



ENERGY NORTHWEST

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10 CFR 50.90

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

Subject: **COLUMBIA GENERATING STATION, DOCKET NO. 50-397
LICENSE AMENDMENT REQUEST TO REVISE CONTROL ROD NOTCH
TESTING FREQUENCY USING THE CONSOLIDATED LINE ITEM
IMPROVEMENT PROCESS (CLIP) FOR TSTF-475**

Dear Sir or Madam:

Pursuant to 10 CFR 50.90, Energy Northwest hereby requests an amendment to the Columbia Generating Station (Columbia) Technical Specifications (TS).

The proposed amendment would: (1) revise the 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 change is consistent with the notice published in the *Federal Register* on November 13, 2007 (72 FR 63935) as part of the consolidated line item improvement process (CLIP).

The enclosure provides a description of the proposed change, the requested confirmation of applicability, and plant-specific verifications. Attachments to the enclosure include the TS page markups, the retyped TS pages, and the TS Bases page markups.

Energy Northwest requests approval of the proposed amendment by June 1, 2009. Once approved, the amendment will be implemented within 90 days to allow for the processing of the necessary procedure revisions.

In accordance with 10 CFR 50.91, a copy of this application, with attachments, is being provided to the designated Washington State Official.

There are no new commitments contained in this request.

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Should you have any questions or require additional information regarding this matter, please contact Mr. MC Humphreys, Licensing Supervisor, at (509) 377-4025.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the date of this letter.

Respectfully,



WS Oxenford
Vice President, Nuclear Generation & Chief Nuclear Officer

Enclosure: Evaluation of the Proposed Change

cc: EE Collins, Jr. – NRC RIV
CF Lyon – NRC NRR
NRC Senior Resident Inspector/988C
RN Sherman – BPA/1399
WA Horin – Winston & Strawn
JO Luce – EFSEC
RR Cowley - WDOH

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Evaluation of the Proposed Change

Subject: License amendment request to revise the TS surveillance requirement (SR) frequency in TS 3.1.3, "Control Rod OPERABILITY," and to clarify the applicability of the 1.25 surveillance test interval extension in Section 1.4, "Frequency" consistent with TSTF-475

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 - 3.2 Optional Changes and Variations
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2. TS Bases Page Markups (for information only)
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1.0 SUMMARY DESCRIPTION

This letter is a request to amend Operating License NPF-21 for Columbia Generating Station.

The proposed change would: (1) revise the Technical Specifications (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 surveillance test interval extension allowed by SR 3.0.2.

The changes are consistent with Nuclear Regulatory Commission (NRC) approved Technical Specification Task Force (TSTF) Traveler TSTF-475 Revision 1 (Reference 6.1) to modify Standard Technical Specifications (STS). The *Federal Register* notice on November 13, 2007 (72 FR 63935) announced the availability of this TS improvement through the consolidated line item improvement process (CLIIP).

2.0 DETAILED DESCRIPTION

The proposed amendment revises the frequency for notch testing of fully withdrawn control rods. Currently, SR 3.1.3.2 requires that each fully withdrawn control rod be inserted at least one notch on a 7 day frequency. The proposed change revises the frequency from 7 to 31 days. Current SR 3.1.3.3 requires that each partially withdrawn control rod be inserted at least one notch on a 31 day frequency. The two SRs will be combined into one "new" SR 3.1.3.2 with a 31 day frequency for all withdrawn control rods, and subsequent SRs will be renumbered accordingly. It should be noted that with the subsequent SR re-numbering, one of the impacted TS pages involves changing a referenced SR in a note on TS page 3.1.4-4. Reference 6.4, currently under review by the NRC, has proposed unrelated changes to the same page, TS 3.1.4-4. For the purposes of this submittal, the current TS page 3.1.4-4 is used as the basis for the TS Page Markups (Attachment 1). For the Retyped TS Pages (Attachment 3) page 3.1.4-4 is presented in two formats, one for approval of this submittal only, and a second version that includes the combined changes proposed with reference 6.4 and this submittal.

In addition, one Example in Section 1.4 "Frequency" is revised to make it clear that the 1.25 interval in SR 3.0.2 is applicable to time periods discussed in the NOTE in the "SURVEILLANCE" column in addition to the time periods in the "FREQUENCY" column. This change to the Example is being made as part of TSTF-475 since the newly re-numbered SR 3.1.3.2 has a 31 day time period discussed in both the "FREQUENCY" column and in a NOTE in the "SURVEILLANCE" column, and it needs to be clear that the 1.25 interval may be applied equally to both of these 31 day time periods.

