



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

November 29, 2016

Mr. Bryan C. Hanson
President and Chief Nuclear Officer
Exelon Nuclear
Nine Mile Point Nuclear Station, LLC
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: NINE MILE POINT NUCLEAR STATION, UNIT 2 - ISSUANCE OF
AMENDMENT REGARDING HIGH PRESSURE CORE SPRAY SYSTEM AND
REACTOR CORE ISOLATING COOLING SYSTEM ACTUATION
INSTRUMENTATION TECHNICAL SPECIFICATIONS (EMERGENCY
CIRCUMSTANCES) (CAC NO. MF8868)

Dear Mr. Hanson:

The Commission has issued the enclosed Amendment No. 160 to Renewed Facility Operating License No. NPF-69 for the Nine Mile Point Nuclear Station, Unit No. 2 (NMP2). The amendment consists of changes to the technical specifications (TSs) in response to your application dated November 26, 2016.

The amendment modifies the High Pressure Core Spray (HPCS) system and Reactor Core Isolation Cooling (RCIC) system actuation instrumentation TSs by adding a footnote indicating that the injection functions of Drywell Pressure – High and Manual Initiation are not required to be operable under low reactor pressure conditions. This amendment was necessitated by the inadvertent deletion of these footnotes during the NMP2 conversion to the Improved Technical Specifications in February 2000 and emergent issues associated with the "A" reactor recirculation pump that required an unplanned plant shutdown.

The license amendment is issued under emergency circumstances as provided in the provisions of paragraph 50.91(a)(5) of Title 10 of the *Code of Federal Regulations* due to the time critical nature of the amendment. In this instance, an emergency situation exists in that the proposed amendment is needed to allow timely resumption of power operation.

Mr. Hanson

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A copy of the related safety evaluation (SE) is enclosed. The SE describes the emergency circumstances under which the amendment was issued and the final determination of no significant hazards. Notice of Issuance, addressing the final no significant hazards determination and opportunity for a hearing, will be included in the Commission's next biweekly *Federal Register* notice.

Sincerely,

A handwritten signature in black ink that reads "Brenda Mozafari". The signature is written in a cursive, flowing style.

Brenda L. Mozafari, Senior Project Manager
Plant Licensing Branch I-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-410

Enclosures:

1. Amendment No. 160 to NPF-69
2. Safety Evaluation

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

EXELON GENERATION COMPANY, LLC

NINE MILE POINT NUCLEAR STATION, UNIT 2

DOCKET NO. 50-410

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 160
Renewed License No. NPF-69

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Exelon Generation Company, LLC (Exelon, the licensee) dated November 26, 2016, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Renewed Facility Operating License No. NPF-69 is hereby amended to read as follows:

Enclosure 1

(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, as revised through Amendment No. 160, are hereby incorporated into this license. Exelon Generation shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in black ink, appearing to read "Douglas V. Pickett".

Douglas V. Pickett, Acting Chief
Plant Licensing Branch I-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the License and Technical
Specifications

Date of Issuance: November 29, 2016

NINE MILE POINT NUCLEAR STATION, UNIT 2
ATTACHMENT TO LICENSE AMENDMENT NO. 160
TO RENEWED FACILITY OPERATING LICENSE NO. NPF-69
DOCKET NO. 50-410

Replace the following page of the Renewed Facility Operating License with the attached revised page. The revised page is identified by amendment number and contains marginal lines indicating the areas of change.

Remove Page

4

Insert Page

4

Replace the following pages of Appendix A, Technical Specifications, with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove Pages

3.3.5.1-12

3.3.5.2-4

Insert Pages

3.3.5.1-12

3.3.5.2-4

(1) Maximum Power Level

Exelon Generation is authorized to operate the facility at reactor core power levels not in excess of 3988 megawatts thermal (100 percent rated power) in accordance with the conditions specified herein.

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, as revised through Amendment No. 160 are hereby incorporated into this license. Exelon Generation shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

(3) Fuel Storage and Handling (Section 9.1, SSER 4)*

- a. Fuel assemblies, when stored in their shipping containers, shall be stacked no more than three containers high.
- b. When not in the reactor vessel, no more than three fuel assemblies shall be allowed outside of their shipping containers or storage racks in the New Fuel Vault or Spent Fuel Storage Facility.
- c. The above three fuel assemblies shall maintain a minimum edge-to-edge spacing of twelve (12) inches from the shipping container array and approved storage rack locations.
- d. The New Fuel Storage Vault shall have no more than ten fresh fuel assemblies uncovered at any one time.

