete testing of the assumed safety function. The associated Frequencies are acceptable, considering the more frequent testing performed to demonstrate other aspects of control rod OPERABILITY and operating experience, which shows scram times do not significantly change over an operating cycle.

SR 3.1.3.~~5~~4

Coupling verification is performed to ensure the control rod is connected to the CRDM and will perform its intended function when necessary. The Surveillance requires verifying that a control rod does not go to the withdrawn overtravel position when it is fully withdrawn. The overtravel position feature provides a positive check on the coupling integrity, since only an uncoupled CRD can reach the overtravel position. The verification is required to be performed anytime a control rod is withdrawn to the "full out" position (notch position 48) or prior to declaring the control rod OPERABLE after work on the control rod or CRD System that could affect coupling. This includes control rods inserted one notch and then returned to the "full out" position during the performance of SR 3.1.3.2. Until the control rod reaches the "full out" position where coupling can be verified, the nuclear instrumentation is observed for any indicated response during withdrawal. This Frequency is acceptable, considering the low probability that a control rod will become uncoupled when it is not being moved and operating experience related to uncoupling events.

(continued)

Information Only

PROPOSED TECHNICAL SPECIFICATION CHANGES

(RETYPED)

1.4 Frequency

EXAMPLES

EXAMPLE 1.4-2 (continued)

"Thereafter" indicates future performances must be established per SR 3.0.2, but only after a specified condition is first met (i.e., the "once" performance in this example). If reactor power decreases to < 25% RTP, the measurement of both intervals stops. New intervals start upon reactor power reaching 25% RTP.

EXAMPLE 1.4-3

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
----------NOTE---------- Not required to be performed until 12 hours after ≥ 25% RTP. ----------	
Perform channel adjustment.	7 days

The interval continues whether or not the unit operation is < 25% RTP between performances.

As the Note modifies the required performance of the Surveillance, it is construed to be part of the "specified Frequency." Should the 7 day interval be exceeded while operation is < 25% RTP, this Note allows 12 hours after power reaches ≥ 25% RTP to perform the Surveillance. The Surveillance is still considered to be within the "specified Frequency." Therefore, if the Surveillance were not performed within the 7 day (plus the extension allowed by SR 3.0.2) interval, but operation was < 25% RTP, it would not constitute a failure of the SR or failure to meet the LCO. Also, no violation of SR 3.0.4 occurs when changing MODES, even with the 7 day Frequency not met, provided operation does not exceed 12 hours (plus the extension allowed by SR 3.0.2) with power ≥ 25% RTP.

(continued)

1.4 Frequency

EXAMPLES

EXAMPLE 1.4-3 (continued)

Once the unit reaches 25% RTP, 12 hours would be allowed for completing the Surveillance. If the Surveillance were not performed within this 12 hour interval (plus the extension allowed by SR 3.0.2), there would then be a failure to perform a Surveillance within the specified Frequency, and the provisions of SR 3.0.3 would apply.

EXAMPLE 1.4-4

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
----------NOTE---------- Only required to be met in MODE 1. ----------	
Verify leakage rates are within limits.	24 hours

Example 1.4-4 specifies that the requirements of this Surveillance do not have to be met until the unit is in MODE 1. The interval measurement for the Frequency of this Surveillance continues at all times, as described in Example 1.4-1. However, the Note constitutes an "otherwise stated" exception to the Applicability of this Surveillance. Therefore, if the Surveillance were not performed within the 24 hour (plus the extension allowed by SR 3.0.2) interval, but the unit was not in MODE 1, there would be no failure of the SR nor failure to meet the LCO. Therefore, no violation of SR 3.0.4 occurs when changing MODES, even with the 24 hour Frequency exceeded, provided the MODE change was not made into MODE 1. Prior to entering MODE 1 (assuming again that the 24 hour Frequency were not met), SR 3.0.4 would require satisfying the SR, except as provided by SR 3.0.3 and LCO 3.0.4.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. (continued)	A.3	Perform SR 3.1.3.2 for each withdrawn OPERABLE control rod.	24 hours from discovery of Condition A concurrent with THERMAL POWER greater than or equal to the low power setpoint (LPSP) of the Rod Pattern Control System (RPCS).
	AND		
	A.4	Perform SR 3.1.1.1.	72 hours
B. Two or more withdrawn control rods stuck.	B.1	Be in MODE 3.	12 hours
C. One or more control rods inoperable for reasons other than Condition A or B.	C.1	--------NOTE-------- Inoperable control rods may be bypassed in RACS in accordance with SR 3.3.2.1.9, if required, to allow insertion of inoperable control rod and continued operation. ---------- Fully insert inoperable control rod.	3 hours
	AND		
	C.2	Disarm the associated CRD.	4 hours

(continued)

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.1.3.1	Determine the position of each control rod.	24 hours
SR 3.1.3.2	----------NOTE---------- Not required to be performed until 31 days after the control rod is withdrawn and THERMAL POWER is greater than the LPSP of the RPCS. ---------- Insert each withdrawn control rod at least one notch.	31 days
SR 3.1.3.3	Verify each control rod scram time from fully withdrawn to notch position 13 is ≤ 7 seconds.	In accordance with SR 3.1.4.1, SR 3.1.4.2, SR 3.1.4.3, and SR 3.1.4.4

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.1.3.4	Verify each control rod does not go to the withdrawn overtravel position.	Each time the control rod is withdrawn to "full out" position AND Prior to declaring control rod OPERABLE after work on control rod or CRD System that could affect coupling

Table 3.1.4-1
Control Rod Scram Times

NOTES

1. OPERABLE control rods with scram times not within the limits of this Table are considered "slow."

2. Enter applicable Conditions and Required Actions of LCO 3.1.3, "Control Rod OPERABILITY," for control rods with scram times > 7 seconds to notch position 13. These control rods are inoperable, in accordance with SR 3.1.3.3, and are not considered "slow."

NOTCH POSITION	SCRAM TIMES(a)(b) (seconds)	
	REACTOR STEAM DOME PRESSURE(c) 950 psig	REACTOR STEAM DOME PRESSURE(c) 1050 psig
43	0.30	0.31
29	0.78	0.84
13	1.40	1.53

(a) Maximum scram time from fully withdrawn position, based on de-energization of scram pilot valve solenoids as time zero.

(b) Scram times as a function of reactor steam dome pressure when < 950 psig are within established limits.

(c) For intermediate reactor steam dome pressures, the scram time criteria are determined by linear interpolation.