TSTF-475 recommends addition of the word "fully" to NUREG-1434, LCO 3.3.1.2 Required Action E.2, to clarify the requirement to fully insert all insertable control rods in

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core cells containing one or more fuel assemblies when the associated SRM instrument is inoperable. This proposed clarification is already included in the respective Columbia TS and TS Bases, and hence, no action is proposed by Energy Northwest in regards to this item of the TSTF.

3.0 TECHNICAL EVALUATION

3.1 Applicability of Published Safety Evaluation

Energy Northwest has reviewed the safety evaluation (SE) dated November 13, 2007 (72 FR 63935), as part of the CLIIP. This review included a review of the NRC staff's evaluation, as well as the supporting information provided in TSTF-475, Revision 1 (Reference 6.1). Energy Northwest has concluded that the justifications presented in the TSTF proposal and the SE prepared by the NRC staff are applicable to Columbia and justify this amendment to the Columbia TS.

3.2 Optional Changes and Variations

Energy Northwest is not proposing any variations or deviations from the TS changes described in TSTF-475, Revision 1 and NRC staff's model safety evaluation dated November 13, 2007 (72 FR 63935). As noted in section 2.0 above, one of the TS changes proposed by TSTF-475 is already incorporated into the Columbia TS and TS Bases, and hence non-action on this portion of the TSTF recommended changes does not constitute a deviation.

Energy Northwest is proposing some differences to the associated TS Bases from that proposed by TSTF-475. The differences include the correction of two errors as well as the elimination of a sentence that is no longer relevant. The specific differences are described below and are included with the information copy of the TS Bases Page Markups in Attachment 2.

In the proposed TS Bases section for SR 3.1.3.2 (which is the combination of the current TS Bases section SR 3.1.3.2 and SR 3.1.3.3) the differences from the TSTF include:

- 1) A grammatical correction. The sentence that begins with "These Surveillances are..." is revised to read "This Surveillance is..." to reflect the combination of two surveillances into one; and
- 2) Elimination of a statement that is no longer relevant based on TSTF-475 proposed changes. The TS Bases currently states that "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." TSTF-475 deletes the last portion of that sentence which refers to the 7 day surveillance testing of fully withdrawn control rods. Energy Northwest is

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proposing to delete this entire sentence in that the portion that is left after the TSTF-475 changes describe why there was a difference in testing frequency between fully withdrawn control rods and partially withdrawn control rods, i.e. because of the potential power reduction required to allow control rod movement [for partially withdrawn rods]. Since the frequency of testing is the same, there is no need to delineate why the partially withdrawn control rods are tested on a different frequency. The following sentence which begins "Furthermore,..." discusses the Frequency as being based on operating experience which accurately reflects the basis for both partially and fully withdrawn control rods. Deleting the word "Furthermore" from this sentence grammatically aligns this TS Bases statement with the above proposed changes.

In the proposed TS Bases section for SR 3.1.3.4 the TSTF inappropriately deletes reference to SR 3.1.4.3 and changes the reference from SR 3.1.4.4 to SR 3.1.4.3. These SRs continue to be valid and the TSTF proposed changes are incorrect. Columbia will not alter this portion of the TS Bases, with this non-incorporation thus constituting a difference from the TSTF proposed change.

4.0 REGULATORY EVALUATION

4.1 Applicable Regulatory Requirements / Criteria

The applicable regulatory requirements and guidance associated with this application are adequately addressed by the NRC Notice of Availability of Model Application published November 13, 2007 (72 FR 63935).

4.2 Significant Hazards Consideration

Energy Northwest has reviewed the proposed no significant hazards consideration determination (NSHCD) dated November 13, 2007 (72 FR 63935), as part of the CLIIP. Energy Northwest has concluded that the proposed NSHCD presented in the *Federal Register* notice is applicable to Columbia and is hereby incorporated by reference to satisfy the requirements of 10 CFR 50.91(a).

