

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

April 29, 2025

David P. Rhoades Senior Vice President Constellation Energy Generation, LLC President and Chief Nuclear Officer Constellation Nuclear 4300 Winfield Road Warrenville, IL 60555

SUBJECT: NINE MILE POINT NUCLEAR STATION, UNIT 1 - ISSUANCE OF AMENDMENT NO. 255 RELATED TO THE ADOPTION OF TECHNICAL SPECIFICATIONS TASK FORCE TRAVELER-230, REVISION 1 (EPID L-2024-LLA-0080)

Dear David Rhoades:

The U.S. Nuclear Regulatory Commission (NRC or the Commission) has issued the enclosed Amendment No. 255 to Renewed Facility Operating License No. DPR-63 for the Nine Mile Point Nuclear Station, Unit 1 (NMP1). The amendment consists of changes to the technical specifications (TSs) in response to your application dated June 13, 2024, as supplemented by letter dated November 22, 2024.

The amendment revises the NMP1 TS limiting conditions for operation (LCO) 3.3.7, "Containment Spray System," to allow both containment spray system (CSS) loops or one CSS loop and one train in the redundant loop to be inoperable for 8 hours. The amendment is consistent with NRC-approved Technical Specification Task Force (TSTF) Traveler-230, Revision 1, "Add New Condition B to LCO 3.6.2.3, RHR [Residual Heat Removal] Suppression Pool Cooling" (Agencywide Documents Access and Management System (ADAMS) Accession No. ML040570110, ML19067A141) and the Standard Technical Specifications (STS), NUREG.1433, "Standard Technical Specifications General Electric Plants, BWR/4," Revision 5 (ML21272A357). NMP1 does not have a RHR system or improved TSs, therefore, the applicable LCO for NMP1 is TS 3.3.7. This is considered a technical variation to TSTF-230, Revision 1, and is discussed in the enclosed safety evaluation. The Notice of Issuance will be included in the Commission's monthly Federal Register notice.

Sincerely,

/**RA**/

Richard V. Guzman, Senior Project Manager Plant Licensing Branch I Division of Operating Reactor Licensing Office of Nuclear Reactor Regulation

Docket No. 50-220

Enclosures: 1. Amendment No. 255 to DPR-63

2. Safety Evaluation

cc: Listserv



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

NINE MILE POINT NUCLEAR STATION, LLC

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-220

NINE MILE POINT NUCLEAR STATION, UNIT 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 255 Renewed License No. DPR-63

- 1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Constellation Energy Generation, LLC dated June 13, 2024, as supplemented by letter dated November 22, 2024, 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 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. DPR-63 is hereby amended to read as follows:
 - 2.C.(2) <u>Technical Specifications</u>

The Technical Specifications contained in Appendix A, which is attached hereto, as revised through Amendment No. 255, is hereby incorporated into this license. Constellation Energy Generation, LLC shall operate the facility in accordance with the Technical Specifications.

3. This amendment is effective as of its date of issuance and shall be implemented within 60 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Hipólito González, Chief Plant Licensing Branch I Division of Operating Reactor Licensing Office of Nuclear Reactor Regulation

Attachment:

Changes to the Technical Specifications and Renewed Facility Operating License

Date of Issuance: April 29, 2025

ATTACHMENT TO LICENSE AMENDMENT NO. 255

NINE MILE POINT NUCLEAR STATION, UNIT 1

RENEWED FACILITY OPERATING LICENSE NO. DPR-63

DOCKET NO. 50-220

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.

<u>Remove Page</u>	<u>Insert Page</u>
4	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.

<u>Remove Page</u>	Insert Page
159	159
160	160
161	161

(1) <u>Maximum Power Level</u>

The licensee is authorized to operate the facility at steady state reactor core power levels not in excess of 1850 megawatts (thermal).

(2) <u>Technical Specifications and Environmental Protection Plan</u>

The Technical Specifications contained in Appendix A, which is attached hereto, as revised through Amendment No. 255, is hereby incorporated into this license. Constellation Energy Generation, LLC shall operate the facility in accordance with the Technical Specifications.