(4) Turbine System Maintenance Program (Section 3.5.1.3.10, SER)

The operating licensee shall submit for NRC approval by October 31, 1989, a turbine system maintenance program based on the manufacturer's calculations of missile generation probabilities. (Submitted by NMPC letter dated October 30, 1989 from C.D. Terry and approved by NRC letter dated March 15, 1990 from Robert Martin to Mr. Lawrence Burkhardt, III).

* The parenthetical notation following the title of many license conditions denotes the section of the Safety Evaluation Report (SER) and/or its supplements wherein the license condition is discussed.

Table 3.3.5.1-1 (page 4 of 5)
Emergency Core Cooling System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
3. High Pressure Core Spray (HPCS) System					
a. Reactor Vessel Water Level – Low Low, Level 2	1,2,3, 4(a),5(a)	4(b)	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.5 SR 3.3.5.1.6	≥ 101.8 inches
b. Drywell Pressure – High (d)	1,2,3	4(b)	B	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.5 SR 3.3.5.1.6	≤ 1.88 psig
c. Reactor Vessel Water Level – High, Level 8	1,2,3, 4(a),5(a)	4	C	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.5 SR 3.3.5.1.6	≤ 209.3 inches
d. Pump Suction Pressure – Low	1,2,3, 4(c),5(c)	2	D	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.5 SR 3.3.5.1.6	≥ 94.5 inches H ₂ O
e. Pump Suction Pressure – Timer	1,2,3, 4(c),5(c)	1	D	SR 3.3.5.1.2 SR 3.3.5.1.5 SR 3.3.5.1.6	≤ 5.5 seconds
f. Suppression Pool Water Level – High	1,2,3	2	D	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.5 SR 3.3.5.1.6	≤ 200.7 ft
g. HPCS Pump Discharge Pressure – High (Bypass)	1,2,3, 4(a),5(a)	1	E	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.5 SR 3.3.5.1.6	≥ 220 psig
h. HPCS System Flow Rate – Low (Bypass)	1,2,3, 4(a),5(a)	1	E	SR 3.3.5.1.1 SR 3.3.5.1.2 SR 3.3.5.1.3 SR 3.3.5.1.5 SR 3.3.5.1.6	≥ 580 gpm and ≤ 720 gpm
i. Manual Initiation (d)	1,2,3, 4(a),5(a)	2	C	SR 3.3.5.1.6	NA

(continued)

- (a) When associated ECCS subsystem(s) are required to be OPERABLE per LCO 3.5.2.
 (b) Also required to initiate the associated DG.
 (c) When HPCS is OPERABLE for compliance with LCO 3.5.2 and aligned to the condensate storage tank while tank water level is not within the limit of SR 3.5.2.2.
 (d) The injection functions of Drywell Pressure-High and Manual Initiation are not required to be OPERABLE with reactor steam dome pressure less than 600 psig.

RCIC System Instrumentation
3.3.5.2

Table 3.3.5.2-1 (page 1 of 1)
Reactor Core Isolation Cooling System Instrumentation

FUNCTION	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Reactor Vessel Water Level – Low Low, Level 2	4	B	SR 3.3.5.2.1 SR 3.3.5.2.2 SR 3.3.5.2.3 SR 3.3.5.2.4 SR 3.3.5.2.5	≥ 101.8 inches
2. Reactor Vessel Water Level – High, Level 8	4	B	SR 3.3.5.2.1 SR 3.3.5.2.2 SR 3.3.5.2.3 SR 3.3.5.2.4 SR 3.3.5.2.5	≤ 209.3 inches
3. Pump Suction Pressure – Low	2	D	SR 3.3.5.2.1 SR 3.3.5.2.2 SR 3.3.5.2.3 SR 3.3.5.2.4 SR 3.3.5.2.5	≥ 101 inches Wg
4. Pump Suction Pressure – Timer	1	D	SR 3.3.5.2.2 SR 3.3.5.2.4 SR 3.3.5.2.5	≤ 12.3 seconds
5. Manual Initiation (a)	2	C	SR 3.3.5.2.5	NA

(a) The injection function of Manual Initiation is not required to be OPERABLE with reactor steam dome pressure less than 600 psig.



UNITED STATES
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WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 160

TO RENEWED FACILITY OPERATING LICENSE NO. NPF-69

EXELON GENERATION COMPANY, LLC.

