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

January 22, 2019

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 1 – ISSUANCE OF AMENDMENT NO. 236 REVISING TECHNICAL SPECIFICATIONS TO ADOPT TSTF-542, REVISION 2, "REACTOR PRESSURE VESSEL WATER INVENTORY CONTROL" (EPID L-2017-LLA-0426)

Dear Mr. Hanson:

The U.S. Nuclear Regulatory Commission (the Commission) has issued the enclosed Amendment No. 236 to Renewed Facility Operating License No. DPR-63 for the Nine Mile Point Nuclear Station, Unit 1. The amendment consists of changes to the Technical Specifications in response to your application dated December 15, 2017, as supplemented by letters dated October 1, 2018, and November 2, 2018 (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML17349A027, ML18274A140, and ML18306A774, respectively).

The amendment revises the Nine Mile Point Nuclear Station, Unit 1, Technical Specifications by replacing requirements related to "operations with a potential for draining the reactor vessel" with new requirements on reactor pressure vessel water inventory control. The proposed changes are based on Technical Specifications Task Force Improved Standard Technical Specifications Change Traveler TSTF-542, Revision 2, "Reactor Pressure Vessel Water Inventory Control" (ADAMS Accession No. ML16074A448).

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,

Michael L. Marshall, Jr., 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. 236 to DPR-63
2. Safety Evaluation

cc: Listserv

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

NINE MILE POINT NUCLEAR STATION, LLC

EXELON GENERATION COMPANY, LLC

DOCKET NO. 50-220

NINE MILE POINT NUCLEAR STATION, UNIT 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 236
Renewed License No. DPR-63

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 December 15, 2017, as supplemented by letters dated October 1, 2018, and November 2, 2018, 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. DPR-63 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, which is attached hereto, as revised through Amendment No. 236, is hereby incorporated into this license. Exelon Generation shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance and shall be implemented no later than the start of the Nine Mile Point Nuclear Station, Unit 1, Spring 2019 refueling outage.

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: January 22, 2019

ATTACHMENT TO LICENSE AMENDMENT NO. 236

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 a marginal line indicating the area of change.

Remove Page	Insert Page
3	3

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	Insert Pages
i	i
---	8a
54	54
55	55
56	56
---	79a
---	79b
---	79c
109	109
164	164
165	165
168	168
171	171
174	174
175	175
178	178
179	179
194	194
196	196
205	205
213	213
217	217
219	219
242	242
243	243
244	244
245	245
---	247b
---	247c
---	247d
---	247e
---	247f

(1) Exelon Generation pursuant to the Act and 10 CFR Part 70, to receive, possess and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended;

(2) Exelon Generation pursuant to the Act and 10 CFR Parts 30, 40, and 70 to receive, possess and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;

(4) Exelon Generation pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument and equipment calibration or associated with radioactive apparatus or components.

(5) Exelon Generation pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

C. This renewed operating license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I:

Part 20, Section 30.34 of Part 30; Section 40.41 of Part 40; Section 50.54 and 50.59 of Part 50; and Section 70.32 of Part 70. This renewed license is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect and is also subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

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

(2) Technical Specifications

The Technical Specifications contained in Appendix A, which is attached hereto, as revised through Amendment No. 236, is hereby incorporated into this license. Exelon Generation shall operate the facility in accordance with the Technical Specifications.

(3) Deleted

NINE MILE POINT NUCLEAR STATION
UNIT 1 - TECHNICAL SPECIFICATIONS
CONTENTS

1.34 Drain Time

The drain time is the time it would take for the water inventory in and above the Reactor Pressure Vessel (RPV) to drain to -10 inches indicator scale (74 inches above the top of the active fuel seated in the RPV) assuming:

a. The water inventory above -10 inches indicator scale is divided by the limiting drain rate;

b. The limiting drain rate is the larger of the drain rate through a single penetration flow path with the highest flow rate, or the sum of the drain rates through multiple penetration flow paths susceptible to a common Mode failure (e.g., seismic event, loss of normal power, single human error), for all penetration flow paths below -10 inches indicator scale except:

   1. Penetration flow paths connected to an intact closed system, or isolate by manual or automatic valves that are locked, sealed, or otherwise secured in the closed position, blank flanges, or other devices that prevent flow of reactor coolant through the penetration flow paths;
   2. Penetration flow paths capable of being isolated by valves that will close automatically without offsite power prior to the RPV water level being equal to -10 inches indicator scale when actuated by RPV water level isolation instrumentation; or
   3. Penetration flow paths with isolation devices that can be closed prior to the RPV water level being equal to the -10 inches indicator scale by a dedicated operator trained in the task, who is in continuous communication with the control room, is stationed at the controls, and is capable of closing the penetration flow path isolation device without offsite power.

c. The penetration flow paths required to be evaluated per paragraph b are assumed to open instantaneously and are not subsequently isolated, and no water is assumed to be subsequently added to the RPV water inventory;

d. No additional draining events occur; and

e. Realistic cross-sectional areas and drain rates are used.

A bounding drain time may be used in lieu of a calculated value.

LIMITING CONDITION FOR OPERATION

3.1.4 CORE SPRAY SYSTEM

Applicability:

Applies to the operating status of the core spray systems when in the Power Operating Condition or Shutdown Condition - Hot.

Objective:

To assure the capability of the core spray systems to cool reactor fuel in the event of a loss-of-coolant accident.

Specification:

a. Whenever irradiated fuel is in the reactor vessel and the reactor coolant temperature is greater than 212°F, each of the two core spray systems shall be operable except as specified in Specifications b and c below.

b. If a redundant component of a core spray system becomes inoperable, that system shall be considered operable provided that the component is returned to an operable condition within 7 days and the additional surveillance required is performed.

c. If a redundant component in each of the core spray systems becomes inoperable, both systems shall be considered operable provided that the component is returned to an operable condition within 7 days and the additional surveillance required is performed.

SURVEILLANCE REQUIREMENT

4.1.4 CORE SPRAY SYSTEM

Applicability:

Applies to the periodic testing requirements for the core spray systems.

Objective:

To verify the operability of the core spray systems.

Specification:

The core spray system surveillance shall be performed as indicated below.

a. In accordance with the Surveillance Frequency Control Program automatic actuation of each subsystem in each core spray system shall be demonstrated.

b. In accordance with the Surveillance Frequency Control Program pump operability shall be checked.

c. In accordance with the Surveillance Frequency Control Program the operability of power-operated valves required for proper system operation shall be checked.

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
d. If Specifications a, b and c are not met, a normal orderly shutdown shall be initiated within one hour and the reactor shall be in the cold shutdown condition within ten hours.	d. (Deleted)
e. During reactor operation, except during core spray system surveillance testing, core spray isolation valves 40-02 and 40-12 shall be in the open position and the associated valve motor starter circuit breakers for these valves shall be locked in the off position. In addition, redundant valve position indication shall be available in the control room.	e. Surveillance with Inoperable Components When a component becomes inoperable its redundant component or system shall be verified to be operable immediately and in accordance with the Surveillance Frequency Control Program thereafter.
f. (Deleted)	f. With a core spray subsystem suction from the CST, CST level shall be checked in accordance with the Surveillance Frequency Control Program.
g. (Deleted)	g. In accordance with the Surveillance Frequency Control Program when the reactor coolant temperature is greater than 212°F, verify that the piping system between valves 40-03, 13 and 40-01, 09, 10, 11 is filled with water.

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
h. (Deleted)	
i. With the downcomers in the suppression chamber having less than three and one half foot submergence, two core spray subsystems and the associated raw water pumps shall be operable with the core spray suction from the condensate storage tanks (CST), and the CST inventory shall not be less than 300,000 gallons.	

