



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

March 6, 2018

Mr. Bryan C. Hanson
Senior Vice President
Exelon Generation Company, LLC
President and Chief Nuclear Officer
Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: NINE MILE POINT NUCLEAR STATION, UNIT 2 - ISSUANCE OF
AMENDMENT NO. 166 TO ADOPT TECHNICAL SPECIFICATIONS
TASK FORCE (TSTF) TRAVELER TSTF-522 (CAC NO. MF9804;
EPID L-2017-LLA-0232)

Dear Mr. Hanson:

The U.S. Nuclear Regulatory Commission (the Commission) has issued the enclosed Amendment No. 166 to Renewed Facility Operating License No. NPF-69 for the Nine Mile Point Nuclear Station, Unit 2. The amendment consists of changes to the Technical Specifications (TSs) in response to your application dated May 31, 2017 (Agencywide Documents Access and Management System Accession No. ML17151A214).

The amendment revises the run time for Surveillance Requirement (SR) 3.6.4.3.1 for TS 3.6.4.3, "Standby Gas Treatment (SGT) System," and SR 3.7.2.1 for TS 3.7.2, "Control Room Envelope Filtration (CREF) System." The run time for SR 3.6.4.3.1 would be reduced from a continuous 10 hours to a continuous 15 minutes, and the run time for SR 3.7.2.1 would be reduced from 1 hour to 15 minutes at frequencies controlled in accordance with the Surveillance Frequency Control Program.

A copy of the related Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael L. Marshall, Jr." with a stylized flourish at the end.

Michael L. Marshall, Jr., Senior Project Manager
Plant Licensing Branch I
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-410

Enclosures:

1. Amendment No. 166 to NPF-69
2. Safety Evaluation

cc: Listserv



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NINE MILE POINT NUCLEAR STATION, LLC

LONG ISLAND LIGHTING COMPANY

EXELON GENERATION COMPANY, LLC

DOCKET NO. 50-410

NINE MILE POINT NUCLEAR STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 166
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 May 31, 2017, 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:

- (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. 166, 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 60 days.

FOR THE NUCLEAR REGULATORY COMMISSION



James G. Danna, Chief
Plant Licensing Branch I
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the License and Technical
Specifications

Date of Issuance: March 6, 2018

ATTACHMENT TO LICENSE AMENDMENT NO. 166
NINE MILE POINT NUCLEAR STATION, UNIT 2
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 the 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

3.6.4.3-3

3.7.2-3

Insert Pages

3.6.4.3-3

3.7.2-3

(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. 166, 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 16, 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.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. (continued)	<u>AND</u> E.3 Initiate action to suspend OPDRVs.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.4.3.1 Operate each SGT subsystem for ≥ 15 continuous minutes with heaters operating.	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.3.2 Perform required SGT filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP
SR 3.6.4.3.3 Verify each SGT subsystem actuates on an actual or simulated initiation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.6.4.3.4 Verify each SGT decay heat removal air inlet valve can be opened.	In accordance with the Surveillance Frequency Control Program



UNITED STATES
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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 166

TO RENEWED FACILITY OPERATING LICENSE NO. NPF-69

NINE MILE POINT NUCLEAR STATION, LLC

LONG ISLAND LIGHTING COMPANY

EXELON GENERATION COMPANY, LLC.

NINE MILE POINT NUCLEAR STATION, UNIT 2

DOCKET NO. 50-410

1.0 INTRODUCTION

By letter dated May 31, 2017 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17151A214), Exelon Generation Company, LLC (Exelon or the licensee) submitted a request for changes to the Nine Mile Point Nuclear Station, Unit 2 (Nine Mile Point 2) Technical Specifications (TSs). The requested changes would revise surveillance requirements (SRs) that currently require operating the ventilation system for at least 10 continuous hours with the heaters operating at a frequency controlled in accordance with the Surveillance Frequency Control Program (SFCP). The SRs would be changed to require at least 15 continuous minutes of ventilation system operation at a frequency controlled in accordance with the SFCP.

The licensee requested to adopt U.S. Nuclear Regulatory Commission (NRC or the Commission) approved Technical Specifications Task Force Traveler (TSTF) 522, Revision 0, "Revise Ventilation System Surveillance Requirements to Operate for 10 hours per Month," dated March 30, 2010 (ADAMS Accession No. ML100890316).

