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NINE MILE POINT
NUCLEAR STATION

July 5, 2013

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 Amendment Request Pursuant to 10 CFR 50.90: Standby Liquid Control System – Increase in Isotopic Enrichment of Boron-10

Pursuant to 10 CFR 50.90, Nine Mile Point Nuclear Station, LLC (NMPNS) hereby requests an amendment to Nine Mile Point Unit 2 (NMP2) Renewed Operating License (OL) NPF-69 to increase the isotopic enrichment of boron-10 in the sodium pentaborate solution used to prepare the neutron absorber solution in the Standby Liquid Control (SLC) System. This request includes the supporting changes to the NMP2 Technical Specification (TS) 3.1.7, "Standby Liquid Control (SLC) System," to increase the boron-10 isotopic enrichment in the sodium pentaborate solution utilized in the SLC System and to decrease the SLC System tank volume.

The Enclosure and its associated Attachments to this application provide the evaluation of the proposed changes to NMP2 TSs. As indicated in the Enclosure, NMPNS concludes that the activities associated with the request involve no significant hazards consideration under the standards set forth in 10 CFR 50.92.

NMPNS requests approval of this application by March 3, 2014, to permit the SLC System modification to be implemented prior to the startup from the spring 2014 NMP2 refueling outage. This date is requested, because an outage is required to perform the modification to the SLC System. The SLC System must be removed from service to modify the sodium pentaborate solution, including the draining and refilling of the SLC System storage tank. The time period required to perform the modification of the SLC System would be greater than permitted by Condition B of Technical Specification 3.1.7, "Standby Liquid Control (SLC) System." As a result, Condition C of Technical Specification 3.1.7 would require that the unit be placed in a mode for which the Limiting Condition of Operation does not apply.

There are no new regulatory commitments in this letter.

A001
NRR

Pursuant to 10 CFR 50.91(b)(1), NMPNS has provided a copy of this license amendment request, with the Enclosure, to the appropriate state representative.

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

I declare under penalty of perjury that the foregoing is true and correct. Executed on July 5, 2013.

Very truly yours,

PMS/STD

Enclosure: Evaluation of the Proposed Change

cc: Regional Administrator, Region I , NRC
Resident Inspector , NRC
Project Manager, NRC
A. L. Peterson NYSERDA

ENCLOSURE

EVALUATION OF THE PROPOSED CHANGE

TABLE OF CONTENTS

ATTACHMENTS

1.0 SUMMARY DESCRIPTION

This evaluation supports a request to amend Renewed Operating License (OL) NPF-69 for Nine Mile Point Unit 2 (NMP2). The proposed amendment includes supporting changes to NMP2 Technical Specification (TS) 3.1.7, "Standby Liquid Control (SLC) System," to increase the isotopic enrichment of boron-10 in the sodium pentaborate solution utilized in the SLC System and decrease the SLC System tank volume.

The following are the proposed changes to the NMP2 TS 3.1.7, "Standby Liquid Control (SLC) System:"

- Revise the acceptance criterion in SR 3.1.7.10 by increasing the sodium pentaborate boron-10 enrichment requirement from ≥ 25 atom percent to ≥ 92 atom percent, and make a corresponding change in TS Figure 3.1.7-1, "Sodium Pentaborate Solution Volume/Concentration Requirements."

- Revise TS Figure 3.1.7-1 to account for the decrease in the minimum volume of the SLC system tank. At a sodium pentaborate concentration of 13.6% the minimum volume changes from 4,558.6 gallons to 1,600 gallons. At a sodium pentaborate concentration of 14.4%, the minimum volume changes from 4,288 gallons to 1,530 gallons.

2.0 DETAILED DESCRIPTION

2.1 Background

Originally, Nine Mile Point Nuclear Station, LLC (NMPNS) planned to include the changes to the NMP2 TS 3.1.7, "Standby Liquid Control System," to increase the isotopic enrichment of boron-10 in the sodium pentaborate solution utilized in the SLC System as part of a License Amendment Request (LAR) to adopt the Maximum Extended Load Line Limit Plus (MELLLA+). However, additional work was required to complete the MELLLA+ LAR. Given that the MELLLA+ LAR would not be available for implementation during the Spring 2014 NMP2 refueling outage, NMPNS decided to submit the proposed changes to TS 3.1.7, "Standby Liquid Control System (SLC) System," as a separate and independent LAR in advance of the MELLLA+ LAR to permit the SLC System modification to be implemented prior to the startup from the Spring 2014 NMP2 refueling outage.