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
3.1.9 Reactor Pressure Vessel (RPV) Water Inventory Control	4.1.9 Reactor Pressure Vessel (RPV) Water Inventory Control
Applicability:	Applicability:
Applies to the operating status of the core spray systems and Reactor Water Inventory Control when the reactor coolant temperature is less than or equal to 212°F.	Applies to the periodic testing requirements for the core spray system and RPV water inventory.
Objective:	Objective:
To assure the RPV water inventory is maintained -10 inches indicator scale.	To verify the operability of the core spray system and RPV water inventory.
Specification:	SpecificationL
a. Whenever irradiated fuel is in the reactor vessel and the reactor coolant temperature is less than or equal to 212°F, drain time of RPV water inventory to -10 inches indicator scale shall be ≥ 36 hours and one core spray subsystem shall be operable except as specified in Specifications b through f below.	a. Verify drain time ≥ 36 hours in accordance with the Surveillance Frequency Control Program.
b. If the required core spray subsystem becomes inoperable, the component shall be returned to an operable condition within 4 hours.	b. Verify, for a required core spray subsystem, the downcomers in the suppression chamber have greater than or equal to three and one half foot of submergence or the condensate storage tank inventory is not less than 300,000 gallons, in accordance with the Surveillance Frequency Control Program.
c. If Specifications a and b are not met, then immediately initiate action to establish a method of water injection capable of operating without offsite electrical power.	c. Verify for the required core spray subsystem, each manual power operated and automatic valve in the flow path, that is not locked, sealed or otherwise secured in position, is in the correct position, in accordance with the Surveillance Frequency Control Program.

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
d. If drain time <36 hours and ≥8 hours, within 4 hours perform the following actions: (1) Verify secondary containment boundary is capable of being established in less than the drain time, and (2) Verify each secondary containment penetration flow path is capable of being isolated in less than the drain time, and (3) Verify one RBEVS is capable of being placed in operation in less than the drain time.	d. Verify each valve credited for automatically isolating a penetration flow path actuates to the isolation position on an actual or simulated isolation signal, in accordance with the Surveillance Frequency Control Program. e. Verify the required core spray subsystem can be manually operated, in accordance with the Surveillance Frequency Control Program. Vessel spray may be excluded.
e. If drain time <8 hours, immediately perform the following actions: (1) Initiate action to establish an additional method of water injection with water sources capable of maintaining RPV water level above -10 inches indicator scale for ≥ 36 hours without offsite electrical power, and (2) Initiate action to establish secondary containment boundary, and (3) Initiate action to isolate each secondary containment penetration flow path or verify it can be manually isolated from the control room, and (4) Initiate action to verify one RBEVS is capable of being placed in operation.	

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
f. Specifications d and e not met, or drain time is <1 hour, immediately initiate action to restore drain time to ≥36 hours.	

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
c. If Specifications 3.2.7a and b above are not met, initiate normal orderly shutdown within one hour and have reactor in the cold shutdown condition within ten hours.	c. In accordance with the Surveillance Frequency Control Program the feedwater and main-steam line power-operated isolation valves shall be exercised by partial closure and subsequent reopening.
d. Whenever fuel is in the reactor vessel and the reactor coolant temperature is less than or equal to 212°F, the isolation valves on the shutdown cooling system lines connected to the reactor coolant system shall be operable except as specified in Specification 3.2.7.e below.	d. In accordance with the INSERVICE TESTING PROGRAM the feedwater and main steam line power-operated isolation valves shall be fully closed and reopened.
e. In the event any shutdown cooling system isolation valve becomes inoperable whenever fuel is in the reactor vessel and the reactor coolant temperature is less than or equal to 212°F, the system shall be considered operable provided that, within 4 hours, at least one valve in each line having an inoperable valve is in the mode corresponding to the isolated condition.	
f. If Specifications 3.2.7.d and 3.2.7.e above are not met, immediately initiate action to restore the valve(s) to operable status.	

3.4.0 REACTOR BUILDING

APPLICABILITY

Applies to the operating status of the reactor building (secondary containment).

OBJECTIVE

To assure the integrity of the reactor building.

SPECIFICATION

Reactor building integrity must be in effect for the following conditions:

a. Power operating condition,

b. When the reactor water temperature is above 215°F, or

c. Whenever recently irradiated fuel or an irradiated fuel cask is being handled in the Reactor Building.

LIMITING CONDITION FOR OPERATION

3.4.1 LEAKAGE RATE

Applicability:

Applies to the leakage rate of the secondary containment.

Objective:

To specify the requirements necessary to limit exfiltration of fission products released to the secondary containment as a result of an accident.

Specification:

At all times when secondary containment integrity is required, the reactor building leakage rate as determined by Specification 4.4.1 shall not exceed 1600 cfm. If this cannot be met after a routine surveillance check, then the actions listed below shall be taken:

a. Suspend any of the following activities:

   1. Handling of recently irradiated fuel in the reactor building.

   2. Irradiated fuel cask operations in the reactor building.

b. Restore the reactor building leakage rates to within specified limits within 4 hours or initiate normal orderly shutdown and be in a cold shutdown condition within 10 hours.

SURVEILLANCE REQUIREMENT

4.4.1 LEAKAGE RATE

Applicability:

Applies to the periodic testing requirements of the secondary containment leakage rate.

Objective:

To assure the capability of the secondary containment to maintain leakage within allowable limits.

Specification:

In accordance with the Surveillance Frequency Control Program - isolate the reactor building and start emergency ventilation system fan to demonstrate negative pressure in the building relative to external static pressure. The fan flow rate shall be varied so that the building internal differential pressure is at least as negative as that on Figure 3.4.1 for the wind speed at which the test is conducted. The fan flow rate represents the reactor building leakage referenced to zero mph with building internal pressure at least 0.25 inch of water less than atmospheric pressure. The test shall be done at wind speeds less than 20 miles per hour.

LIMITING CONDITION FOR OPERATION

3.4.2 REACTOR BUILDING INTEGRITY - ISOLATION VALVES

Applicability:

Applies to the operational status of the reactor building isolation valves.

Objective:

To assure that fission products released to the secondary containment are discharged to the environment in a controlled manner using the emergency ventilation system.

Specification:

a. The normal Ventilation System isolation valves shall be operable at all times when secondary containment integrity is required.

b. If Specification 3.4.2.a is not met, then the actions listed below shall be taken:

   1. The reactor shall be in the cold shutdown condition within ten hours.

   2. Suspend any of the following activities:

      a. Handling of recently irradiated fuel in the reactor building,

      b. Irradiated fuel cask handling operations in the reactor building.

SURVEILLANCE REQUIREMENT

4.4.2 REACTOR BUILDING INTEGRITY - ISOLATION VALVES

Applicability:

Applies to the periodic testing requirements of the reactor building isolation valves.

Objective:

To assure the operability of the reactor building isolation valves.

Specification:

In accordance with the Surveillance Frequency Control Program, automatic initiation of valves shall be checked.

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
b. If these conditions cannot be met, then the actions listed below shall be taken: 1. If in the power operating condition, restore reactor building integrity within 4 hours or be in at least the hot shutdown condition within the next 12 hours and in the cold shutdown condition within the following 24 hours. OR If the reactor coolant system temperature is above 215°F, restore reactor building integrity within 4 hours or be in cold shutdown within the following 24 hours. 2. Suspend any of the following activities: a. Handling of recently irradiated fuel in the reactor building, b. Irradiated fuel cask handling operations in the reactor building.	b. Verify in accordance with the Surveillance Frequency Control Program that: 1. At least one door in each access to the secondary containment is closed, except when the access opening is being used for entry and exit. 2. At least one door or closeup of the railroad bay is closed.

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
c. The results of laboratory carbon sample analysis shall show ≥95% radioactive methyl iodide removal when tested in accordance with ASTM D3803-1989 at 30°C and 95% R.H.	b. The tests and sample analysis of Specification 3.4.4b, c and d shall be performed in accordance with the Surveillance Frequency Control Program, or after 720 hours of system operation, whichever occurs first or following significant painting, fire or chemical release in any ventilation zone communicating with the system.
d. Fans shall be shown to operate within ±10% design flow.	c. Cold DOP testing shall be performed after each complete or partial replacement of the HEPA filter bank or after any structural maintenance on the system housing.
e. During reactor operation, including when the reactor coolant system temperature is above 215°F, from and after the date that one circuit of the emergency ventilation system is made or found to be inoperable for any reason, reactor operation is permissible only during the succeeding seven days unless such circuit is sooner made operable, provided that during such seven days all active components of the other emergency ventilation circuit shall be operable. During handling of recently irradiated fuel in the reactor building or handling of an irradiated fuel cask in the reactor building from and after the date that one circuit of the emergency ventilation system is made or found to be inoperable for any reason, recently irradiated fuel handling in the reactor building or irradiated fuel cask handling in the reactor building is permissible during the succeeding seven days unless such circuit is sooner made operable, provided that	d. Halogenated hydrocarbon testing shall be performed after each complete or partial replacement of the charcoal adsorber bank or after any structural maintenance on the system housing. e. Each circuit shall be operated at least 15 minutes in accordance with the Surveillance Frequency Control Program. f. Test sealing of gaskets for housing doors downstream of the HEPA filters and charcoal adsorbers shall be performed at and in conformance with each test performed for compliance with Specification 4.4.4b and Specification 3.4.4b.

