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**Constellation Energy**

• Nine Mile Point Nuclear Station

August 14, 2008

U. S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

**ATTENTION:** Document Control Desk

**SUBJECT:** Nine Mile Point Nuclear Station  
Unit No. 2; Docket No. 50-410  
License No. NPF-69

Application for Technical Specification Change Regarding Revision of Control Rod  
Notch Surveillance Test Frequency and a Clarification of a Frequency Example  
Using the Consolidated Line Item Improvement Process

In accordance with the provisions of 10 CFR 50.90, Nine Mile Point Nuclear Station, LLC (NMPNS) is submitting a request for an amendment to the Technical Specifications (TS) for Nine Mile Point Unit 2 (NMP2).

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 TS 1.4, "Frequency" to clarify the applicability of the 1.25 surveillance test interval extension.

Attachment 1 provides a description of the proposed change, the requested confirmation of applicability, and plant-specific verifications. Attachment 2 provides the existing TS pages marked-up to show the proposed changes. Associated TS Bases changes are marked-up in Attachment 3. The TS Bases changes are provided for information only and will be processed in accordance with the NMP2 TS 5.5.10, "Technical Specifications (TS) Bases Control Program." Attachment 4 provides a summary of the regulatory commitments made in this submittal.

NMPNS requests approval of the proposed License Amendment by February 16, 2009, with the amendment being implementation within 60 days of approval of the amendment.

In accordance with 10 CFR 50.91, NMPNS has provided a copy of this license amendment request, with attachments, to the appropriate state representative.

Should you have any questions regarding the information in this submittal, please contact T. F. Syrell, Licensing Director, at (315) 349-5219.

Very truly yours,



STATE OF NEW YORK :  
: TO WIT:  
COUNTY OF OSWEGO :

I, Keith J. Polson, being duly sworn, state that I am Vice President-Nine Mile Point, and that I am duly authorized to execute and file this request on behalf of Nine Mile Point Nuclear Station, LLC. To the best of my knowledge and belief, the statements contained in this document are true and correct. To the extent that these statements are not based on my personal knowledge, they are based upon information provided by other Nine Mile Point employees and/or consultants. Such information has been reviewed in accordance with company practice and I believe it to be reliable.



Subscribed and sworn before me, a Notary Public in and for the State of New York and County of Oswego, this 14<sup>th</sup> day of August, 2008.

WITNESS my Hand and Notarial Seal:

  
Notary Public

My Commission Expires:

10/25/09  
Date

SANDRA A. OSWALD  
Notary Public, State of New York  
No. 01OS6032276  
Qualified in Oswego County  
Commission Expires 10/25/09

KJP/GB/

- Attachments:
1. Description and Assessment
  2. Proposed Technical Specification Changes (Marked-Up Pages)
  3. Proposed Technical Specifications Bases Changes (Marked-Up Pages)
  4. Summary of Regulatory Commitments made in this Submittal

cc: S. J. Collins, NRC Regional Administrator, Region I  
R. V. Guzman, Jr., NRC Project Manager  
E. C. Knutson, Senior NRC Resident Inspector  
J. P. Spath, NYSERDA

# **ATTACHMENT 1**

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## **DESCRIPTION AND ASSESSMENT**

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**ATTACHMENT 1**  
**DESCRIPTION AND ASSESSMENT**

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## **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 TS 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 (CLIP).

## **2.0 ASSESSMENT**

### **2.1 Applicability of Published Safety Evaluation**

Nine Mile Point Nuclear Station, LLC (NMPNS) has reviewed the safety evaluation dated November 13, 2007 as part of the CLIP. This review included a review of the NRC staff's evaluation, as well as the supporting information provided to support TSTF-475, Revision 1. NMPNS has concluded that the justifications presented in the TSTF proposal and the safety evaluation prepared by the NRC staff are applicable to Nine Mile Point Unit 2 (NMP2) and justify this amendment for the incorporation of the changes to the NMP2 TS.

### **2.2 Optional Changes and Variations**

NMPNS is proposing to implement the following TS editorial changes which differ from those TS changes described in TSTF-475, Revision 1, and the NRC staff's model safety evaluation dated November 13, 2007. The changes do not adversely impact the considerations or conclusions in the model safety evaluation or the intent of the amendment.

NMPNS chooses to designate Surveillance Requirement (SR) 3.1.3.2 as "Deleted" and retain current SR numbers SR 3.1.3.3, SR 3.1.3.4, and SR 3.1.3.5. This proposed variation will alleviate the requirement to make editorial changes listed in TSTF-475, Revision 1 for TS 3.1.3, 3.1.4 and associated TS Bases. Additionally, the TSTF-475, Revision 1 requested change to the TS Bases for SR 3.1.3.4 (to revise references to SR 3.1.4.3 and SR 3.1.4.4) was not included as these surveillances are not affected by the proposed changes.

During the NMP2 conversion to the STS (NUREG-1433) for TS 3.3.1.2, "Source Range Monitor (SRM) Instrumentation" by Amendment 91 dated February 15, 2000 (TAC No. MA3822), Required Action E.2 was revised and presently reads "Initiate action to fully insert all insertable control rods in core cells containing one or more fuel assemblies." The term "fully" was also included in TS Bases 3.3.1.2. Therefore, these TSTF-475, Revision 1 changes are not necessary for NMP2.

## **3.0 REGULATORY ANALYSIS**

### **3.1 No Significant Hazards Consideration Determination**

NMPNS has reviewed the proposed no significant hazards consideration determination (NSHCD) published in the *Federal Register* as part of the CLIP. NMPNS has concluded that the proposed NSHCD

**ATTACHMENT 1**  
**DESCRIPTION AND ASSESSMENT**

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presented in the *Federal Register* notice is applicable to NMP2 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, NMPNS has verified the applicability of TSTF-475 to NMP2, and commits to establishing Technical Specification Bases for the TS as described in this licensing amendment request.