- (3) Deleted
- A. This license is subject to the following additional conditions:
 - (1) NMP LLC will complete construction of a new radwaste facility in conformance with the design defined and evaluated in the FES, to be operational no later than June 1976.
 - (2) Deleted by License Amendment No. 51
 - (3) Deleted by License Amendment No. 51
 - (4) <u>Security, Training and Qualification and Safeguards Contingency Plans</u>

Constellation Energy Generation, LLC shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans, including amendments made pursuant to the provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans, which contain Safeguards Information protected under 10 CFR 73.21 is entitled "Nine Mile Point Nuclear Station, LLC Physical Security, Safeguards Contingency, and Security Training and Qualification Plan, Revision 1," and was submitted by letter dated April 26, 2006.

Constellation Energy Generation, LLC shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The licensee's CSP was approved by License Amendment No. 209 and modified by License Amendment No. 219. The licensee has obtained Commission authorization to use Section 161A preemption authority under 42 U.S.C 2201a for weapons at its facility.

(5) Paragraph 2.D(5) of the license has been combined with paragraph 2.D(4) as amended above into a single paragraph.

4.3.7	CONTAINMENT SPRAY SYSTEM	
	Applicability:	
	Applies to the testing of the containment spray	
	system.	
	Chiestive	
	<u>Objective</u> .	
	To verify the operability of the containment spray	
	system.	
	Specification:	
	The containment spray system surveillance shall be performed as indicated below:	
	 a. Containment Spray Pumps (1) In accordance with the Surveillance Frequency Control Program, automatic startup of the containment spray pump shall be demonstrated. (2) In accordance with the Surveillance Frequency Control Program, pump operability shall be checked. 	
	 b. Nozzles Following maintenance that could result in nozzle blockage, a test shall be performed on the spray nozzles. 	
	4.3.7	

SURVEILLANCE REQUIREMENT

LIMITING CONDITION FOR OPERATION

3.3.7

LIMITING CONDITION FOR OPERATION

- c. If a redundant component in each of the containment spray systems or their associated raw water systems become inoperable, both systems shall be considered operable provided that the component is returned to an operable condition within 7 days or in accordance with the Risk Informed Completion Time Program and that the additional surveillance required is performed.
- d. If a containment spray system or its associated raw water system becomes inoperable and all the components are operable in the other systems, the reactor may remain in operation for a period not to exceed 7 days or in accordance with the Risk Informed Completion Time Program.
- e. If both containment spray system loops become inoperable, or if one containment spray system loop and one train in the redundant loop become inoperable, the reactor may remain in operation for a period not to exceed 8 hours.
- f. If Specifications "a," "b," "c," "d," or "e" are not met, the reactor shall be in the hot shutdown condition within 12 hours and the reactor shall be in the cold shutdown condition within 36 hours and no work shall be performed on the reactor which could result in lowering the reactor water level to more than six feet, three inches (-10 inches indicator scale) below minimum normal water level (Elevation 302'9").

SURVEILLANCE REQUIREMENT

c. Raw Water Cooling Pumps

In accordance with the Surveillance Frequency Control Program, manual startup and operability of the raw water cooling pumps shall be demonstrated.

d. Surveillance with Inoperable Components

When a component or system becomes inoperable its redundant component or system shall be verified to be operable immediately and in accordance with the Surveillance Frequency Control Program thereafter.

AMENDMENT NO. 142, 222, 250 255

LIMITING CONDITION FOR OPERATION

- g. The containment spray system shall be considered operable by verifying that lake water temperature does not exceed 83°F.
- h. If specification "g" cannot be met commence shutdown within one hour and be in hot shutdown within 8 hours and cold shutdown within 24 hours.

SURVEILLANCE REQUIREMENT

g. Lake Water Temperature

Record in accordance with the Surveillance Frequency Control Program and at least once per 8 hours when latest recorded water temperature is greater than or equal to 75°F and at least once per 4 hours when the latest recorded water temperature is greater than or equal to 79°F.



SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 255 TO

RENEWED FACILITY OPERATING LICENSE NO DPR-63

CONSTELLATION ENERGY GENERATION, LLC

NINE MILE POINT NUCLEAR STATION, UNIT NO. 1

DOCKET NO. 50-220

1.0 INTRODUCTION

By letter dated June 13, 2024 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML24165A223), as supplemented by letter dated November 22, 2024 (ML24327A191), Constellation Energy Generation, LLC (the licensee) submitted a license amendment request (LAR) to revise the technical specifications (TSs) for Nine Mile Point Nuclear Station, Unit 1 (NMP1).

The proposed changes would revise NMP1 TS limiting conditions for operation (LCO) 3.3.7, "Containment Spray System," to allow both containment spray system (CSS) loops or one CSS loop and one train in the redundant loop to be inoperable for 8 hours. The proposed amendment is consistent with NRC-approved Technical Specification Task Force (TSTF) Traveler-230, Revision 1, "Add New Condition B to LCO 3.6.2.3, RHR [Residual Heat Removal] Suppression Pool Cooling" (ML040570110, ML19067A141) and the Standard Technical Specifications (STS), NUREG-1433, "Standard Technical Specifications General Electric Plants, BWR/4," Revision 5 (ML21272A357). NMP1 does not have a RHR system or improved TSs, therefore, the applicable LCO for NMP1 is TS 3.3.7. This is considered a technical variation to TSTF-230, Revision 1, and is discussed in Section 3.2 of this safety evaluation.

The supplemental letter dated November 22, 2024, provided additional information that clarified the application, did not expand the scope of the application as originally noticed, and did not change the NRC staff's original proposed no significant hazards consideration determination as published in the *Federal Register* (FR) on September 3, 2024 (89 FR 71436).

2.0 REGULATORY EVALUATION

2.1 <u>Description of the NMP1 Containment Spray System</u>

The NMP1 Containment Spray System is composed of two redundant loops. Each loop is made up of two redundant trains. Each redundant train contains its own motor-driven pump and heat

exchanger, and utilizes the piping, valves, instrumentation, and controls of its designated system. Each train has a suction source from the suppression pool and is capable of discharging water to the primary and secondary drywell spray headers, torus spray headers, or back to the suppression pool via a full flow test line. Each of the four heat exchangers is cooled by water supplied from a dedicated raw water pump taking suction from the condenser circulating water intake tunnel.

Following a design-basis accident (DBA), the CSS removes heat from and reduces pressure inside the drywell and torus and restores the pressure suppression system temperature following a loss-of-coolant accident (LOCA). The suppression pool inside the torus is designed to absorb the sudden input of heat from the primary system. In the long term, the pool continues to absorb residual heat generated by fuel in the reactor core. Some means must be provided to remove heat from the suppression pool so that the temperature inside the primary containment remains within design limits. This function is provided by two redundant CSS loops. The heat removal capability of one CSS loop with two pumps operating is sufficient to meet all DBA containment pressure, temperature, and suppression pool cooling requirements (Nine Mile Point Unit 1 UFSAR, Revision 28, Section VII (ML23353A157)).

The CSS is automatically initiated on high drywell pressure or low-low reactor water level signals and are independently controlled. The CSS performs the suppression pool cooling function by circulating water from the suppression pool through heat exchangers and returning it to the suppression pool. Cooling water supplied by independent raw water pumps circulates through the tube side of the heat exchangers and transfers heat from the suppression pool water to the external heat sink. Additionally, the CSS supplies water to drywell and torus spray headers which are used to control primary containment pressure during a LOCA.

2.2 Proposed TS Changes to Adopt TSTF-230

Consistent with NRC-approved TSTF-230, Revision 1, the licensee proposed changes that would revise the TS related to the CSS to allow two CSS loops or one CSS loop and one CSS train in the redundant loop to be inoperable for 8 hours. Specifically, the licensee proposed the following changes to NMP1 TS LCO 3.3.7:

- Revise Specification 3.3.7.a to add additional exceptions (in bold): "During all reactor operating conditions whenever reactor coolant temperature is greater than 215°F and fuel is in the reactor vessel and primary containment integrity is required; each of the two containment spray systems and the associated raw water cooling systems shall be operable except as specified in 3.3.7.b, **3.3.7.c**, **3.3.7.d**, **or 3.3.7.e**".
- Revise Specification 3.3.7.e to be "If both containment spray system loops become inoperable, or if one containment spray system loop and one train in the redundant loop become inoperable, the reactor may remain in operation for a period not to exceed 8 hours."
- Add new Specification 3.3.7.f to account for the revisions to Specifications 3.3.7.a and 3.3.7.e and allow additional time to bring the reactor to hot and cold shutdown conditions as such: "If Specifications "a," "b," "c," "d," or "e" are not met, the reactor shall be in the hot shutdown condition within 12 hours and the reactor shall be in the cold shutdown condition within 36 hours and no work shall be performed on the reactor which could result in lowering the reactor water level to more than six feet, three inches (-10 inches indicator scale) below minimum normal water level (Elevation 302'9")."

• To account for the previously mentioned changes, existing Specifications 3.3.7.f and 3.3.7.g are renumbered to 3.3.7.g and 3.3.7.h, respectively. In addition, existing Surveillance Requirement 4.3.7.f is renumbered to 4.3.7.g.

2.3 Applicable Regulatory Requirements

Title 10 of the *Code of Federal Regulations* (10 CFR) 50.36(c)(2), requires that TSs include LCO. Per 10 CFR 50.36(c)(2)(i), LCOs "are the lowest functional capability or performance levels of equipment required for safe operation of the facility." The regulation also requires that when an LCO of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the TS until the condition can be met.

2.4 <u>Applicable Regulatory Guidance</u>

The NRC staff's guidance for the review of TSs is in Chapter 16.0, "Technical Specifications," of NUREG-0800, Revision 3, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR [Light-Water Reactor] Edition" (SRP), dated March 9, 2010 (ML100351425). As described therein, as part of the regulatory standardization effort, the NRC staff has prepared STSs for each of the LWR nuclear designs. Accordingly, the NRC staff's review includes consideration of whether the proposed changes are consistent with NUREG-1433, Revision 5, as modified by NRC-approved travelers. TSTF-230, Revision 1, revised the STSs related to Completion Times when two RHR suppression pool cooling subsystems are inoperable. The NRC staff approved TSTF-230 on July 26, 1999 (ML19067A141) and it was incorporated into NUREG-1433, Revision 2 (Specifications: ML011780568 and ML011780616; Bases: ML011780518, ML011780521, and ML011780547).

3.0 TECHNICAL EVALUATION

3.1 Proposed TS Changes to Adopt TSTF-230

The NMP1 TS LCO 3.3.7 currently requires two CSS loops be operable during all reactor operating conditions whenever reactor coolant temperature is greater than 215°F, fuel is in the reactor vessel, and primary containment integrity is required. When two CSS loops are inoperable, the current specification requires the plant to "be in the cold shutdown condition within ten hours and no work shall be performed on the reactor which could result in lowering the reactor water level to more than six feet, three inches (-10 inches indicator scale) below minimum normal water level (Elevation 302'9")."

The licensee proposed that when two CSS loops are inoperable, or when one CSS loop is inoperable and one train in the redundant loop is inoperable, 8 hours be given to restore one CSS loop to operable status. If this proposed action cannot be completed within the proposed 8 hours, then the licensee will be required to be in the hot shutdown condition in 12 hours and be in the cold shutdown condition in 36 hours. As noted in its application, the licensee's basis for the proposed change was NRC staff-approved traveler TSTF-230, Revision 1, which was developed to allow this change for all boiling-water reactor (BWR) plants (i.e., BWR/4 and BWR/6).

The licensee states that allowing the proposed 8-hour completion time for two CSS loops inoperable is appropriate because an immediate plant shutdown, which is currently required, has the potential to result in a unit scram that could result in steam being discharged to the

suppression pool. In such a case, with both CSS loops inoperable, there would be no available means to remove heat from the suppression pool. The licensee stated that the 8-hour completion time would provide some time to restore one CSS prior to requiring a unit shutdown.