2.2 Proposed Changes to the Nine Mile Point Unit 2 Technical Specification 3.1.7

Changes to NMP2 TS 3.1.7, "Standby Liquid Control (SLC) System," are required to increase the isotopic enrichment of boron-10 in the sodium pentaborate solution used to prepare the neutron absorber solution in the SLC System. Attachment 1 of this enclosure provides a mark-up of the NMP2 TS 3.1.7, "Standby Liquid Control (SLC) System," showing the proposed changes. There are no corresponding changes to the NMP2 TS Bases. A description of each TS change is provided below.

TS SR 3.1.7.10 is revised to increase the boron-10 enrichment requirement of sodium pentaborate from ≥ 25 atom percent to ≥ 92 atom percent. In addition, TS Figure 3.1.7-1 is updated to reflect the increase in the boron-10 enrichment requirement.

TS Figure 3.1.7-1, sodium pentaborate Solution Volume/Concentration Requirements, is revised to account for the change in the minimum volume in the SLC System tank that arises from the enrichment increase. At a sodium pentaborate concentration of 13.6% the minimum volume changes from 4,558.6 gallons to 1,600 gallons. At a sodium pentaborate concentration of 14.4%, the minimum volume changes from 4,288 gallons to 1,530 gallons.

2.3 Modification Summary

The boron-10 enrichment in the sodium pentaborate solution in the SLC System is increased from ≥ 25 atom percent to ≥ 92 atom percent. The increase in the boron-10 enrichment in the sodium pentaborate solution for the SLC System is sufficient to decrease the sodium pentaborate solution volume stored in the SLC System storage tank. Changes to instrumentation setpoints will be made to account for these changes.

3.0 TECHNICAL EVALUATION

The SLC System is described in Section 9.3.5 of the NMP2 Updated Safety Analysis Report (USAR). The system provides a backup capability for shutting down the reactor. The SLC System is needed only in the event that sufficient control rods cannot be inserted into the reactor core to accomplish shutdown and cooldown in the normal manner. To accomplish this function, the SLC System injects a sodium pentaborate solution into the reactor. The SLC System consists of a boron solution storage tank, two positive displacement pumps, two explosive valves (provided in parallel for redundancy), and associated piping and valves used to transfer borated water from the storage tank to the reactor pressure vessel (RPV). The borated water solution is discharged into the RPV through the high pressure core spray sparger.

The specified neutron absorber solution is sodium pentaborate. It is prepared by dissolving granularly-enriched sodium pentaborate in demineralized water (NMP2 USAR Section 9.3.5.2). The sodium pentaborate solution is discharged radially over the top of the core through the High Pressure Core Spray (HPCS) sparger. The boron absorbs thermal neutrons and thereby terminates the nuclear fission chain reaction in the uranium fuel. The sodium pentaborate also acts as a buffer to maintain the suppression pool pH at or above 7.0 to prevent the re-evolution of iodine, when mixed in the suppression pool following a LOCA accompanied by significant fuel damage (NMP2 USAR Section 9.3.5.1).

<u>Change in Boron-10 Enrichment in Sodium Pentaborate</u>

10 CFR 50.62(c)(4) requires:

> "Each boiling water reactor must have a standby liquid control system (SLCS) with the capability of injecting into the reactor pressure vessel a borated water solution at such a flow rate, level of boron concentration and boron-10 isotope enrichment, and accounting for reactor pressure vessel volume, that the resulting reactivity control is at least equivalent to that resulting from injection of 86 gallons per minute of 13 weight percent sodium pentaborate decahydrate solution at the natural boron-10 isotope abundance into a 251-inch inside diameter reactor pressure vessel for a given core design..."

The NRC-approved licensing topical report NEDE-31096P-A (Reference 1) provides a method by which the boron equivalency requirement of 10 CFR 50.62(c)(4) can be demonstrated. Equation 1-1 of that document was used to demonstrate injection capacity equivalency as follows:

$$(Q/86) \times (M251/M) \times (C/13) \times (E/19.8) \geq 1$$

Where:

Q	=	expected SLC System flow rate (gpm)
$M251$	=	mass of water in the reactor vessel and recirculation system at hot rated conditions (lbs) for a 251-inch diameter vessel reference plant
M	=	mass of water in the NMP2 reactor vessel and recirculation system at hot rated conditions (lbs)
C	=	sodium pentaborate solution concentration (wt%)
E	=	boron-10 isotope enrichment (atom percent)

NMP2 is equipped with a 251-inch diameter reactor vessel (NMP2 USAR Section 15G.5). Consequently the value of the $M251/M$ term in the above equation is 1. Table 1 provides the key assumptions utilized in the analyses of the changes to the SLC System.