4.3 Verification

As discussed in the notice of availability published in the *Federal Register* on November 13, 2007 (72 FR 63935) for this TS improvement, Energy Northwest verifies the applicability of TSTF-475 to Columbia, and has proposed TS Bases consistent with the TSTF, with differences as described in section 3.2 (information copy provided in Attachment 2). The final TS Bases pages will be submitted with a future update in accordance with TS 5.5.10, "Technical Specifications (TS) Bases Control Program."

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4.4 Conclusions

In conclusion, based on the considerations discussed above, (1) there is a reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

5.0 ENVIRONMENTAL CONSIDERATION

Energy Northwest has reviewed the environmental evaluation included in the model SE published on November 13, 2007 (72 FR 63935), as part of the CLIIP. Energy Northwest has concluded that the NRC staff's findings presented in that evaluation are applicable to Columbia and the evaluation is hereby incorporated by reference for this application.

6.0 REFERENCES

- 6.1 TSTF-475, Revision 1, "Control Rod Notch Testing Frequency and SRM Insert Control Rod Action"
- 6.2 *Federal Register* Notice of Opportunity to Comment on Model Safety Evaluation on Technical Specification Improvement to Revise Control Rod Notch Surveillance Frequency, Clarify SRM Insert Control Rod Action, and Clarify Frequency Example, August 16, 2007 (72 FR 46103)
- 6.3 *Federal Register* Notice of Availability of Model Application Concerning Technical Specification Improvement To Revise Control Rod Notch Surveillance Frequency, Clarify SRM Insert Control Rod Action, and Clarify Frequency Example, November 13, 2007 (72 FR 63935)
- 6.4 GO2-08-108, Letter from Sudesh K Gambhir (Energy Northwest) to NRC, "License Amendment Request for Changes to Technical Specifications Involving Core Operating Limits Report and Scram Time Testing," July 16, 2008

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ATTACHMENT 1**

Technical Specification Page Markups

1.4-5
3.1.3-2
3.1.3-5
3.1.3-6
3.1.4-4

1.4 Frequency

EXAMPLES

EXAMPLE 1.4-3 (continued)

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 \geq 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 interval (plus the extension allowed by SR 3.0.2), 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 \geq 25% RTP.

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.

(plus the extension allowed by SR 3.0.2)

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.

(continued)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (continued)	<p>A.3 Perform SR 3.1.3.2 and SR 3.1.3.3 for each withdrawn OPERABLE control rod.</p> <p><u>AND</u></p> <p>A.4 Perform SR 3.1.1.1.</p>	<p>24 hours from discovery of Condition A concurrent with THERMAL POWER greater than the low power setpoint (LPSP) of the RWM</p> <p>72 hours</p>
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.	<p>C.1 Verify the total number of "slow" and inoperable control rods is \leq eight.</p> <p><u>AND</u></p>	<p>Immediately</p> <p>(continued)</p>

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.1.3.1 Determine the position of each control rod.	24 hours
<p>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 RWM. -----</p> <p>Insert each fully withdrawn control rod at least one notch.</p>	7 days
<p>SR 3.1.3.2^① -----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 RWM. -----</p> <p>Insert each partially withdrawn control rod at least one notch.</p>	31 days
<p>SR 3.1.3.3^② ^③ Verify each control rod scram time from fully withdrawn to notch position 5 is ≤ 7 seconds.</p>	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

SURVEILLANCE	FREQUENCY
SR 3.1.3. 6 ④ Verify each control rod does not go to the withdrawn overtravel position.	Each time the control rod is withdrawn to "full out" position <u>AND</u> 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

-----NOTE-----
 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 5. These control rods are inoperable, in accordance with SR 3.1.3.4, and are not considered "slow."

④
③

NOTCH POSITION	SCRAM TIMES(a)(b) (seconds) WHEN REACTOR STEAM DOME PRESSURE ≥ 800 psig
45	0.430
39	0.868
25	1.936
5	3.497

- (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 < 800 psig, are within established limits.

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TS Bases Page Markups (for information only)

B 3.1.3-4

B 3.1.3-8

B 3.1.3-9

B 3.1.4-2

BASES

ACTIONS

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

less inoperable or "slow" control rods are in the same group as the stuck control rod. The description of "slow" control rod is provided in LCO 3.1.4, "Control Rod Scram Times." In addition, the associated control rod drive 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. The control rod must be isolated from both scram and normal insert and withdraw pressure. Isolating the control rod from scram and normal insert and withdraw pressure prevents damage to the CRDM. The control rod should be isolated from scram by isolating the hydraulic control unit from scram and normal insert and withdraw pressure, while maintaining cooling water to the CRD.