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
during such seven days all active components of the other emergency ventilation circuit shall be operable. Recently irradiated fuel handling in the reactor building or irradiated fuel cask handling in the reactor building may continue beyond seven days provided the operable emergency ventilation circuit is in operation.	
f. If these conditions cannot be met, within 36 hours, the reactor shall be placed in a condition for which the emergency ventilation system is not required.	
	g. In accordance with the Surveillance Frequency Control Program, automatic initiation of each branch of the emergency ventilation system shall be demonstrated.
	h. In accordance with the Surveillance Frequency Control Program, manual operability of the bypass valve for filter cooling shall be demonstrated.
	i. When one circuit of the emergency ventilation system becomes inoperable all active components in the other emergency ventilation circuit shall be verified to be operable within two hours and in accordance with the Surveillance Frequency Control Program thereafter.

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
3.4.5 CONTROL ROOM AIR TREATMENT SYSTEM	4.4.5 CONTROL ROOM AIR TREATMENT SYSTEM
Applicability:	Applicability:
Applies to the operating status of the control room air treatment system and Control Room Envelope (CRE) boundary.	Applies to the testing of the control room air treatment system and CRE boundary.
----------NOTE---------- The CRE boundary may be opened intermittently under administrative control. ----------	
Objective:	Objective:
To assure the capability of the control room air treatment system to minimize the amount of radioactivity or other gases entering the control room in the event of an incident.	To assure the operability of the control room air treatment system.
Specification:	Specification:
a. Except as specified below, the control room air treatment system shall be operable for the following conditions: 1. Power operating condition, and whenever the reactor coolant system temperature is greater than 212°F. 2. Whenever recently irradiated fuel or an irradiated fuel cask is being handled in the reactor building.	a. In accordance with the Surveillance Frequency Control Program, the pressure drop across the combined HEPA filters and charcoal adsorber banks shall be demonstrated to be less than 1.5 inches of water at system design flow rate (± 10%).
b. The results of the in-place cold DOP and halogenated hydrocarbon tests at design flows on HEPA filters and charcoal adsorber banks shall show ≥ 99% DOP removal and ≥ 99% halogenated hydrocarbon removal when tested in accordance with ANSI N.510-1980.	b. The tests and sample analysis of Specification 3.4.5b, c and d shall be performed in accordance with the Surveillance Frequency Control Program, or after 720 hours of system operation, whichever occurs first or following significant painting, fire or chemical release any ventilation zone communicating with the system.

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
c. The results of laboratory carbon sample analysis shall show ≥95% radioactive methyl iodine removal when tested in accordance with ASTM D3803-1989 at 30°C and 95% R.H.	c. Cold DOP testing shall be performed after each complete or partial replacement of the HEPA filter bank or after any structural maintenance on the system housing.
d. Fans shall be shown to operate within ±10% design flow.	d. Halogenated hydrocarbon testing shall be performed after each complete or partial replacement of the charcoal absorber bank or after any structural maintenance on the system housing.
e. From and after the date that the control room air treatment system is made or found to be inoperable for any reason, except for an inoperable CRE boundary during the power operating condition, restore the system to operable within the succeeding seven days.	e. The system shall be operated at least 15 minutes in accordance with the Surveillance Frequency Control Program.
f. If the control room air treatment system is made or found to be inoperable due to an inoperable CRE boundary during the power operating condition: immediately initiate action to implement mitigating actions; within 24 hours, verify mitigating actions ensure CRE occupant exposures to radiological, chemical, and smoke hazards will not exceed limits; and within 90 days, restore the CRE boundary to operable status.	f. In accordance with the Surveillance Frequency Control Program, automatic initiation of the control room air treatment system shall be demonstrated.
g. If Specifications 3.4.5.e or 3.4.5.f cannot be met during the power operating condition, or when reactor coolant system temperature is greater than 212°F, reactor shutdown shall be initiated and the reactor shall be in cold shutdown within 36 hours.	g. In accordance with the frequency and specifications of the Control Room Envelope Habitability Program, perform required CRE unfiltered air inleakage testing.
h. If Specification 3.4.5.e cannot be met whenever recently irradiated fuel or an irradiated fuel cask is being handled in the reactor building, immediately suspend handling of recently irradiated fuel or the irradiated fuel cask in the reactor building.	

LIMITING CONDITION FOR OPERATION

3.6.2 PROTECTIVE INSTRUMENTATION

Applicability:

Applies to the operability of the plant instrumentation that performs a safety function.

Objective:

To assure the operability of the instrumentation required for safe operation.

Specification:

a. The set points, minimum number of trip systems, and minimum number of instrument channels that must be operable for each position of the reactor mode switch shall be as given in Tables 3.6.2a to 3.6.2m.

   If the requirements of a table are not met, the actions listed below for the respective type of instrumentation shall be taken.

   (1) Instrumentation that initiates scram - control rods shall be inserted, unless there is no fuel in the reactor vessel.

SURVEILLANCE REQUIREMENT

4.6.2 PROTECTIVE INSTRUMENTATION

Applicability:

Applies to the surveillance of the instrumentation that performs a safety function.

Objective:

To verify the operability of protective instrumentation.

Specification:

a. Sensors and instrument channels shall be checked, tested and calibrated at the frequency specified in the Surveillance Frequency Control Program unless otherwise noted in Tables 4.6.2a to 4.6.2m.

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
(8) Mechanical Vacuum Pump Isolation - The mechanical vacuum pump shall be isolated or the instrument channel shall be considered inoperable and Specification 3.6.1 shall be applied.	
(9) Diesel Generator Initiation - The diesel generator shall be considered inoperable and Specification 3.6.3 shall be applied.	
(10) Emergency Ventilation Initiation - The emergency ventilation system shall be considered inoperable and Specification 3.4.4 shall be applied.	
(11) High Pressure Coolant Injection Initiation - The high pressure coolant injection system shall be considered inoperable and Specification 3.1.8.c shall be applied.	
(12) Control Room Ventilation - The control room ventilation system shall be considered inoperable and Specification 3.4.5 shall be applied.	
(13) Reactor Pressure Vessel Water Inventory Control - Specification 3.1.9 shall be applied for the applicable drain time.	

TABLE 3.6.2b

INSTRUMENTATION THAT INITIATES PRIMARY COOLANT SYSTEM OR CONTAINMENT ISOLATION

Limiting Condition for Operation

Parameter	Minimum No. of Tripped or Operable Trip Systems	Minimum No. of Operable Instrument Channels per Operable Trip System	Set Point	Reactor Mode Switch Position in Which Function Must Be Operable			
				Shutdown	Refuel	Startup	Run
PRIMARY COOLANT ISOLATION							
(Main Steam, Cleanup, and Shutdown Cooling)							
(1) Low-Low Reactor Water Level							
(a) Main Steam and Cleanup	2	2(f)	≥ 5 inches (Indicator Scale)	(k)		x	x
(b) Shutdown Cooling	2	2(f)	≥ 5 inches (Indicator Scale)	(k)		x	x
(2) Manual	2	1	---	(k)		x	x
MAIN-STEAM-LINE ISOLATION							
(3) High Steam Flow Main-Steam Line	2	2(f)	≤ 105 psid			x	x

(g) A channel may be placed in an inoperable status for up to 6 hours for required surveillances without placing the Trip System in tripped condition provided at least one Operable Instrument Channel in the same Trip System is monitoring that Parameter.

With the number of Operable channels one less than required by the Minimum Number of Operable Instrument Channels for the Operable Trip System, either

1. Place the inoperable channel(s) in the tripped condition within 24 hours.

or

2. Take the ACTION required by Specification 3.6.2a for that Parameter.

(h) Only applicable during startup mode while operating in IRM range 10.

(i) May be bypassed in the cold shutdown condition.

(j) Deleted.