Substituting the current values as defined in Table 1 in the above equation, including two SLC System pumps injecting, yields:

82.4/86 X 1 X 13.6/13 X 25/19.8 = 1.27 > 1

Substituting the new values from Table 1 into the above equation yields:

80/86 X 1 X 13.6/13 X 92/19.8 = 4.52 > 1

This demonstrates that the boron equivalent control capacity requirement of 10 CFR 50.62(c)(4) is met when the changes to the SLC System effective flow rate and the boron-10 isotope enrichment are included.

Note: TS SR 3.1.7.7 requires each SLC System pump to have a flow rate of at least 41.2 gpm. Maintaining the TS SR 3.1.7.7 acceptance criteria for SLC pump flow rate at 41.2 gpm provides margin with respect to the required flow rate for ATWS mitigation. Condition Report CR-2010-011626 addresses this issue for current operation.

As defined in Table 1, the analyzed SLC System injection flow rate is reduced to 80 gpm flow rate for two SLC System pumps in operation to account for dilution effects identified by GE Hitachi Nuclear Energy Safety Communication 10-13, Standby Liquid Control System Dilution Flow, with additional margin.

Table 1 – Assumptions regarding SLC System Performance

Parameter	Units	Current Value	New Value
Reactor boron concentration for cold shutdown (natural boron)	Parts per million (ppm)	780	780
Maximum allowable solution concentration	Weight Percent (wt%)	14.4	14.4
Minimum allowable solution concentration	wt%	13.6	13.6
Solution concentration assumed in ATWS analysis	wt%	13.6	13.6
Minimum boron-10 enrichment for ATWS analysis	Atom%	25	92
Design SLC System pump flow rate	gpm	45	45
Minimum SLC System pump flow rate defined in TS 3.1.7	gpm	41.2	41.2
SLC System pump flow rate	gpm	82.4 (Flow Rate Defined in NMP2 USAR Table 15G-7)	80 (Flow rate defined in TS 3.1.7.7 minus dilution flow and additional margin)
Number of SLC System pumps required for TS LCO	NA	2	2

Change in SLC System Storage Tank Solution Minimum Volume

The proposed boron-10 enrichment value allows the minimum solution volume stored in the SLC System storage tank to be decreased to 1,530 gallons at a sodium pentaborate concentration of 14.4% and 1,600 gallons at a sodium pentaborate concentration of 13.6%. The mark-up of NMP2 TS Figure 3.1.7-1 provided in Attachment 1 of this Enclosure delineates the proposed change in the minimum SLC System storage tank solution volume.

The required minimum volumes for the 13.6 wt% and 14.4 wt% solution volumes were derived by determining the minimum solution volume and then increasing the volume to account for: 1) the dead volume not pumped in the reactor that remains in the SLC System and HPCS piping; and 2) instrument accuracy.

The minimum net solution volume for injection meets all considerations for ATWS boron injection rates and Alternate Source Term suppression pool pH control. It also assures that the reactor core boron concentration will be greater than 780 ppm natural boron equivalent.

Anticipated Transient Without SCRAM

The current ATWS analysis is not adversely affected by the proposed changes because the reactivity insertion rate would increase by a factor greater than 3 (values from the above calculations, 4.52/1.27 = 3.57) and the amount of injected boron-10 is not reduced.

Suppression Pool Buffering

The SLC System also provides suppression pool buffering following a Loss of Coolant Accident (LOCA) accompanied by significant fuel damage, preventing re-evolution of iodine from the suppression pool by maintaining the pool pH above 7.0, in support of the Alternate Source Term methodology. Section 9.3.5.1 of the NMP2 USAR requires a sufficient concentration and quantity of sodium pentaborate to be available for injection into the reactor vessel to control pH in the suppression pool for 30 days following a Design Basis Accident (DBA) LOCA.