NINE MILE POINT NUCLEAR STATION, UNIT 2

DOCKET NO. 50-410

1.0 INTRODUCTION

By letter dated November 26, 2016, Exelon Generation Company, LLC, the licensee, submitted a request for an emergency license amendment to the Nine Mile Point Nuclear Station, Unit 2 (NMP2). The amendment reinserts a footnote in the NMP2 Technical Specifications (TSs) related to the High Pressure Core Spray (HPCS) system and Reactor Core Isolation Cooling (RCIC) system actuation instrumentation to provide clarification that the injection functions of Drywell Pressure – High (HPCS only) and Manual Initiation (HPCS and RCIC) are not required to be operable under low reactor pressure conditions.

The licensee requested that the Nuclear Regulatory Commission (NRC) staff process this submittal under emergency circumstances as described in 10 CFR 50.91(a)(5).

2.0 REGULATORY EVALUATION

The Commission's regulatory requirements related to the content of the TSs are set forth in Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.36, "Technical specifications." This regulation requires that the TSs include items in the following five specific categories: (1) safety limits, limiting safety system settings, and limiting control settings; (2) limiting conditions for operation (LCOs); (3) surveillance requirements; (4) design features; and (5) administrative controls. The regulation does not specify the particular requirements to be included in plant TSs. In general, there are two classes of changes to TSs: (1) changes needed to reflect modifications to the design basis, as TSs are derived from the design basis, and (2) changes to take advantage of the evolution in policy and guidance as to the required content and preferred format of TSs over time. In determining the acceptability of such changes, the NRC staff interprets the requirements in 10 CFR 50.36 using as a model the accumulation of generically approved guidance in the Improved Standard Technical Specifications (ISTS). For this review, the NRC staff used NUREG-1433, Revision 4, "Standard Technical Specifications, General Electric Plants BWR/4."

As discussed in 10 CFR 50.36(c)(2), LCOs are the lowest functional capability or performance level of equipment required for safe operation of the facility. When LCOs are not met, the licensee shall shut down the reactor or follow any remedial action permitted by the TSs until the LCO can be met.

Section 10 CFR, Appendix A of Part 50, General Design Criterion (GDC) 13, "Instrumentation and control," requires, that "Instrumentation shall be provided to monitor variables and systems over their anticipated ranges for normal operation, for anticipated operational occurrences, and for accident conditions as appropriate to assure adequate safety, including those variables and systems that can affect the fission process, the integrity of the reactor core, the reactor coolant pressure boundary, and the containment and its associated systems. Appropriate controls shall be provided to maintain these variables and systems within prescribed operating ranges."

3.0 TECHNICAL EVALUATION

3.1 System Description

As presented in the licensee's November 26, 2016, application:

The HPCS system consists of a motor-driven centrifugal pump, an independent spray sparger in the reactor vessel located above the core (separate from the Low Pressure Core Spray (LPCS) sparger) and associated system piping, valves, controls and instrumentation. The HPCS system provides coolant to the reactor vessel following a small break loss-of-coolant accident (LOCA) until reactor pressure is below the pressure at which the low pressure coolant injection systems, i.e., the Low Pressure Core Spray (LPCS) system or the Low Pressure Coolant Injection (LPCI) mode of the Residual Heat Removal (RHR) system.

In addition, the HPCS system is designed to automatically start on primary containment (drywell) high pressure. Primary containment high pressure is an indication that a breach of the nuclear process barrier has occurred inside the drywell. The system can also be initiated manually.

The RCIC system uses a steam-driven turbine-pump unit and automatically operates to maintain adequate water level in the reactor vessel. The RCIC system provides makeup water to the reactor vessel when the vessel is isolated. The RCIC system is designed to ensure that sufficient reactor water inventory is maintained in the reactor vessel to permit adequate core cooling in the event of a loss of normal feedwater flow. The system can also be initiated manually.

HPCS and RCIC system controls automatically start the systems from the receipt of a reactor vessel low-low water level signal (Level 2). In all actuation modes, the systems are prevented from injecting above high reactor vessel water level (Level 8) using one-out of-two twice logic that originates from wide range reactor vessel level instrumentation. The HPCS and RCIC system controls function to provide design makeup water flow to the reactor vessel until the amount of water delivered to the reactor vessel is adequate (Level 8), at which time the HPCS

and RCIC systems automatically stop injecting into the reactor vessel. The HPCS and RCIC systems are designed to automatically cycle between the low-low (Level 2) and high (Level 8) reactor vessel water levels.