2.0 REGULATORY EVALUATION

2.1 Description of Systems

One of the reasons that air filtration and adsorption systems are required at nuclear power plants is to lower the concentration of airborne radioactive material that may be released from the site to the environment due to a design-basis event. Lowering the concentration of airborne radioactive materials can mitigate doses to plant operators and members of the public in the event of a design-basis event. A typical system consists of ventilation ductwork, fans, dampers, valves, instrumentation, prefilters or demisters, high efficiency particulate air (HEPA) filters, heaters, and activated charcoal adsorbers. These systems are tested by operating the systems

and monitoring the response of the overall system, as well as individual components. Laboratory tests of charcoal adsorbers are also performed to ensure the charcoal adsorbs an acceptable amount of radioactive gases.

2.2 Description of Proposed Change

The licensee proposed changes to TS 3.6.4.3, "Standby Gas Treatment (SGT) System," and TS 3.7.2, "Control Room Envelope Filtration (CREF) System." In particular, SR 3.6.4.3.1, which currently requires operating for at least 10 continuous hours with heaters, and SR 3.7.2.1, which currently requires operating for 1 continuous hour at frequencies controlled in accordance with the SFCP, would be changed to require at least 15 continuous minutes of operation at a frequency controlled in accordance with the SFCP.

Current testing requirements for the air filtration and adsorption systems state that the systems should be operated for at least 10 continuous hours with heaters operating at a frequency controlled by the SFCP. These requirements are based on NRC staff guidance for testing air filtration and adsorption systems that has been superseded. New NRC staff guidance states at least 15 continuous minutes of ventilation system operation with heaters operating every 31 days is acceptable for those plants that test ventilation system adsorption at a relative humidity of less than 95 percent.

2.3 Description of Applicable Regulatory Requirements and Guidance

2.3.1 Requirements

The NRC's regulatory requirements related to the content of the TSs are contained in Title 10 of the *Code of Federal Regulation* (10 CFR) Section 50.36.

Section 50.36(c)(3) of 10 CFR addresses the need for SRs:

Surveillance requirements are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operation will be met.

Section 50.36(a)(1) of 10 CFR addresses the need for TS Bases:

A summary statement of the bases or reasons for such specifications...shall also be included in the application, but shall not become part of the technical specifications.

The licensee may make changes to the TS Bases without prior NRC staff review and approval in accordance with Nine Mile Point 2 TS 5.5.10, "Technical Specifications (TS) Bases Control Program." Accordingly, along with the proposed TS changes, the licensee also submitted TS Bases changes corresponding to the proposed TS changes. The NRC staff has no objections to the proposed TS Bases changes because the proposed changes are consistent with the proposed TS changes and provide the purpose for each requirement in the specification consistent with the Commission's Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors, dated July 22, 1993 (58 FR 39132).

2.3.2 Guidance

Regulatory Guide (RG) 1.52, Revision 3, "Design, Testing, and Maintenance Criteria for Post Accident Engineered-Safety-Feature Atmosphere Cleanup System Air Filtration and Adsorption Units of Light-Water-Cooled Nuclear Power Plants" (ADAMS Accession No. ML011710176), was published in March 2001 to provide guidance and criteria acceptable to the NRC staff to implement the regulations in Appendix A to 10 CFR Part 50 related to the design, inspection, and testing of air filtration and iodine adsorption units of engineered-safety-feature (ESF) atmosphere cleanup systems in light-water-cooled nuclear power plants.

The NRC's guidance for the format and content of licensee TSs can be found in the Standard Technical Specifications (STs). The applicable STs for Nine Mile Point 2 are NUREG-1433, "Standard Technical Specifications General Electric Plants BWR/4" (ADAMS Accession No. ML12104A192), and NUREG-1434, "Standard Technical Specifications General Electric Plants, BWR/6" (ADAMS Accession No. ML12104A195).

TSTF-522, Revision 0, provides guidance on revising the SRs for ventilation system operation. The licensee stated that the license amendment request is consistent with TSTF-522, Revision 0. The availability of the TSTF for use was announced in the *Federal Register* on September 20, 2012 (77 FR 58421), as part of the consolidated line item improvement process.

3.0 TECHNICAL EVALUATION

The NRC staff evaluated the licensee's proposed change against the applicable regulatory guidance in RG 1.52, Revision 3, in the applicable STs (as modified by TSTF-522) and the regulatory requirements of 10 CFR 50.36.

The current requirements in the TSs are consistent with the regulatory guidance in RG 1.52, Revision 2 (ADAMS Accession No. ML003740139). Regulatory Position 4.d of RG 1.52, Revision 2, states:

Each ESF atmosphere cleanup train should be operated at least 10 hours per month, with the heaters on (if so equipped), in order to reduce the buildup of moisture on the adsorbers and HEPA filters.