The reduction in the minimum required solution volume results in a reduction in the excess solution available for injection to maintain suppression pool pH $\geq$ 7.0 for 30 days post-LOCA. The minimum sodium pentaborate solution volume required for injection post-LOCA for adequate pH control is 1,065 gallons at the limiting concentration (i.e., a sodium pentaborate concentration of 13.6%). The minimum required tank volume at a concentration of 13.6 % is reduced from 4,558.6 gallons to 1,600 gallons. While this does reduce the amount of excess available solution, adequate margin is maintained to ensure that the SLC System can perform its required Alternate Source Term support function.

The proposed boron-10 enrichment changes do not impact the capability to achieve and maintain a pH above 7.0 in the suppression pool following a LOCA, because the chemical properties and concentration of the sodium pentaborate solution injected into the suppression pool will remain the same. Given the reduced volume of solution that will be available, there will be a two hour reduction in the maximum time available to add boron to the suppression pool to maintain pH above 7.0 (nominal time based on low level alarm is within 22 hours versus the current time of within 24 hours). A review of the Emergency Operating Procedures confirmed that the sodium pentaborate solution would be injected within 30 minutes following the occurrence of LOCA. The maximum 22-hour time period provides a large margin to the minimum requirement for manual operator action to inject the sodium pentaborate solution of 30 minutes. In addition, the suppression pH is not expected to drop below 7 for several days.

Section 9.3.5.3 of the NMP2 USAR delineates that only one of the two SLC System loops was assumed for suppression pool pH control operation. Thus, the proposed changes to the SLC System do not affect the design redundancy of the SLC System for suppression pool buffering.

Net Positive Suction Head Available ($NPSH_A$) for SLC System Pumps

The proposed changes include a reduction in the minimum volume for the SLC System storage tank. This results in a reduction in the static head available to provide Net Positive Suction Head ($NPSH_A$) for the SLC System pumps. The calculation that determines the SLC System pump $NPSH_A$ did not take any credit for the static head above the SLC System storage tank zero level. The minimum tank level corresponding to the minimum net volume permitted by the proposed change to Figure 3.1.7-1 is greater than 3 feet above tank zero.

4.0 REGULATORY EVALUATION

4.1 Applicable Regulatory Requirements/Criteria

Appendix A to 10 CFR 50, General Design Criteria

General Design Criterion (GDC) 26, "Reactivity control system redundancy and capability," states:

> "Two independent reactivity control systems of different design principles shall be provided. One of the systems shall use control rods, preferably including a positive means for inserting the rods, and shall be capable of reliably controlling reactivity changes to assure that under conditions of normal operation, including anticipated operational occurrences, and with appropriate margin for malfunctions such as stuck rods, specified acceptable fuel design limits are not exceeded. The second reactivity control system shall be capable of reliably controlling the rate of reactivity changes resulting from planned, normal power changes (including xenon burnout) to assure acceptable fuel design limits are not exceeded. One of the systems shall be capable of holding the reactor core subcritical under cold conditions."

For Boiling Water Reactors, the provisions of 10 CFR 50.62 require that the second reactivity control system be the SLC System. Its function is, per the requirements, to inject into the reactor pressure vessel a borated water solution at a prescribed flow rate, concentration and boron-10 isotopic enrichment. The boron in the solution absorbs neutrons, thus providing reactivity control to shut down the reactor in the event the control rods fail to insert into the core.

GDC 27, "Combined reactivity control systems capability," states:

> "The reactivity control system shall be designed to have a combined capability, in conjunction with poison addition by the emergency core cooling system, of reliably controlling reactivity changes to assure that under postulated accident conditions and with appropriate margin for stuck rods the capability to cool the core is maintained.

The SLC System is the poison addition system described in GDC 27.

10 CFR 50.62, "Requirements for reduction of risk from anticipated transients without scram (ATWS) events for light-water-cooled nuclear power plants"

10 CFR 50.62 (c)(4) states:

> "Each boiling water reactor must have a standby liquid control system (SLCS) with the capability of injecting, into the reactor pressure vessel a borated water solution at such a flow rate, level of boron concentration, and boron-10 isotope enrichment, and accounting for reactor pressure vessel volume, that the resulting reactivity control is at least equivalent to that resulting from injection of 86 gallons per minute of 13 weight percent sodium pentaborate decahydrate solution at the natural boron-l0 isotope abundance into a 251-inch inside diameter reactor pressure vessel for a given core design..."