(k) The Primary Coolant Isolation Parameters for Cleanup and Shutdown Cooling in Table 3.6.2b are only applicable in the Shutdown Condition - Hot. See Table 3.6.2m for Parameter applicability in the Shutdown Condition - Cold.

Note 1: Surveillance intervals are specified in the Surveillance Frequency Control Program unless otherwise noted in Table 4.6.2b.

TABLE 3.6.2d

INSTRUMENTATION THAT INITIATES CORE SPRAY[E]

Limiting Condition for Operation

Parameter	Minimum No. of Tripped or Operable Trip Systems	Minimum No. of Operable Instrument Channels per Operable Trip System (f)	Set Point	Reactor Mode Switch Position in Which Function Must Be Operable			
				Shutdown	Refuel	Startup	Run
START CORE SPRAY PUMPS							
(1) High Drywell Pressure	2	2	≤ 3.5 psig	(d)(g)	(h)	(a)	(a)
(2) Low-Low Reactor Water Level	2	2	≥ 5 inches (Indicator Scale)	(b)(g)	(h)	x	x
OPEN CORE SPRAY DISCHARGE VALVES							
(3) Reactor Pressure and either (1) or (2) above.	2	2	≥ 365 psig	(g)	(h)	x	x

(a) May be bypassed when necessary for containment inerting.

(b) May be bypassed when necessary for performing major maintenance as specified in Specification 2.1.1.e.

(c) The trip circuit will be calibrated and tested in accordance with the Surveillance Frequency Control Program, the primary sensor will be calibrated and tested in accordance with the Surveillance Frequency Control Program.

(d) May be bypassed when necessary for integrated leak rate testing.

(e) The instrumentation that initiates the Core Spray System is not required to be operable, if there is no fuel in the reactor vessel.

(f) A channel may be placed in an inoperable status for up to 6 hours for required surveillances without placing the Trip System in the tripped condition provided at least one Operable Instrument Channel in the same Trip System is monitoring that parameter.

With the number of Operable channels less than required by the Minimum Number of Operable Instrument Channels per Operable Trip System requirement:

1. With one channel inoperable, place the inoperable channel in the tripped condition within 24 hours or take the ACTION required by Specification 3.6.2a for that Parameter.

2. With more than one channel inoperable, take the ACTION required by Specification 3.6.2a for that Parameter.

(g) The Parameters for Start Core Spray Pumps and Open Core Spray Discharge Valves in Table 3.6.2d are only applicable in the Shutdown Condition - Hot. See Table 3.6.2m for Parameter applicability in the Shutdown Condition - Cold.

(h) The Parameters are required when Reactor Coolant Temperature is greater than 212°F.

Note 1: Surveillance intervals are specified in the Surveillance Frequency Control Program unless otherwise noted in Table 4.6.2d.

(a) This function shall be operable whenever recently irradiated fuel or an irradiated fuel cask is being handled in the reactor building.

(b) Deleted.

(c) Immediately prior to when function is required and in accordance with the Surveillance Frequency Control Program thereafter until function is no longer required.

(d) A channel may be placed in an inoperable status for up to 6 hours for required surveillances without placing the Trip System in the tripped condition provided at least one Operable Instrument Channel in the same Trip System is monitoring that parameter.

With the number of Operable channels one less than required by the Minimum Number of Operable Instrument Channels for the Operable Trip System, either

1) Place the inoperable channel(s) in the tripped condition within 24 hours.
or
2) Take the ACTION required by Specification 3.6.2a for that Parameter.

Note 1: Surveillance intervals are specified in the Surveillance Frequency Control Program unless otherwise noted in Table 4.6.2j.

TABLE 3.6.2k

HIGH PRESSURE COOLANT INJECTION

Limiting Condition for Operation

	Parameter	Minimum No. of Tripped or Operable Trip Systems	Minimum No. of Operable Instrument Channels per Operable Trip System	Set Point	Reactor Mode Switch Position in Which Function Must Be Operable			
					Shutdown	Refuel	Startup	Run
(1)	Low Reactor Water Level	2	2(c)	≥ 53 inches (Indicator Scale)	(a)		(a)	x
(2)	Automatic Turbine Trip	1	1	---			(a)	x

TABLE 4.6.2k

HIGH PRESSURE COOLANT INJECTION

Surveillance Requirement

	Parameter	Sensor Check	Instrument Channel Test	Instrument Channel Calibration
(1)	Low Reactor Water Level	Note 1[(a)]	Note 1[(a)(b)]	Note 1[(a)(b)]
(2)	Automatic Turbine Trip	None	Note 1[(a)]	None

(a) Not required in the Shutdown Condition – Cold. May be bypassed when the reactor pressure is less than 110 psig and the reactor coolant temperature is less than the corresponding saturation temperature.

(b) The trip circuit will be calibrated and tested in accordance with the Surveillance Frequency Control Program, the primary sensor will be calibrated and tested in accordance with the Surveillance Frequency Control Program.

(c) A channel may be placed in an inoperable status for up to 6 hours for required surveillances without placing the Trip System in the tripped condition provided at least one operable channel in the same Trip System is monitoring that parameter.

With the number of Operable channels less than required by the Minimum Number of Operable Instrument Channels per Operable Trip System requirement:

1. For one channel inoperable, place the inoperable channel in the tripped condition within 24 hours or take the ACTION required by Specification 3.6.2a for that Parameter.

2. With more than one channel inoperable, take the ACTION required by Specification 3.6.2a for that Parameter.

Note 1: Surveillance intervals are specified in the Surveillance Frequency Control Program unless otherwise noted in Table 4.6.2k.

TABLE 3.6.2m

RPV WATER INVENTORY CONTROL INSTRUMENTATION

Limiting Condition for Operation

Parameter	Minimum No. of Tripped or Operable Trip Systems	Minimum No. of Operable Instrument Channels per Operable Trip System	Set Point	Reactor Mode Switch Position in Which Function Must Be Operable			
				Shutdown	Refuel	Startup	Run
OPEN CORE SPRAY DISCHARGE VALVES							
(1) Reactor Pressure	2	1(d)(e)	≥ 365 psig	(a)(b)	(a)(b)		

TABLE 3.6.2m

RPV WATER INVENTORY CONTROL INSTRUMENTATION

Limiting Condition for Operation

Parameter	Minimum No. of Tripped or Operable Trip Systems	Minimum No. of Operable Instrument Channels per Operable Trip System	Set Point	Reactor Mode Switch Position in Which Function Must Be Operable			
				Shutdown	Refuel	Startup	Run
PRIMARY COOLANT ISOLATION							
(1) Low-Low Reactor Water Level							
(a) Cleanup	2	2(c)	≥ 5 inches (Indicator Scale)	(a)	(a)		
(b) Shutdown Cooling	2	2(c)	≥ 5 inches (Indicator Scale)	(a)	(a)		
(2) Manual	2	1	---	(a)	(a)		

TABLE 4.6.2m

RPV WATER INVENTORY CONTROL INSTRUMENTATION

Surveillance Requirement

Parameter	Sensor Check	Instrument Channel Test	Instrument Channel Calibration
OPEN CORE SPRAY DISCHARGE VALVES			
(1) Reactor Pressure	---	Note 1	---

TABLE 4.6.2m

RPV WATER INVENTORY CONTROL INSTRUMENTATION

Surveillance Requirement

Parameter	Sensor Check	Instrument Channel Test	Instrument Channel Calibration
PRIMARY COOLANT ISOLATION (Cleanup and Shutdown Cooling)			
(1) Low-Low Reactor Water Level	Note 1	Note 1	---
(2) Manual	---	Note 1	---

NOTES FOR TABLES 3.6.2m AND 4.6.2m

(a) The Parameters in this table are only applicable in the Shutdown Condition – Cold and Refuel. See Table 3.6.2b or Table 3.6.2d for Parameter applicability in the Shutdown Condition – Hot.

(b) The instrumentation that allows for injection of the Core Spray System is not required to be operable if there is no fuel in the reactor vessel.

(c) Applicable when automatic isolation of the associated penetration flow path(s) is credited in calculating drain time. With one or more channels inoperable, immediately

1. Declare associated penetration flow path(s) incapable of automatic isolation,

and

2. Calculate drain time.

(d) Associated with the subsystem of Core Spray required to be Operable per Specification 3.1.9, Reactor Pressure Vessel (RPV) Water Inventory Control.