Monitoring of the insertion capability for each withdrawn control rod must also be performed within 24 hours from discovery of Condition A concurrent with THERMAL POWER greater than the low power setpoint (LPSP) of the RWM. 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. This Completion Time also allows for an exception to the normal "time zero" for beginning the allowed outage time "clock." The Required Action A.3 Completion Time only begins upon discovery of Condition A concurrent with THERMAL POWER greater than the actual (LPSP) of the RWM, since the notch insertions may not be compatible with the requirements of rod pattern control (LCO 3.1.6) and the RWM (LCO 3.3.2.1). The allowed Completion Time provides a reasonable time to test the control rods, considering the potential for a need to reduce power to perform the tests.

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

(continued)

BASES

SURVEILLANCE
REQUIREMENTS

SR 3.1.3.1 (continued)

position may be determined by the use of OPERABLE position indicators, 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. This ensures the control rod is not stuck and is free to insert on a scram signal. ~~These~~ Surveillances ~~are~~ ^{is} not required when THERMAL POWER is less than or equal the actual LPSP of the RWM since the notch insertions may not be compatible with the requirements of the banked position withdrawal sequence (BPWS) (LCO 3.1.6) and the RWM

(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.

~~These~~ SRs are modified by ~~Notes~~ that allow 7 days and 31 days respectively, after withdrawal of the control rod and increasing power to above the LPSP, to perform the Surveillance. This acknowledges that the control rod must be first withdrawn and THERMAL POWER must be increased to above the LPSP before performance of the Surveillance, and therefore the ~~Note~~ avoid potential conflicts with SR 3.0.3 and SR 3.0.4.

(continued)

This SR is modified by a Note that allows 31 days

BASES

SURVEILLANCE
REQUIREMENTS
(continued)

SR 3.1.3.3 ~~3~~ ③

Verifying the scram time for each control rod to notch position 5 is ≤ 7 seconds provides reasonable assurance that the control rod will insert when required during a DBA or transient, thereby completing its shutdown function. 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 3.1.3.4 ~~4~~ 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. 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)

BASES

APPLICABLE
SAFETY ANALYSES
(continued)

The scram function of the CRD System protects the MCPR Safety Limit (SL) (see Bases for SL 2.1.1, "Reactor Core SLs," and LCO 3.2.2, "MINIMUM CRITICAL POWER RATIO (MCPR)"), and the 1% cladding plastic strain fuel design limit (see Bases for LCO 3.2.3, "LINEAR HEAT GENERATION RATE (LHGR)"), which ensure that no fuel damage will occur if these limits are not exceeded. Above 800 psig, the scram function is designed to insert negative reactivity at a rate fast enough to prevent the actual MCPR from becoming less than the MCPR SL during the analyzed limiting power transient. Below 800 psig, the scram function is assumed to perform during the control rod drop accident (Ref. 6) and, therefore, also provides protection against violating fuel damage limits during reactivity insertion accidents (see Bases for LCO 3.1.6, "Rod Pattern Control"). For the reactor vessel overpressure protection analysis (Ref. 4), the scram function, along with the safety/relief valves, ensure that the peak vessel pressure is maintained within the applicable ASME Code limits.

Control rod scram times satisfy Criterion 3 of Reference 7.

LCO

The scram times specified in Table 3.1.4-1 are required to ensure that the scram reactivity assumed in the DBA and transient analysis is met. The scram times have a margin to allow up to eight of the control rods to have scram times that exceed the specified limits (i.e., "slow" control rods in a two-by-two array that do not meet the average scram time limits) assuming a single stuck control rod (as allowed by LCO 3.1.3, "Control Rod OPERABILITY") and an additional control rod failing to scram per the single failure criterion. The scram times are specified as a function of reactor steam dome pressure to account for the pressure dependence of the scram times. The scram times are specified relative to measurements based on reed switch positions, which provide the control rod position indication. The reed switch closes ("pickup") when the index tube passes a specific location and then opens ("dropout") as the index tube travels upward. Verification of the specified scram times in Table 3.1.4-1 is accomplished through measurement of the "dropout" times.