3.2 Proposed TS Changes

As presented in the licensee's November 26, 2016, application:

TS Table 3.3.5.1-1 requires HPCS Drywell Pressure – High and Manual Initiation actuation instrumentation to be operable in various operational conditions. Any challenge to the reactor coolant pressure boundary that results in a high drywell pressure condition will result in an automatic actuation of the HPCS system actuation logic; however, the system will not automatically inject with the Level 8 signal present. The system will automatically inject, without operator intervention, when a demand for inventory is sensed at low-low reactor vessel water level (Level 2). Or, the system can be started manually if the Level 8 signal clears or is overridden. This operation is the same for a high reactor vessel water level occurring at rated pressure and temperature, or at low reactor vessel pressures and temperatures.

Similar to HPCS, TS Table 3.3.5.2-1 requires RCIC Manual Initiation actuation instrumentation to be operable in various operational conditions. However, as a result of the level instrumentation condition, a high reactor vessel water level signal is present for the RCIC system at low reactor pressures (up to 600 psig), but above the pressure at which the RCIC system is required to be operable, and the system will not manually inject with the Level 8 signal present. The system will automatically inject, without operator intervention, when a demand for inventory is sensed at low-low reactor vessel water level (Level 2). Or, the system can inject manually if the Level 8 signal clears or is overridden. This operation is the same for a high reactor vessel water level occurring at rated pressure and temperature, or at low reactor vessel pressures and temperatures.

Therefore, Exelon proposes to change the HPCS system actuation instrumentation Limiting Condition for Operation requirements specified in TS Table 3.3.5.1-1, "Emergency Core Cooling System Instrumentation," to add a footnote indicating that the injection functions of Drywell Pressure – High and Manual Initiation are not required to be operable under low reactor pressure conditions. In addition, Exelon proposes to change the RCIC system actuation instrumentation Limiting Condition for Operation requirements specified in TS Table 3.3.5.2-1, "Reactor Core Isolation Cooling System Instrumentation," to add a footnote indicating that the injection function of Manual Initiation is not required to be operable under low reactor pressure conditions.

In particular, the following changes are proposed for NMP2:

1. TS Table 3.3.5.1-1 will be revised on TS page 3.3.5.1-12 to add notation (d) to the end of Function 3.b., "Drywell Pressure – High," and Function 3.i,

"Manual Initiation," listed under Function 3, "High Pressure Core Spray (HPCS) System." Notation "(d)" will read as follows:

The injection functions of Drywell Pressure – High and Manual Initiation are not required to be OPERABLE with reactor steam dome pressure less than 600 psig.

2. TS Table 3.3.5.2-1 will be revised on TS page 3.3.5.2-4 to add notation (a) to the end of Function 5, "Manual Initiation." Notation "(a)" will read as follows:

The injection function of Manual Initiation is not required to be OPERABLE with reactor steam dome pressure less than 600 psig.

3.3 NRC Staff Evaluation

As discussed in the licensee's application, the licensee proposed changes to modify the HPCS system and RCIC system actuation instrumentation TSs that would effectively reinsert the aforementioned footnotes that had been unintentionally removed from the original TS during the conversion to the Improved Technical Specifications for NMP2 (License Amendment No. 91 dated February 15, 2000, Agencywide Document Access and Management System (ADAMS) Accession No. ML003686855). Therefore, the reinserted footnote would provide clarification that the injection functions of Drywell Pressure – High (HPCS only) and Manual Initiation (HPCS and RCIC) are not required to be operable under low reactor pressure conditions.

The original footnotes were approved by the NRC when NMP2 was licensed in July 1987 with the issuance of NUREG-1253, "Technical Specifications Nine Mile Point Nuclear Station, Unit No. 2." The NRC staff reviewed NUREG-1253 and confirmed that the footnotes were included in the HPCS and RCIC TSs.

As noted above, NMP2 converted to the Improved Technical Specifications on February 15, 2000. Prior to issuance of the TS conversion, the NRC staff requested that the licensee submit "clean" TS pages ready for issuance with the license amendment. The "clean" TS pages were submitted by the licensee on January 31, 2000 (ADAMS Accession No. ML003679008). Examination of this latter submittal makes it clear that the footnotes for the HPCS and RCIC systems were inadvertently omitted. Since the NRC staff issued the "clean" TS pages as received from the licensee with the license amendment for the TS conversion, the footnotes were inadvertently deleted.