(e) With the number of Operable channels less than required by the Minimum Number of Operable Instrument Channels per Operable Trip System requirement, place the inoperable channel in a tripped condition within 1 hour,

or

Immediately, declare the associated Core Spray subsystem per Specification 3.1.9 inoperable.

Note 1: Surveillance intervals are specified in the Surveillance Frequency Control Program unless otherwise noted in Table 4.6.2m.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 236

TO RENEWED FACILITY OPERATING LICENSE NO. DPR-63

NINE MILE POINT NUCLEAR STATION, LLC

EXELON GENERATION COMPANY, LLC

NINE MILE POINT NUCLEAR STATION, UNIT 1

DOCKET NO. 50-220

1.0 INTRODUCTION

By application dated December 15, 2017 (Reference 1), as supplemented by letters dated October 1, 2018 (Reference 2), and November 2, 2018 (Reference 3), Exelon Generation Company, LLC (Exelon, the licensee) submitted a license amendment request (LAR) to adopt Technical Specifications Task Force Traveler (TSTF)-542, Revision 2 (TSTF-542), "Reactor Pressure Vessel Water Inventory Control" (Reference 4), for the Nine Mile Point Nuclear Station (Nine Mile Point), Unit 1. The final safety evaluation (SE) for TSTF-542, Revision 2 (Reference 5), was issued by the U.S. Nuclear Regulatory Commission (NRC or the Commission) on December 20, 2018.

The supplements dated October 1, 2018, and November 2, 2018, 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* on February 13, 2018 (83 FR 6224).

The proposed changes replace existing or current technical specification (CTS) requirements associated with "operations with the potential for draining the reactor vessel" (OPDRVs), with revised technical specifications (TSs) providing an alternative requirement for reactor pressure vessel (RPV) water inventory control (WIC). These alternative requirements would protect Nine Mile Point, Unit 1, TS Section 2.1.1, "Fuel Cladding Integrity," Safety Limit 2.1.1.d, which states, in part:

> Whenever the reactor is in the shutdown condition with irradiated fuel in the reactor vessel, the water level shall not be more than 6 feet 3 inches (-10 inches indicator scale) below minimum normal water level (Elevation 302', 9").

Since Nine Mile Point, Unit 1, is of the General Electric Boiling Water Reactor (BWR)/2 design, and the changes to the TSs described in the applicable parts of TSTF-542, Revision 2, or the NRC-approved TSTF-542 SE, were written with the primary focus of addressing the BWR/4 and BWR/6 designs, there are some variations based on plant design differences and variations to TSTF-542 proposed by the licensee.

2.0 REGULATORY EVALUATION

2.1 System Description

The BWR RPVs have a number of penetrations located below the top of active fuel (TAF). In TSTF-542, the safety limit for RPV water level, Standard Technical Specification (STS) 2.1.1.3, is above TAF. However, the corresponding Nine Mile Point, Unit 1, safety limit, TS 2.1.1.d, is above -10 inches indicator scale. These penetrations provide entry for control rods, recirculation flow, reactor water cleanup, and shutdown cooling. Since these penetrations are below the Nine Mile Point, Unit 1, safety limit of TS 2.1.1.d, this creates a potential to drain the reactor vessel water inventory and lose effective core cooling. The loss of water inventory and effective core cooling can potentially lead to fuel cladding failure and radioactive release.

During power operating conditions, and with the average reactor coolant temperature greater than 212 degrees Fahrenheit (°F), current Nine Mile Point, Unit 1, TS 3.1.4, "Core Spray System," requires two core spray (CS) systems to be operable to assure the capability of cooling the reactor fuel. Each separate and independent CS system consists of two subsystems to prevent overheating of the fuel following a postulated loss-of-coolant accident (LOCA). A CS subsystem consists of one motor driven pump set (two pumps, a CS, and a topping pump, in series), piping, and valves, to transfer water from the torus to the RPV. Each pump set is full capacity. This system is designed to accommodate the range of LOCAs from the smallest up to the largest line break, as discussed in the accident analysis. The CS will ensure large quantities of water will be injected into the reactor vessel, should level decrease below the preselected value. This is designed to mitigate the effects of a LOCA, but also provides protection for other accidents and transients that involve a water inventory loss.

During shutdown, with all reactor vessel head closure bolts fully tensioned and average reactor coolant temperature ≤ 212 °F (shutdown condition – cold), and the refueling condition – one or more reactor vessel head closure bolts less than fully tensioned and reactor mode switch in shutdown or refuel), the pressures and temperatures that could cause a LOCA are not present. During certain phases of refueling, a large volume of water is available above the RPV (i.e., the RPV head is removed, the water level is approximately 23 feet over the top of the RPV flange, and the spent fuel storage pool gates are removed).

The large volume of water available in and above the RPV provides time for operator detection and manual operator action to stop and mitigate an RPV draining event. However, typically, at other times during a refueling outage during shutdown condition – cold or the refueling condition, there may be a potential for significant drainage paths from certain outage activities, human error, and other events, when it is more likely to have some normally available equipment, instrumentation, and systems inoperable due to maintenance and outage activities. There may not be as much time for operator action as compared to times when there are large volumes of water above the RPV.

In comparison to the power operating conditions, shutdown – hot, with typical high temperatures and pressures, the shutdown – cold and refueling conditions generally do not have the high

pressure and temperature considered necessary for a LOCA envisioned from a high energy pipe failure. Thus, while the potential sudden loss of large volumes of water from a LOCA are not expected, operators monitor for BWR RPV water level decrease from potential significant or even unexpected drainage paths. These potential drainage paths in the shutdown – cold and refueling conditions generally would require less water replacement capability to maintain water above the Nine Mile Point, Unit 1, safety limit of TS 2.1.1.d.

To address the draindown potential during the shutdown – cold and refueling conditions, the existing Nine Mile Point, Unit 1, TSs contain specifications that are applicable during OPDRVs, or require suspension of OPDRVs if certain equipment is inoperable. The term OPDRVs is not specifically defined in the TSs and historically has been subject to inconsistent application by licensees. The changes discussed in this SE are intended to resolve any ambiguity by creating a new RPV WIC TS with attendant equipment operability requirements, required actions, and surveillance requirements (SRs), and deleting references to OPDRVs throughout the TSs.

2.2 Proposed TS Changes

Section 2.2.1 of this SE discusses the addition of a new definition of drain time (evaluated below in Section 3.1). Section 2.2.2 of this SE discusses TS 3.1.4, "Core Spray System," revisions that include changing the applicability (evaluated below in Section 3.2). Section 2.2.3 of this SE discusses the addition of TS 3.1.9, "RPV Water Inventory Control" (evaluated below in Section 3.3). Section 2.2.4 of this SE discusses the addition of TS SRs 4.1.9, "Reactor Pressure Vessel (RPV) Water Inventory Control" (evaluated below in Section 3.4). Section 2.2.5 of this SE discusses the instrumentation revisions to TS 3.6.2, "Protective Instrumentation," including revisions to the tables and notes for Tables 3.6.2b, 4.6.2.b, 3.6.2d, and 4.6.2d, to remove reference to the shutdown – cold and refueling operating conditions; adds new Tables 3.6.2m and 4.6.2m, "Reactor Pressure Vessel (RPV) Water Inventory Control Instrumentation" (evaluated below in Section 3.5). Section 2.2.6 of this SE discusses deletion of references to the OPDRVs term in the Nine Mile Point, Unit 1, TSs for implementation of TSTF-542, Revision 2 (evaluated below in Section 3.6). Section 2.2.7 of this SE discusses Nine Mile Point, Unit 1, plant-specific variations to TSTF-542, Revision 2 (evaluated below in Section 3.7).