Table 3.1.4-1 is modified by a Note, which states that control rods with scram times > 7 seconds are considered inoperable as required by SR 3.1.3. ~~7~~ ³

(continued)

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Retyped Technical Specification Pages

1.4-5

1.4-6 - 1.4-8 No content change, these pages included due to impact of changes made on page 1.4-5.

3.1.3-2

3.1.3-5 Content from old page 3.1.3-6 has been relocated to this page. Old page 3.1.3-6 is deleted.

3.1.4-4 Incorporates this submittal's changes only.

3.1.4-4 Reference 6.4 and this submittal's proposed changes both included.

1.4 Frequency

EXAMPLES

EXAMPLE 1.4-3 (continued)

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 \geq 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 interval (plus the extension allowed by SR 3.0.2), 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 \geq 25% RTP.

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
<p>-----NOTE----- Only required to be met in MODE 1. -----</p>	
<p>Verify leakage rates are within limits.</p>	<p>24 hours</p>

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

(continued)

1.4 Frequency

EXAMPLES

EXAMPLE 1.4-4 (continued)

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 interval (plus the extension allowed by SR 3.0.2), 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.

EXAMPLE 1.4-5

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>-----NOTE----- Only required to be performed in MODE 1. -----</p>	
<p>Perform complete cycle of the valve.</p>	<p>7 days</p>

The interval continues, whether or not the unit operation is in MODE 1, 2, or 3 (the assumed Applicability of the associated LCO) between performances.

As the Note modifies the required performance of the Surveillance, the Note is construed to be part of the "specified Frequency." Should the 7 day interval be exceeded while operation is not in MODE 1, this Note allows entry into and operation in MODES 2 and 3 to perform the Surveillance. The Surveillance is still considered to be performed within the "specified Frequency" if completed prior to entering MODE 1.

(continued)

1.4 Frequency

EXAMPLES

EXAMPLE 1.4-5 (continued)

Therefore, if the Surveillance were not performed within the 7 day (plus the extension allowed by SR 3.0.2) interval, but operation was not in MODE 1, 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 result in entry into MODE 1.

Once the unit reaches MODE 1, the requirement for the Surveillance to be performed within its specified Frequency applies and would require that the Surveillance had been performed. If the Surveillance were not performed prior to entering MODE 1, 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 1.4-6

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>-----NOTE----- Not required to be met in MODE 3. -----</p>	
<p>Verify parameter is within limits.</p>	<p>24 hours</p>

Example 1.4-6 specifies that the requirements of this Surveillance do not have to be met while the unit is in MODE 3 (the assumed Applicability of the associated LCO is MODES 1, 2, and 3). 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

(continued)

1.4 Frequency

EXAMPLES

EXAMPLE 1.4-6 (continued)

24 hour interval (plus the extension allowed by SR 3.0.2), and the unit was in MODE 3, 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 to enter MODE 3, even with the 24 hour Frequency exceeded, provided the MODE change does not result in entry into MODE 2. Prior to entering MODE 2 (assuming again that the 24 hour Frequency were not met), SR 3.0.4 would require satisfying the SR.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (continued)	<p>A.3 Perform SR 3.1.3.2 for each withdrawn OPERABLE control rod.</p> <p><u>AND</u></p> <p>A.4 Perform SR 3.1.1.1.</p>	<p>24 hours from discovery of Condition A concurrent with THERMAL POWER greater than the low power setpoint (LPSP) of the RWM</p> <p>72 hours</p>
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.	<p>C.1 Verify the total number of "slow" and inoperable control rods is \leq eight.</p> <p><u>AND</u></p>	<p>Immediately</p> <p>(continued)</p>

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 RWM. ----- 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 5 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
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 <u>AND</u> 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

-----NOTE-----
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 5. 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) WHEN REACTOR STEAM DOME PRESSURE ≥ 800 psig
45	0.430
39	0.868
25	1.936
5	3.497

(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 < 800 psig, are within established limits.

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 5. These control rods are inoperable, in accordance with SR 3.1.3.3, and are not considered "slow."
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NOTCH POSITION	SCRAM TIMES(a)(b) (seconds) WHEN REACTOR STEAM DOME PRESSURE ≥ 800 psig
45	0.528
39	0.866
25	1.917
5	3.437

- (a) Maximum scram time from fully withdrawn position, based on de-energization of scram pilot valve solenoids at time zero.
- (b) Scram times as a function of reactor steam dome pressure, when < 800 psig, are within established limits.