The licensee also stated in its application that the proposed changes would resolve an NRC inspection finding documented in the second quarter 2016 inspection report for NMP2, which was the result of removing the footnotes from the TSs. In response to the inspection finding, the issue was being tracked in the licensee's corrective action program (CAP). Exelon stated that it had developed a license amendment request (LAR) which it planned to submit to the NRC in the fourth quarter of 2016 and implement during the next scheduled refueling outage in the spring of 2018, until the current forced outage required the submittal of this emergency LAR. Prior to the previous refueling outage, NMP2 stated that it had remained at full power for 412 days; and therefore, based on improved equipment reliability, processing the LAR to coincide with the 2018 outage was commensurate with Exelon's expected need.

The NRC staff concludes that the HPCS and RCIC footnotes that bypass HPCS and RCIC system operability requirements at low reactor steam dome pressure were inadvertently eliminated as part of the NMP2 conversion to the Improved Technical Specifications. The staff has examined past license amendments issued to NMP2 and concluded that the footnotes were not knowingly eliminated in a separate license amendment. Furthermore, the staff has confirmed that the footnotes are included in NUREG-1433, Revision 4, which, as stated in the Regulatory Evaluation section of this SE, serves as the model for the Improved Technical Specifications. Therefore, the staff approves the proposed TS changes that reinserts the footnotes for both the HPCS and RCIC systems.

4.0 EMERGENCY CIRCUMSTANCES

The NRC's regulations in 10 CFR 50.91(a)(5) state that where the NRC finds that an emergency situation exists in that failure to act in a timely way would result in derating or shutdown of a nuclear power plant, or in prevention of either resumption of operation or of increase in power output up to the plant's licensed power level, the NRC may issue a license amendment involving no significant hazards consideration (NSHC) without prior notice and opportunity for a hearing or for public comment. In such a situation, the NRC will publish a notice of issuance under 10 CFR 2.106, providing for opportunity for a hearing and for public comment after issuance.

The proposed amendment would reinsert footnotes that were inadvertently deleted in a previous license amendment. As explained above, the licensee initially planned to submit this LAR to the NRC in the fourth quarter of 2016 and implement the LAR during the next scheduled refueling outage in the spring of 2018. However, the current forced outage necessitated the licensee's submittal of this LAR under emergency circumstances. The licensee requested that the proposed amendment be processed by the NRC on an emergency basis because the proposed changes would allow for compliance with TS 3.3.5.1 for HPCS and TS 3.3.5.2 for RCIC to support startup from the current forced outage and future outages.

The licensee stated that the emergency situation are based on the circumstance involving the unexpected failure of the "A" Reactor Recirculation Pump motor bearing oil cooler which resulted in the licensee's conservative decision to shut down the plant for repairs. The licensee further stated that:

The station's power history since startup from the spring 2016 refueling outage has been at normal power, with the exception of TS required surveillances and the associated power reductions. The "A" Reactor Recirculation Pump motor performance has been monitored from August 27, 2016, due to temperatures for the upper guide, upper thrust, and lower thrust bearings being lower than normal (100 degrees Fahrenheit versus 135-160 degrees Fahrenheit). Historically, this pump and motor had good performance. From August 27 to November 22, 2016, parameters were consistent. On November 22, 2016, an unexpected low oil level alarm for the upper bearing oil reservoir was received leading to the conservative shutdown of the plant for repairs.

The licensee stated that the emergency circumstance involving the failure of the "A" Reactor Recirculation Pump motor bearing oil cooler could not be avoided because:

Motor bearing vibrations and temperature degradation worsened after the low oil level alarm was received, requiring plant operators to secure the pump in accordance with the adverse condition monitoring plan on November 23, 2016. Failure of the motor bearing oil cooler was discovered during drywell entry on November 24, 2016, which led to the subsequent plant shutdown for repairs.

The NRC staff reviewed the licensee's basis for processing the proposed amendment as an emergency and agrees that an emergency situation exists because the proposed changes would allow for compliance with TS 3.3.5.1 for HPCS and TS 3.3.5.2 for RCIC to support startup from the current forced outage and future outages. Further, the NRC staff agrees that the emergency circumstance involving the unexpected failure of the "A" Reactor Recirculation Pump motor bearing oil cooler could not be avoided. Finally, the NRC staff concludes that failure to issue the proposed amendment would result in prevention of the resumption of operations for NMP2.