In the NRC-approved licensing topical report, NEDE-31096P-A, "Anticipated Transients Without Scram: Response to NRC ATWS Rule, 10 CFR 50.62," General Electric provides guidance on modifications to the SLC system to ensure licensee compliance with the ATWS rule.

The NRC approved the methods presented in NEDE-31096P-A for use by Boiling Water Reactor licensees to demonstrate compliance with the ATWS Rule. The application of this guidance demonstrates that the equivalency requirement of 10 CFR 50.62 is met.

10 CFR 50.67, "Accident source term"

10 CFR 50.67(b)(1) provides guidance to licensees with respect to revision of the licensee's current accident source term in design basis radiological consequence analyses. Specifically, the regulation states that in order to revise the accident source term, a licensee shall apply for a license amendment under 10 CFR 50.90 and that the application shall contain an evaluation of the consequences of applicable design basis accidents previously analyzed in the safety analysis report.

The radiological consequences of certain DBAs have been reevaluated using a full implementation of an Alternate Source Term as described in Regulatory Guide (RG) 1.183 (Reference 2) and NRC Standard Review Plan (SRP) 15.0.1 (Reference 3). The evaluation was performed at 120 percent of the original licensed power to bound the effects of future power uprates. The evaluation demonstrates that the calculated offsite exposures and control room doses meet the criteria of 10 CFR 50.67.

The supporting analyses for Alternate Source Term assume the pH of the suppression pool is controlled to prevent the re-evolution of iodine following a DBA LOCA. This is accomplished by injecting the SLC System solution (i.e., boron solution) following a DBA LOCA to ensure pH is controlled to a value greater than 7.0. Analysis has confirmed that the SLC System will continue to maintain suppression pool pH level above 7.0 following a LOCA which involves significant fission product releases.

4.2 Precedent

The NRC has approved a number of requests to increase the isotopic enrichment of boron-10 in the sodium pentaborate utilized to prepare the solution that is utilized in the SLC System. These include:

- Columbia Generating Station - Issuance of Amendment Re: Increased Boron Concentration In Standby Liquid Control System (TAC NO. ME4789), May 18, 2011, (ADAMS Accession Number ML111170370) (Reference 4)

  This amendment is similar to the NMP2 proposed change with respect to the increase in the isotopic boron-10 enrichment in the sodium pentaborate solution utilized in the SLC System. For Columbia Generating Station, the boron-10 enrichment was increased from 22 atom percent to 44 atom percent.

- Susquehanna Steam Electric Station, Units 1 and 2 – Issuance of Amendment Re: Standby Liquid Control System (TAC NOS. MD1424 and MD1425), February 28, 2007, (ADAMS Accession Number ML070390215) (Reference 5)

  This amendment is similar to the NMP2 proposed change with respect to the increase in the isotopic boron-10 enrichment in the sodium pentaborate solution utilized in the SLC System and the SLC System volume decrease. The amendment also reduced the sodium pentaborate concentration; however, NMPNS is not proposing a change to the minimum sodium pentaborate solution concentration.

4.3 Significant Hazards Consideration

Nine Mile Point Nuclear Station LLC (NMPNS) is requesting an amendment to Renewed Facility Operating License NPF-69 for Nine Mile Point Unit 2 (NMP2). The proposed amendment includes supporting changes to the NMP2 Technical Specifications (TSs) necessary to increase the isotopic enrichment of boron-10 in the Standby Liquid Control (SLC). The proposed changes to the NMP2 TSs are as follows:

- Revise the acceptance criterion in TS 3.1.7 SR 3.1.7.10 by increasing the sodium pentaborate boron-10 enrichment requirement from ≥ 25 atom percent to ≥ 92 atom percent, and making a corresponding change to TS Figure 3.1.7-1, "Sodium Pentaborate Solution Volume/Concentration Requirements."

- Revise TS Figure 3.1.7-1 to account for the decrease in the minimum volume of the SLC system tank. At a sodium pentaborate concentration of 13.6% the minimum volume changes from 4,558.6 gallons to 1,600 gallons. At a sodium pentaborate concentration of 14.4%, the minimum volume changes from 4,288 gallons to 1,530 gallons.

NMPNS has evaluated whether or not a significant hazards consideration is involved with the proposed amendment by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

1) Will the change involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

The SLC System is used to mitigate the consequences of an Anticipated Transient Without SCRAM (ATWS) special event and is used to limit the radiological dose during a Loss of Coolant Accident (LOCA). The proposed changes do not affect the capability of the SLC System to perform these two functions in accordance with the assumptions of the associated analyses.