2.2.1 Addition of Drain Time Definition

Reference 1 includes the following definition of "drain time" that would be added to Nine Mile Point, Unit 1, TS Section 1.0, "Definitions:"

The drain time is the time it would take for the water inventory in and above the RPV to drain to -10 inches indicator scale (74 inches above the top of the active fuel seated in the RPV), assuming:

a. The water inventory above -10 inches indicator scale is divided by the limiting drain rate;

b. The limiting drain rate is the larger of the drain rate through a single penetration flow path with the highest flow rate, or the sum of the drain rates through multiple penetration flow paths susceptible to a common mode failure (e.g., seismic event, loss of normal power, single human error), for all penetration flow paths below -10 inches indicated scale except:

1. Penetration flow paths connected to an intact closed system, or isolated by manual or automatic valves that are locked, sealed, or otherwise secured in the closed position, blank flanges, or other devices that prevent flow of reactor coolant through the penetration flow paths;

2. Penetration flow paths capable of being isolated by valves that will close automatically without offsite power prior to the RPV water level being equal to -10 inches indicator scale when actuated by RPV water level isolation instrumentation; or

3. Penetration flow paths with isolation devices that can be closed prior to the RPV water level being equal to -10 inches indicator scale by a dedicated operator trained in the task, who is in continuous communication with the control room, is stationed at the controls, and is capable of closing the penetration flow path isolation device without offsite power.

c. The penetration flow paths required to be evaluated per paragraph b. are assumed to open instantaneously and are not subsequently isolated, and no water is assumed to be subsequently added to the RPV water inventory;

d. No additional draining events occur; and

e. Realistic cross-sectional areas and drain rates are used.

A bounding drain time may be used in lieu of a calculated value.

2.2.2 TS LCO 3.1.4, "Core Spray System"

The applicability statement for the CS system would be modified such that the current TS will only apply to the power operating condition or shutdown condition – hot. The revised applicability statement is shown below:

> Applies to the operating status of the core spray systems when in the Power Operating Condition or Shutdown Condition – Hot.

Specifications f, g, and h would be deleted from this section in their entirety.

2.2.3 TS LCO 3.1.9, "Reactor Pressure Vessel (RPV) Water Inventory Control"

The proposed applicability of LCO 3.1.9 would be:

> Applies to the operating status of the core spray systems and Reactor Water Inventory Control when the reactor coolant temperature is less than or equal to 212°F.

The proposed objective for LCO 3.1.9 would be:

> To assure the RPV water inventory is maintained -10 inches indicator scale.

The specifications would include the following:

a.	Whenever irradiated fuel is in the reactor vessel and the reactor coolant temperature is less than or equal to 212°F, drain time of RPV water inventory to -10 inches indicator scale shall be ≥ 36 hours and one core spray subsystem shall be operable except as specified in Specifications b through f below.	
b.	If the required core spray subsystem becomes inoperable, the component shall be returned to an operable condition within 4 hours.	
c.	If Specifications a and b are not met, then immediately initiate action to establish a method of water injection capable of operating without offsite electrical power.	
d.	If drain time <36 hours and ≥ 8hours, within 4 hours perform the following actions:	
	(1)	Verify secondary containment boundary is capable of being established in less than the drain time,
	and	
	(2)	Verify each secondary containment penetration flow path is capable of being isolated in less than the drain time,
	and	
	(3)	Verify one RBEVS is capable of being placed in operation in less than the drain time.
e.	If drain time <8 hours, immediately perform the following actions:	
	(1)	Initiate action to establish an additional method of water injection with water sources capable of maintaining RPV water level above -10 inches indicator scale for ≥36 hours without offsite electrical power,
	and	
	(2)	Initiate action to establish secondary containment boundary,
	and	
	(3)	Initiate action to isolate each secondary containment penetration flow path or verify it can be manually isolated from the control room.
	and	
	(4)	Initiate action to verify one RBEVS is capable of being placed in operation
f.	Specifications d and e not met, or drain time is <1 hour, immediately initiate action to restore drain time to ≥36 hours.	

2.2.4 TS SR 4.1.9, "Reactor Pressure Vessel (RPV) Water Inventory Control"

The proposed applicability of SR 4.1.9 would be:

> Applies to the periodic testing requirements for the core spray system and RPV water inventory.

The proposed objective for LCO 3.1.9 would be:

> To verify the operability of the core spray system and RPV water inventory.

The specifications would include the following:

a.	Verify drain time ≥36 hours in accordance with the Surveillance Frequency Control Program.
b.	Verify, for a required core spray subsystem, the downcomers in the suppression chamber have greater than or equal to three and one half foot of submergence or the condensate storage tank inventory is not less than 300,000 gallons in accordance with the Surveillance Frequency Control Program.
c.	Verify for the required core spray subsystem, each manual power operated and automatic valve in the flow path, that is not locked, sealed or otherwise secured in position, is in the correct position, in accordance with the Surveillance Frequency Control Program.
d.	Verify each valve credited for automatically isolating a penetration flow path actuates to the isolation position on an actual or simulated isolation signal, in accordance with the Surveillance Frequency Control Program.
e.	Verify the required core spray subsystem can be manually operated, in accordance with the Surveillance Frequency Control Program. Vessel spray may be excluded.

2.2.5 TSs 3.6.2 and 4.6.2, "Protective Instrumentation"

Nine Mile Point, Unit 1, TS LCO 3.6.2, "Protective Instrumentation," is modified as follows:

- Table 3.6.2m is added to Specification a and
- Specification a.(13) is added, which states:

  Reactor Pressure Vessel Water Inventory Control – Specification 3.1.9 shall be applied for the applicable drain time.

Nine Mile Point, Unit 1, TS SR 4.6.2, "Protective Instrumentation," is modified to add Table 4.6.2m to Specification a.

2.2.5.1 Table 3.6.2b, "Instrumentation that Initiates Primary Coolant System or Containment Isolation, Limiting Condition for Operation"

Table 3.6.2b is changed to remove references to the cold shutdown and refueling conditions from the following parameters:

- Primary coolant isolation (1) Low-Low Reactor Vessel Water Level (a) Main Steam and Cleanup
- Primary coolant isolation (1) Low-Low Reactor Vessel Water Level (b) Shutdown Cooling
- Primary coolant isolation (2) Manual

Reference to note (i) is removed for the primary coolant isolation (1) Low-low Reactor Vessel Water Level (a) Main Steam and Cleanup parameter.

Reference to note (j) is removed for the primary coolant isolation (1) Low-Low Reactor Vessel Water Level (b) Shutdown Cooling parameter.

Note (j) is removed from the notes for Tables 3.6.2b and 4.6.2b. Additionally, a new note (k) is added, which states:

> The Primary Coolant Isolation Parameters for Cleanup and Shutdown Cooling in Table 3.6.2b are only applicable in the Shutdown Condition - Hot. See Table 3.6.2m for Parameter applicability in the Shutdown Condition – Cold.

Reference to new note (k) is added for the shutdown column under "Reactor Mode Switch Position in Which Function Must Be Operable," for the following parameters:

- Primary coolant isolation (1) Low-Low Reactor Vessel Water Level (a) Main Steam and Cleanup
- Primary coolant isolation (1) Low-Low Reactor Vessel Water Level (b) Shutdown Cooling
- Primary coolant isolation (2) Manual

2.2.5.2 Table 3.6.2d, "Instrumentation that Initiates Core Spray Limiting Condition for Operation"

A new note (g) is added, which states:

> The Parameters for Start Core Spray Pumps and Open Core Spray Discharge Valves in Table 3.6.2d are only applicable in the Shutdown Condition – Hot. See Table 3.6.2m for Parameter applicability in the Shutdown Condition – Cold.

Table 3.6.2d is changed to add reference to the new note (g) under "Reactor Mode Switch Position in Which Function Must Be Operable," for the following parameters:

- Start Core Spray Pumps (1) High Drywell Pressure
- Start Core Spray Pumps (2) Low-Low Reactor Vessel Water Level
- Open Core Spray Discharge Valves (3) Reactor Pressure and either (1) or (2) above

The "x" to indicate that the "Open Core Spray Discharge Valves (3) Reactor Pressure and either (1) or (2) ..." is to be operable in all shutdown conditions is removed.