The NRC staff reviewed the licensee's basis for processing the proposed amendment as an emergency amendment and finds that an emergency situation exists consistent with the provisions in 10 CFR 50.91(a)(5). Furthermore, the staff determines that (1) the licensee used its best efforts to make a timely application and (2) the licensee has not abused the provisions of 10 CFR 50.91(a)(5). Based on these findings and the determination that the amendment involves NSHC as discussed below, the NRC staff has determined that a valid need exists for issuance of the license amendment using the emergency provisions of 10 CFR 50.91(a)(5).

5.0 FINAL NO SIGNIFICANT HAZARDS CONSIDERATION

The NRC's regulation in 10 CFR 50.91(a)(5) states that where the Commission finds that an emergency situation exists, the Commission will not publish a notice of proposed determination on NSHC. The NRC's regulations in 10 CFR 50.92 state that the NRC may make a final determination that a license amendment involves NSHC if operation of the facility, in accordance with the amendment, would not: (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety. As discussed in Section 4.0 of this SE, the NRC staff finds that an emergency situation exists for NMP2. Therefore, as provided below, the NRC has made a final determination concerning whether the license amendment involves a significant hazards consideration.

As required by 10 CFR 50.91(a), Exelon has provided its analysis of the issue of NSHC, which is presented below.

1. Do the proposed changes involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

The proposed changes involve the addition of clarifying footnotes to the HPCS and RCIC actuation instrumentation TS to reflect the as-built plant

design and operability requirements of HPCS and RCIC instrumentation as described in the NMP2 Updated Safety Analysis Report (USAR). HPCS and RCIC are not an initiator of any accident previously evaluated. As a result, the probability of any accident previously evaluated is not increased. In addition, the automatic start of HPCS on high drywell pressure and the manual initiation of HPCS and RCIC are not credited to mitigate the consequences of design basis accidents within the current NMP2 design and licensing basis.

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

2. Do the proposed changes create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The proposed changes do not alter the protection system design, create new failure modes, or change any modes of operation. The proposed changes do not involve a physical alteration of the plant, and no new or different kind of equipment will be installed. Consequently, there are no new initiators that could result in a new or different kind of accident.

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

3. Do the proposed changes involve a significant reduction in a margin of safety?

Response: No.

The proposed changes have no adverse effect on plant operation. The plant response to the design basis accidents does not change. The proposed changes do not adversely affect existing plant safety margins or the reliability of the equipment assumed to operate in the safety analyses. There is no change being made to safety analysis assumptions, safety limits or limiting safety system settings that would adversely affect plant safety as a result of the proposed changes.

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

The NRC staff has reviewed Exelon's analysis and, based on this review, the NRC staff concludes that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff has made a final determination that NSHC is involved for the proposed amendment and that the amendment should be issued as allowed by the criteria contained in 10 CFR 50.91.

6.0 STATE CONSULTATION

In accordance with the Commission's regulations, the New York State official was notified of the proposed issuance of the amendment on November 28, 2016. The State official had questions about system operability and whether the HPCS and RCIC systems would remain available for automatic and manual initiation when the reactor steam dome pressure was below 600 psig. The NRC staff confirmed that control room operators would still be able to manually initiate both the HPCS and RCIC systems provided that the reactor steam dome pressure was at least 150 psig to support the RCIC steam turbine. In addition, the HPCS system would still actuate automatically on Drywell Pressure – High, although the instrumentation is not calibrated for cold reactor coolant conditions.

7.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has made a finding in this document that the amendment involves NSHC. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

8.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) there is reasonable assurance that 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.

Principal Contributors: Richard Guzman, NRR
Douglas Pickett, NRR

Date: November 29, 2016

Mr. Hanson

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A copy of the related safety evaluation (SE) is enclosed. The SE describes the emergency circumstances under which the amendment was issued and the final determination of no significant hazards. Notice of Issuance, addressing the final no significant hazards determination and opportunity for a hearing, will be included in the Commission's next biweekly *Federal Register* notice.

Sincerely,

/RA/

Brenda L. Mozafari, Senior Project Manager
Plant Licensing Branch I-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-410

Enclosures:

1. Amendment No. 160 to NPF-69
2. Safety Evaluation

cc w/encls: Distribution via Listserv

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ADAMS Accession No.: ML16333A000

*via email

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DATE	11/29/16	11/29/16	11/29/16	11/29/16
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NAME	MWaters*	AGhosh	DPickett	
DATE	11/28/16	11/29/16	11/29/16	

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