A SLC System failure is not a precursor of any previously evaluated accident in the NMP2 Updated Safety Analysis Report (USAR). Consequently there is no change in the probability of an accident previously evaluated accident.

The current ATWS analysis is not adversely affected by the proposed changes because the reactivity insertion rate would increase by a factor greater than 3 and the amount of injected boron-10 is not reduced. The ability of SLC System to mitigate radiological dose in the event of a LOCA is not affected by these changes.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2) Will the change create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

Structures, systems and components (SSCs) previously required for the mitigation of a transient remain capable of fulfilling their intended design functions. The proposed changes do not adversely affect safety-related SSCs and do not challenge the performance or integrity of any safety-related SSC. The physical changes to the SLC System are limited to the increase in the boron-10 enrichment of the sodium pentaborate solution in the SLC System storage tank, the corresponding decrease in the net sodium pentaborate solution volume requirement in the SLC System storage tank, and the associated instrumentation changes. In addition, the effective SLC System flow rate utilized in the boron equivalency analysis is reduced. The proposed changes do not otherwise affect the design or operation of the SLC System.

This change does not adversely affect any current system interfaces or create any new interfaces that could result in an accident or malfunction of a different kind than was previously evaluated.

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

3) Will the change involve a significant reduction in a margin of safety?

Response: No.

The SLC System is used to mitigate the consequences of an ATWS event and is used to limit the radiological dose during a LOCA. The proposed changes do not affect the capability of the SLC System to perform these two functions in accordance with the assumptions of the associated analyses. The current ATWS analysis is not adversely affected by the proposed changes because the reactivity insertion rate would increase by a factor greater than 3 and the amount of injected boron-10 is not reduced. The ability of the SLC System to mitigate radiological dose in the event of a LOCA by maintaining suppression pool pH ≥ 7.0 is not affected by these changes.

Therefore, the proposed changes do not involve a significant reduction in a margin of safety.

4.4 Conclusions

Based on the considerations discussed above, (1) there is 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. Therefore, NMPNS concludes that the proposed amendment presents no significant hazards considerations under the standards set forth in 10 CFR 50.92, and, accordingly, a finding of "no significant hazards consideration" is justified.

5.0 ENVIRONMENTAL CONSIDERATION

A review has determined that the proposed amendment would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. However, the proposed amendment does not involve: (i) a significant hazards consideration; (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite; or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

6.0 REFERENCES

1. NEDE-31096P-A, "Anticipated Transients Without Scram: Response to NRC ATWS Rule 10CFR50.62," February 1987.

2. Regulatory Guide 1.183, "Alternative Radiological Source Terms for Evaluating Design Basis Accidents at Nuclear Power Reactors," July 2000 (ADAMS Accession No. ML003716792).

3. Standard Review Plan (SRP) 15.0.1, "Radiological Consequence Analyses Using Alternative Source Terms," Revision 0, July 2000 (ADAMS Accession No. ML003721661).

4. NRC letter to M. E. Reddemann (Energy Northwest), "Columbia Generating Station – Issuance of Amendment Re: Increased Boron Concentration in Standby Liquid Control System (TAC No. ME4789)," dated May 18, 2011 (ADAMS Accession No. ML111170370).

5. R. V. Guzman (NRC) letter to B. T. McKinney (PPL Susquehanna, LLC), "Susquehanna Steam Electric Station, Units 1 and 2 – Issuance of Amendment Re: Standby Liquid Control System (TAC Nos. MD1424 and MD1425)," dated February 28, 2007 (ADAMS Accession No. ML070390215).

6. GE Hitachi Nuclear Energy Safety Communication 10-13, Standby Liquid Control System Dilution Flow, dated October 11, 2010.