2.2.5.3 Table 3.6.2m, "RPV [Reactor Pressure Vessel] Water Inventory Control Instrumentation Limiting Condition for Operation"

The proposed insertion of new Table 3.6.2m would contain functions moved from Table 3.6.2d, as well as new requirements. The new Table 3.6.2m is shown below:

Parameter	Minimum No. of Tripped or Operable Trip Systems	Minimum No. of Operable Instrument Channels per Operable Trip System	Set Point	Reactor Mode Switch Position in Which Function Must Be Operable			
				Shutdown	Refuel	Startup	Run
OPEN CORE SPRAY DISCHARGE VALVES							
(1) Reactor Pressure	2	1 (d)(e)	≥ 365 psig	(a)(b)	(a)(b		
PRIMARY COOLANT ISOLATION							
(1) Low-Low Reactor Water Level							
(a) Cleanup	2	2(c)	≥ 5 inches (Indicator Scale)	(a)	(a)		
(b) Shutdown Cooling	2	2(c)	≥ 5 inches (Indicator Scale)	(a)	(a)		
(2) Manual	2	1	---	(a)	(a)		

2.2.5.4 Table 4.6.2m, "RPV Water Inventory Control Instrumentation Surveillance Requirement"

The proposed insertion of new Table 4.6.2m would contain functions that are comprised of requirements moved from Tables 4.6.2d as well as new requirements. The new Table 4.6.2m is shown below:

Parameter	Sensor Check	Instrument Channel Test	Instrument Channel Calibration
OPEN CORE SPRAY DISCHARGE VALVES			
(1) Reactor Pressure	---	Note 1	---
PRIMARY COOLANT ISOLATION			
(1) Low-Low Reactor Water Level	Note 1	Note 1	---
(2) Manual	---	Note 1	---

2.2.5.5 Notes for Tables 3.6.2m and 4.6.2m

(a)	The Parameters in this table are only applicable in the Shutdown Condition – Cold and Refuel. See Table 3.6.2b or Table 3.6.2d for Parameter applicability in the Shutdown Condition – Hot.	
(b)	The instrumentation that allows for injection the Core Spray System is not required to be operable if there is no fuel in the reactor vessel.	
(c)	Applicable when automatic isolation of the associated penetration flow path(s) is credited in calculating drain time. With one or more channels inoperable immediately	
	1.	Declare associated penetration flow path(s) incapable of automatic isolation,
	and	
	2.	Calculate drain time.
(d)	Associated with the subsystem of Core Spray required to be Operable per Specification 3.1.9, Reactor Pressure Vessel (RPV) Water Inventory Control.	
(e)	With the number of Operable channels less than required by the Minimum Number of Operable Instrument Channels per Operable Trip System requirement, place the inoperable channel in a tripped condition within 1 hour,	
	or	
	Immediately, declare the associated Core Spray subsystem per Specification 3.1.9 inoperable.	

Note 1: Surveillance intervals are specified in the Surveillance Frequency Control Program unless otherwise noted in Table 4.6.2m.

2.2.6 Deletion of References to OPDRVs Term

In Reference 1, the licensee proposed to revise existing TS requirements related to "operations with a potential for draining the reactor vessel" or "OPDRVs," with new requirements on RPV WIC that will protect Safety Limit 2.1.1.d. To remain consistent with the TSTF-542, all references to the term OPDRVs in the Nine Mile Point, Unit 1, TSs will be deleted. The TS locations of these references are summarized as follows:

Nine Mile Point, Unit 1	Location of References
3.2.7 Reactor Coolant System Isolation Valves	Specification f
3.4.0 Reactor Building	Specification d
3.4.1 Leakage Rate	Specification a.3
3.4.2 Reactor Building Integrity – Isolation Valves	Specification b.2.c
3.4.3 Access Control	Specification b.2.c
3.4.4 Emergency Ventilation System	Specification e
3.4.5 Control Room Air Treatment System	Specifications a.3 and h
Tables 3.6.2j/4.6.2j Emergency Ventilation Initiation	Note a

2.2.7 Nine Mile Point, Unit 1, Plant-Specific TSTF-542 TS Variations

In Section 2.2.2 of Reference 1, the licensee stated that the Nine Mile Point, Unit 1, TSs are custom TSs and are of a different format with different numbering than the STS. The licensee also states that there are requirements included in the STS that do not appear in the Nine Mile Point, Unit 1, TSs. Requirements that are included in the STS, but not applicable to the Nine Mile Point, Unit 1, TSs, will not be included here nor in the evaluation section of this SE.

In addition, the licensee identified several Nine Mile Point, Unit 1, plant-specific TS variations from TSTF-542, Revision 2, and/or the NRC-approved TSTF-542 SE. The licensee states these variations do not affect the applicability of TSTF-542 to the Nine Mile Point, Unit 1, TSs. Section 3.7 of this SE includes the NRC staff's technical evaluation of each of these technical variations.

The following excerpts from the LAR provide a description of each technical variation as characterized by the licensee:

> 2.2.7.1 Variation 1, Use of a Different Safety Limit
>
> The TSTF-542, Revision 2, traveler is written to support a safety limit that requires RPV water level to remain above the TAF. The licensee stated that reactor vessel water level of -10 inches indicator scale used by Nine Mile Point, Unit 1, as its safety limit is a reflection of the limitations of the vessel level instrumentation available to the operations staff and is not indicative of a difference from, or change to, the analysis presented in TSTF-542, Revision 2. The safety limit is a longstanding TS value and is not changed as part of the proposed changes to apply TSTF-542, Revision 2, to Nine Mile Point, Unit 1.
>
> 2.2.7.2 Variation 2, Core Spray with No Low Pressure Core Injection System in the Nine Mile Point, Unit 1, Design
>
> Nine Mile Point, Unit 1, does not have a low pressure core injection (LPCI) system, although TSTF-542, Revision 2, identifies both an LPCI system and a CS system for RCP WIC. Nine Mile Point, Unit 1, uses a robust CS system that operates at low pressure. This is a variation to TSTF-542, Revision 2.

2.2.7.3 Variation 3, Deletion of TS 3.1.4h Requirement to Suspend Core Alterations

In alignment with TSTF-542, Revision 2, "Proposed Safety Basis" (Section 3.1.2), the existing Nine Mile Point, Unit 1, TS 3.1.4h requirement to suspend core alterations as an action for CS subsystem inoperability is no longer warranted since there are no postulated events associated with core alterations that are prevented or mitigated by the proposed RPV WIC requirements. In addition, loss of RPV inventory events are not initiated by core alteration operations. Refueling limiting conditions for operation (LCOs) provide requirements to ensure safe operation during core alterations. Therefore, Nine Mile Point, Unit 1, proposes to delete TS 3.1.4.h.

2.3 Applicable Regulatory Requirements

The regulation at Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.36(a)(1), requires an applicant for an operating license to include in the application proposed TSs in accordance with the requirements of 10 CFR 50.36. The applicant must include in the application a "summary statement of the bases or reasons for such specifications, other than those covering administrative controls." However, per 10 CFR 50.36(a)(1), these TS Bases "shall not become part of the technical specifications."

As required by 10 CFR 50.36(c), TSs will include items in the following categories:

(1) Safety limits, limiting safety system settings, and limiting control settings.
(i)(A) Safety limits for nuclear reactors are limits upon important process variables that are found to be necessary to reasonably protect the integrity of certain of the physical barriers that guard against the uncontrolled release of radioactivity. If any safety limit is exceeded, the reactor must be shut down. The licensee shall notify the Commission, review the matter, and record the results of the review, including the cause of the condition and the basis for corrective action taken to preclude recurrence. Operation must not be resumed until authorized by the Commission.

As required by 10 CFR 50.36(c)(2)(i), the TSs will include LCOs, which are the lowest functional capability or performance levels of equipment required for safe operation of the facility. Per 10 CFR 50.36(c)(2)(i), 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 TSs until the condition can be met.

The regulation at 10 CFR 50.36(c)(2)(ii) requires licensees to establish TS LCOs for items meeting one or more of the listed criteria. Specifically, Criterion 4, "A structure, system, or component which operating experience or probabilistic risk assessment has shown to be significant to public health and safety," supports the establishment of LCOs for RPV WIC due to insights gained by operating experience.

The regulation at 10 CFR 50.36(c)(3) requires TSs to include items in the category of SRs, which 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 LCOs will be met.

The regulation at 10 CFR 50.36(a)(1) states that a summary statement of the bases or reasons for such specifications, other than those covering administrative controls, shall also be included in the

application, but shall not become part of the TSs. In accordance with the 10 CFR 50.36(a)(1) requirement, the licensee provided TS Bases markups in the proposed LAR (Reference 1). The TS Bases markups were provided for information, and the NRC staff did not review the TS Bases markups.

Pursuant to 10 CFR 50.90, whenever a holder of an operating license desires to amend the license, application for an amendment must be filed with the Commission fully describing the changes desired, and following, as far as applicable, the form prescribed for original applications. The technical information to be included in an application for an operating license is governed in particular by 10 CFR 50.34(b).