The purpose of this position is to minimize the moisture content in the system and thereby enhance efficiency in the event the system is called upon to perform its design-basis function. Testing requirements for air filtration and adsorption systems currently require operating the heaters in the respective ventilation and filtering systems for at least 10 continuous hours every 31 days. The current STS Bases explain that operation of heaters for 10 hours would eliminate moisture on the charcoal adsorbers and HEPA filters.

Subsequent to the publication RG 1.52, Revision 2, the NRC staff was informed that 10 continuous hours of system operation would dry out the charcoal adsorber for a brief period of time but, following heater de-energization, the level of moisture accumulation in adsorbers would rapidly return to the pre-test level. The NRC staff found this information persuasive and subsequently issued NRC Generic Letter (GL) 99-02, "Laboratory Testing of Nuclear-Grade Activated Charcoal," dated June 3, 1999 (ADAMS Accession No. ML082350935), and Errata, dated August 23, 1999 (ADAMS Accession No. ML031110094). It was requested in GL 99-02 that licensees confirm their charcoal testing protocols accurately reflect the adsorber gaseous

activity capture capability. Also, in GL 99-02, it was requested that the licensees account for the effects of moisture accumulation in adsorbers.

Therefore, the NRC staff updated RG 1.52 in June 2001 (ADAMS Accession No. ML011710176) to include this new information. RG 1.52, Revision 3, Regulatory Position 6.1, states:

Each ESF atmosphere cleanup train should be operated continuously for at least 15 minutes each month, with the heaters on (if so equipped), to justify the operability of the system and all its components.

One of the reasons for the previous 10-hour requirement for ventilation system operation with heaters operating was to minimize the effects of moisture on the adsorber's ability to capture gaseous activity. However, these effects are already accounted for in the Ventilation Filter Testing Program by performing testing at a relative humidity of 95 percent. Nine Mile Point 2 TS 5.5.7, "Ventilation Filter Testing Program (VFTP)," requires testing charcoal adsorbers in a manner to account for the effects of moisture on the adsorber's ability to capture gaseous activity. Therefore, the licensee proposed to remove the requirement to operate heaters from SR 3.6.4.3.1.

The NRC staff evaluated the licensee's proposed change against the applicable regulatory guidance in the STS, as modified by TSTF-522. The proposed change adopted the TS format and content, to the extent practicable, contained in the changes made to NUREG-1433 or NUREG-1434 by TSTF-522. The NRC staff found that the proposed change is consistent with guidance in the STS, as modified by TSTF-522.

The NRC staff compared the proposed change to the existing SRs, as well as the regulatory requirements of 10 CFR 50.36. The existing SRs provide assurance that the necessary quality of ventilation systems and components will be maintained and that the LCOs will be met. The proposed change reduces the amount of required system operational time from 1 hour and 10 hours to 15 minutes. The 1-hour operational requirement for SR 3.7.2.1 and 10-hour operational requirement for SR 3.6.4.3.1 with heaters was based on using the SR to eliminate moisture in the adsorbers and thus ensure the adsorbers would capture gaseous activity. The effects of moisture on the adsorber's ability to capture gaseous activity are now accounted for in the licensee's Ventilation Filter Testing Program by performing testing at a relative humidity of 95 percent. Since the SRs are no longer relied upon to ensure the effects of moisture on the adsorber's ability to capture gaseous activity are mitigated, the 1-hour heater operational for SR 3.7.2.1 and 10-hour heater operational for SR 3.6.4.3.1 requirements are unnecessary.

The NRC staff found that reducing the required minimum system operation time to 15 minutes, consistent with RG 1.52, Revision 3, in conjunction with the Ventilation Filter Testing Program, is sufficient to justify operability of the system and all its components. The NRC staff found that the proposed SRs meet the regulatory requirements of 10 CFR 50.36(c)(3) because the change provides assurance that the necessary quality of ventilation systems and components will be maintained and that the LCOs will be met. Therefore, the NRC staff finds the proposed change acceptable.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the New York State official was notified of the proposed issuance of the amendment on January 26, 2018. The State official had no comments.

5.0 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, and changes SRs. 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 previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (82 FR 35839; August 1, 2017). 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.

6.0 CONCLUSION

The staff 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 Contributor: Tarico Sweat

Date: March 6, 2018

SUBJECT: NINE MILE POINT NUCLEAR STATION, UNIT 2 - ISSUANCE OF AMENDMENT NO. 166 TO ADOPT TECHNICAL SPECIFICATIONS TASK FORCE (TSTF) TRAVELER TSTF-522 (CAC NO. MF9804; EPID L-2017-LLA-0232) DATED MARCH 6, 2018

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**by email*

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