3.2 <u>Technical Variation</u>

The CSS at NMP1 performs several similar safety functions comparable to the standard General Electric BWR/4 design. In NUREG-1433, LCO 3.6.2.3, Residual Heat Removal (RHR) Suppression Pool Cooling and LCO 3.6.2.4, Residual Heat Removal (RHR) Suppression Pool Spray contain requirements for containment pressure suppression and cooling. Those requirements are comparable to those at NMP1 TS LCO 3.3.7 and are met by the CSS.

The primary difference between the CSS at NMP1 and the standard RHR system at a BWR/4 is that, at NMP1, each CSS loop has two heat exchangers, one for each pump (4 pumps and 4 heat exchangers total), whereas the standard BWR/4 RHR subsystem has one heat exchanger that is shared between two pumps (four pumps and two heat exchangers total). Additionally, both NMP1 and the standard BWR/4 design share the Mark-1 primary containment design consisting of a drywell and torus with suppression pool.

The licensee also proposed to change the time required to bring the reactor to the cold shutdown condition in TS LCO 3.3.7.f from 10 hours to 36 hours. Although this change is not evaluated in TSTF-230, it does align with the comparable required actions in NUREG-1433.

3.3 <u>Technical Evaluation</u>

The NRC staff reviewed the licensee's submittal and plant design described above and in Section 2.0 of this SE. The NRC staff determined that the STS changes approved in TSTF-230, Revision 1, are applicable to NMP1 TSs because the primary containment design and CSS are of comparable design and capability. The NRC staff compared the licensee's proposed TS changes to the NRC-approved changes contained in TSTF-230, Revision 1, and NUREG-1433, Revision 5. Based on this review, the staff determined that the licensee's proposed changes conform to TSTF-230 and NUREG-1433 by 1) allowing a completion time of 8 hours to return one CSS loop to operable status in the event that two CSS loops are inoperable or one CSS loop and one CSS train in the redundant loop are inoperable and 2) requiring entry into the hot shutdown condition and eventually cold shutdown condition in the event the 8-hour completion time is not met.

Under the current NMP1 TSs, the unit must immediately shut down when both CSS loops are inoperable. During an immediate shutdown, there is the possibility that the unit could scram, and discharge steam to the suppression pool. The proposed 8-hour completion time allows the licensee time to restore one of the CSS loops prior to requiring a unit shutdown, which avoids the potential scenario where steam could be discharged to the suppression pool during a time when both suppression pool. The 8-hour completion time is considered acceptable due to the low probability of a DBA occurring within this short period. As a result, the NRC staff finds that the proposed changes to NMP1 TS LCO 3.3.7 provide adequate remedial actions to be taken until the conditions for operation can be met, thereby satisfying 10 CFR 50.36(c)(2)(i). Therefore, the NRC staff concludes that the licensee's proposed changes to the NMP1 TSs are 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 April 7, 2025. 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 involves changes to 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 (89 FR 71436, September 3, 2024). 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 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 Contributor: T. Sweat, NRR

Date: April 29, 2025

SUBJECT: NINE MILE POINT NUCLEAR STATION, UNIT 1 - ISSUANCE OF AMENDMENT NO. 255 RELATED TO THE ADOPTION OF TECHNICAL SPECIFICATIONS TASK FORCE TRAVELER-230, REVISION 1 (EPID L-2024-LLA-0080) DATED APRIL 29, 2025

DISTRIBUTION:

PUBLIC RidsNrrLAKEntz Resource RidsNrrPMNineMilePoint Resource RidsRgn1MailCenter Resource RidsACRS_MailCTR Resource RidsNrrDorlLpl1 Resource RidsNrrDssStsb Resource RidsNrrDraAplb Resource CRojas, NRR CAshley, NRR BLee, NRR

ADAMS Accession No. ML25097A220

OFFICE	NRR/DORL/LPL1/PM	NRR/DORL/LPL1/LA	NRR/DSS/STSB/BC
NAME	RGuzman	KEntz	SMehta
DATE	4/7/2025	4/8/2025	2/7/2025
OFFICE	OGC (NLO)	NRR/DORL/LPL1/BC	NRR/DORL/LPL1/PM
NAME	SGellen	HGonzález	RGuzman
DATE	4/7/2025	4/29/2025	4/29/2025

OFFICIAL RECORD COPY