These changes are based on TSTF change traveler TSTF-475 (Revision 1) that proposes revisions to the STS by: (1) revising the frequency of SR 3.1.3.2, notch testing of a withdrawn control rod, from “7 days after the control rod is withdrawn and THERMAL POWER is greater than the LPSP of RWM” to “31 days after the control rod is withdrawn and THERMAL POWER is greater than the LPSP of RWM”; 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**

NMPNS has reviewed the environmental evaluation included in the model safety evaluation dated November 13, 2007 as part of the CLIP. NMPNS has concluded that the staff’s findings presented in that evaluation are applicable to NMP2 and the evaluation is hereby incorporated by reference for this application.

## **ATTACHMENT 2**

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### **PROPOSED TECHNICAL SPECIFICATION CHANGES (MARKED-UP PAGES)**

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TS Page 1.4-4

TS Page 1.4-5

TS Page 3.1.3-2

TS Page 3.1.3-4

# 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 $\geq$ 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  $\geq$  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.

(continued)

(Plus the extension Allowed by SR 3.0.2)



## 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, 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 1.4-4SURVEILLANCE 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 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.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (continued)	A.3     Perform <del>SR 3.1.3.2</del> 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 the low power setpoint (LPSP) of the RWM
	<u>AND</u> 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----- RWM may be bypassed as allowed by LCO 3.3.2.1, if required, to allow insertion of inoperable control rod and continued operation. -----  Fully insert inoperable control rod.	3 hours
	<u>AND</u> C.2     Disarm the associated CRD.	4 hours

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.1.3.2</p> <p><del>Deleted</del></p> <p>-----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.            -----            Insert each fully withdrawn control rod at least one notch.</p>	<p>e</p> <p>7 days</p>
<p>SR 3.1.3.3</p> <p>-----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 <del>partially</del> withdrawn control rod at least one notch.</p>	<p>31 days</p>
<p>SR 3.1.3.4</p> <p>Verify each control rod scram time from fully withdrawn to notch position 05 is <math>\leq 7</math> seconds.</p>	<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</p>

(continued)

**ATTACHMENT 3**

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**PROPOSED TECHNICAL SPECIFICATIONS BASES CHANGES  
(MARKED-UP PAGES)**

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TS Bases Page B 3.1.3-4

TS Bases Page B 3.1.3-7

TS Bases Page B 3.1.3-8

BASES

ACTIONS

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

control rod separation criteria are not met. Therefore, a verification that the separation criteria are met must be performed immediately. The stuck control rod separation criteria are not met if: a) the stuck control rod occupies a location adjacent to two "slow" control rods, b) the stuck control rod occupies a location adjacent to one "slow" control rod, and the one "slow" control rod is also adjacent to another "slow" control rod, or c) if the stuck control rod occupies a location adjacent to one "slow" control rod when there is another pair of "slow" control rods elsewhere in the core adjacent to one another. The description of "slow" control rods 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 or reactor internals. The control rod isolation method should also ensure cooling water to the CRD is maintained.

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.

(continued)

BASES

ACTIONS  
(continued)

E.1

If any Required Action and associated Completion Time of Condition A, C, or D are not met or nine or more inoperable control rods exist, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to MODE 3 within 12 hours. This ensures all insertable control rods are inserted and places the reactor in a condition that does not require the active function (i.e., scram) of the control rods. The number of control rods permitted to be inoperable when operating above 10% RTP (i.e., no CRDA considerations) could be more than the value specified, but the occurrence of a large number of inoperable control rods could be indicative of a generic problem, and investigation and resolution of the potential problem should be undertaken. 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.

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 OPERABLE position indicators, by moving control rods to a position with an OPERABLE indicator, (full-in, full-out, or numeric indicator), by verifying the indicators one notch "out" and one notch "in" are OPERABLE, 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~~

(Note! SR 3.1.3.2 has been deleted)

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 not required when THERMAL POWER is less than or equal to the

This SURVEILLANCE IS (continued)

BASES

SURVEILLANCE  
REQUIREMENTS

~~SR 3.1.3.2 and SR 3.1.3.3~~ (continued)

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.~~

This SR is

~~These SRs are modified by~~ <sup>o</sup> ~~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 Notes avoid~~ <sup>AVOID</sup> ~~potential conflicts with SR 3.0.3 and SR 3.0.4.~~ <sup>allows</sup>

SR 3.1.3.4

Verifying the scram time for each control rod to notch position 05 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. 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.

(continued)

**ATTACHMENT 4**

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**SUMMARY OF REGULATORY COMMITMENTS MADE IN THIS  
SUBMITTAL**

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**ATTACHMENT 4**  
**SUMMARY OF REGULATORY COMMITMENTS MADE IN THIS SUBMITTAL**

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**LIST OF REGULATORY COMMITMENTS**

The following table identifies those actions committed to by NMPNS in this document. Any other statements in this submittal are provided for information purposes and are not considered to be regulatory commitments. Please direct questions regarding these commitments to T. F. Syrell, Licensing Director, at (315) 349-5219.

<b>REGULATORY COMMITMENT</b>	<b>DUE DATE</b>
NMPNS will establish the Technical Specifications Bases for TS B 3.1.3 consistent with those shown in TSTF-475, Revision 1, "Control Rod Notch Testing Frequency and SRM Insert Control Rod Action" as described in the license amendment request.	This commitment will be implemented within 60 days from the date of the approval of the proposed amendment.