ATTACHMENT 1

NINE MILE POINT UNIT 2
PROPOSED CHANGES TO TECHNICAL SPECIFICATIONS
(MARK-UPS)

The current versions of the following Technical Specification pages have been marked-up to reflect the proposed changes:

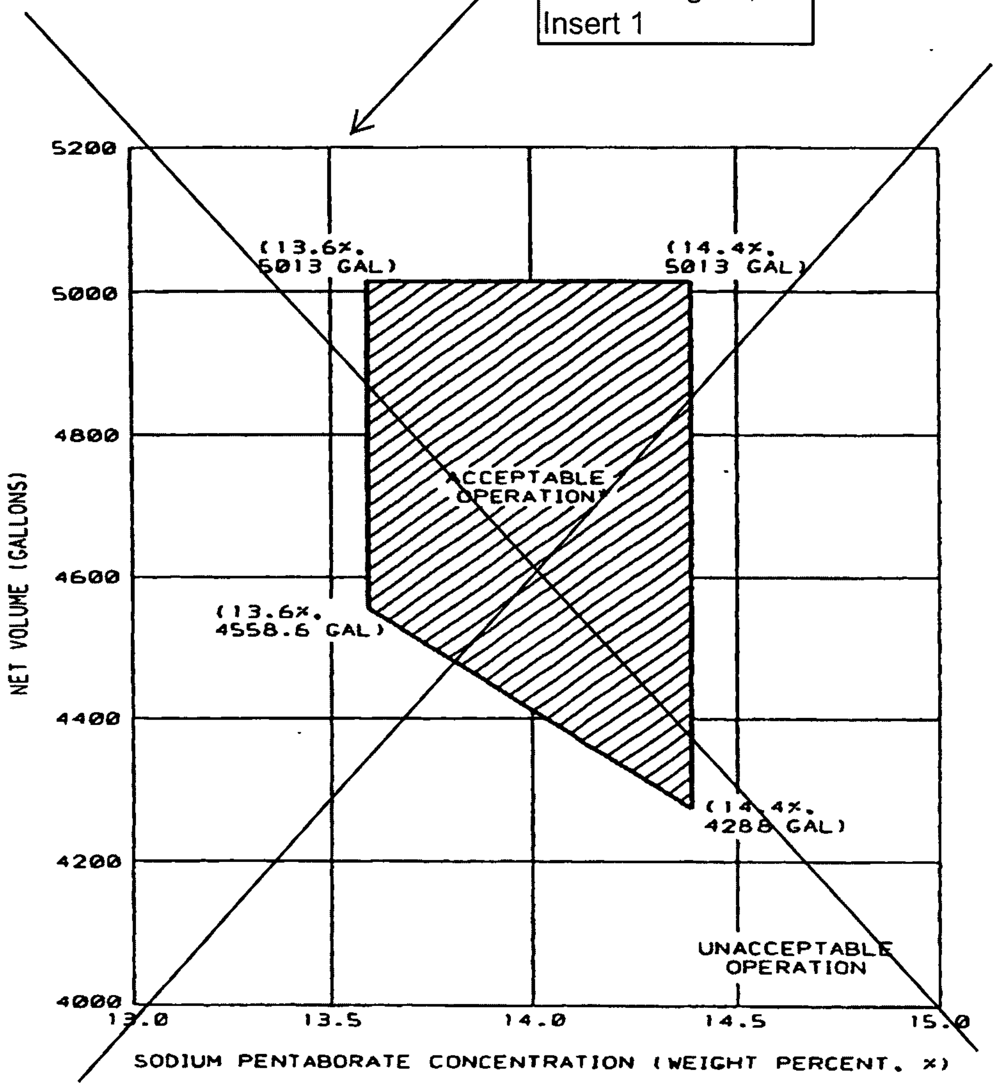
3.1.7-3
3.1.7-4

Nine Mile Point Nuclear Station, LLC
July 5, 2013

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.1.7.7	Verify each pump develops a flow rate ≥ 41.2 gpm at a discharge pressure ≥ 1327 psig.	In accordance with the Inservice Testing Program
SR 3.1.7.8	Verify flow through one SLC subsystem from pump into reactor pressure vessel.	24 months on a STAGGERED TEST BASIS
SR 3.1.7.9	Verify all heat traced piping between storage tank and pump suction valve is unblocked.	24 months AND Once within 24 hours after piping temperature is restored to ≥ 70°F
SR 3.1.7.10	Verify sodium pentaborate enrichment is ≥ ~~25~~ atom percent B-10. [92]	Prior to addition to SLC tank

Replace with attached figure, Insert 1



TS Insert 1 - Figure 3.1.7-1

92

*For Boron-10 Isotope Enrichment ≥ ~~25~~ Atom Percent

Figure 3.1.7-1 (Page 1 of 1)
Sodium Pentaborate Solution Volume/Concentration Requirements

TS Insert 1- Figure 3.1.7-1