As described in 10 CFR 50.92(a), in determining whether an amendment to a license will be issued to the applicant, the Commission will be guided by the considerations that govern the issuance of initial licenses to the extent applicable and appropriate. The general considerations that guide the Commission include, as stated in 10 CFR 50.40(a), how the TSs provide reasonable assurance that the health and safety of the public will not be endangered. Also, to issue an operating license of which TSs are a part, the Commission must make the findings of 10 CFR 50.57, including the 10 CFR 50.57(a)(3)(i) finding that there is reasonable assurance that the activities authorized by the operating license can be conducted without endangering the health and safety of the public.

NUREG-1433, Revision 4, "Standard Technical Specifications General Electric BWR/4 Plants," contains the STS for BWR/4 plants that were developed as part of a regulatory standardization effort. The NRC staff has prepared STS for each of the light-water reactor nuclear designs. TSTF-542, Revision 2, is an NRC-approved revision to the STS and will be incorporated into future revisions of NUREG-1433, Volumes 1 and 2 (References 6 and 7). In the case of this amendment, NUREG-1433, Revision 4, STS may only be used as reference material for the proper understanding of the TSTF and its proposed application to the Nine Mile Point, Unit 1, plant.

The guidance contained in the NRC's Final Policy Statement in Technical Specifications (58 FR 39132) permits consideration of STS changes like TSTF-542, Revision 2, to be implemented as line item improvements to custom TS plants.

Additional NRC staff guidance for review of TSs is in Chapter 16, "Technical Specifications," of NUREG-0800, Revision 3, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants" (Standard Review Plan), dated March 2010 (Reference 8).

2.3.1 Nine Mile Point, Unit 1, Applicable Design Requirements

Nine Mile Point, Unit 1, was not licensed to the 10 CFR 50, Appendix A, General Design Criteria (GDC). The applicable principal design criteria for Nine Mile Point, Unit 1, are listed in Section I.A of the Nine Mile Point, Unit 1, Updated Final Safety Analysis Report (UFSAR). Table I-1 in the UFSAR provides an assessment of the principal design criteria against the GDC. Table I-1 of the UFSAR refers to the Nine Mile Point, Unit 1, Technical Supplement to Petition for Conversion from Provisional Operating License to Full-Term Operating License, July 1972, for the details of the assessment against the GDC current at that time.

The licensee provided the following excerpts in the LAR from the July 1972 Nine Mile Point, Unit 1, Technical Supplement to Petition for Conversion from Provisional Operating License to Full-Term Operating License, describing how the Nine Mile Point, Unit 1, design aligns to the applicable GDC.

Criterion 13 - Instrumentation and Control
The fission process is monitored and controlled for all conditions from the source range through the power range. The neutron monitoring system detects core conditions that could potentially threaten the overall integrity of the fuel barrier due to excess power generation and provides a corresponding signal to the reactor protection system. Fission chambers, located in the core, are used to sense neutron flux from the source range through the power range. The detectors are located to provide maximum sensitivity to control-rod movement during startup and to provide optimum monitoring in the intermediate and power ranges.

Also, the reactor protection system is provided to initiate automatically appropriate action whenever specific Station conditions reach established limits. The protective system functions are tabulated in the Technical Specifications. The system is designed to mitigate the consequences of Station normal and accident transients, and operator errors, to ensure that core safety limits are not exceeded and to ensure the integrity of the reactor coolant boundary, containment and associated systems.

Instrumentation and control features of systems which can affect the fission process, the integrity of the reactor core, the reactor coolant pressure boundary, and the containment and its associated systems are described in detail in the FSAR. Also described there are instrumentation and control features of other systems associated with the reactor.

Criterion 14 - Reactor Coolant Pressure Boundary
This criterion is met since these systems were designed and analyzed for all possible adverse conditions and the resultant stresses are very conservative when compared to the American National Standards Institute code B31.1 allowables. All code required tests, inspections and material certifications were performed.

Criterion 30 - Quality of Reactor Coolant Pressure Boundary
As discussed in the evaluation for Criterion 14 above, components which are part of the reactor coolant pressure boundary are designed and constructed to the highest quality standards practical. Drywell equipment and floor drains are monitored and sampled. From analyses of the samples, the location of the source of reactor coolant leakage will be determined. In addition, a continuous air monitor is employed to monitor rises in drywell atmosphere radioactivity which can be related to leakage.

Criterion 33 - Reactor Coolant Makeup
As discussed in the accident analysis presented in the FSAR, leaks from smaller coolant lines are detected by increased drywell temperature or pressure, or by drywell sump level buildup. For line breaks with an equivalent area less than 0.15 square feet, feedwater flow provides adequate core cooling. A

control-rod-drive pump is continuously available for high-pressure inventory makeup, even if all offsite power is lost. The control-rod-drive pump would deliver 50 gallons per minute (gpm) of makeup to the reactor at operating pressure.

For breaks above the capacity of these systems, or in the event that neither system is available, a redundant core spray system is provided. This system is discussed in the FSAR. Core spray coolant does not enter the reactor vessel until reactor pressure has dropped to 365 psig [pounds per square inch]. For break areas less than 0.15 square feet, the reactor is depressurized by the redundant auto-relief system. This allows core spray operation and prevents significant clad damage.

As an additional means of accommodating small breaks a feedwater high pressure coolant injection system will be provided. The system consists of two redundant sets of motor-driven pumps. The system will be capable of delivering 7,600 gpm into the reactor vessel at reactor pressure. Condensate and feedwater-booster pumps are normally operating when the primary system is at pressure. The two motor-driven feedwater pumps would be automatically started on either a turbine trip or low reactor water level. The system will use off-site power for operation and on-site power for the lubrication pump. Installation of final wiring and electrical controls will make the system operable by the end of the first major refueling outage.

In the LAR, the licensee stated it determined that the plant-specific requirements for Nine Mile Point, Unit 1, are sufficiently similar to the 10 CFR Part 50, Appendix A, GDC, and represent an adequate technical basis for adopting TSTF-542, Revision 2.

3.0 TECHNICAL EVALUATION

The Nine Mile Point, Unit 1, TSs are of a custom arrangement, derived at the time of initial licensing of the facility, and accepted by the NRC at that time. TSTF-542, Revision 2, is a change to improved STS. The STS are not directly applicable to Nine Mile Point, Unit 1, but the NRC's Final Policy Statement on Technical Specifications (58 FR 39132) permits consideration of STS changes as line item improvements to custom TS plants.

The NRC staff considered each change proposed by the licensee as a line item improvement to the custom Nine Mile Point, Unit 1, TSs. The staff compared the licensee's proposed changes to Nine Mile Point, Unit 1, to the approved TSTF-542's application to a "standard TS" plant represented by NUREG 1433, Revision 4.

3.1 Staff Evaluation of Proposed "Drain Time" Definition

The drain time is the time it would take the RPV water inventory to drain from the current level to -10 inches indicator scale, assuming the most limiting of the RPV penetration flow paths with the largest flow rate, or a combination of penetration flow paths that could open due to a common mode failure were to open, and the licensee took no mitigating action.

The NRC staff reviewed the proposed "drain time" definition from the TSTF-542 traveler. For the purpose of NRC staff considerations, the term "break" describes a pathway for water to drain from the RPV that has not been prescribed in the "drain time" definition proposed in

TSTF-542. This licensee's chosen definition of drain time varies from that proposed in the TSTF-542 traveler since the safety limit chosen to protect fuel cladding integrity in the Nine Mile Point, Unit 1 TS, TS 2.1.1d, is -10 inches indicator scale and not the TAF, identified as Variation 1. This variance is discussed further in Section 3.7.1 of this SE. The safety limit is longstanding at Nine Mile Point, Unit 1, and as stated by the licensee, is "... a reflection on the limitations of the vessel level instrumentation available to the operations staff ..." The licensee states on page 4 of 17 of Attachment 1 to Reference 1 that the TAF at Nine Mile Point, Unit 1, is -84 inches below vessel zero; therefore, the licensee's chosen safety limit will ensure that the RPV water inventory will remain 74 inches above the TAF seated in the RPV.

Based on information furnished by the licensee in Reference 1, the NRC staff has determined the licensee is appropriately adopting the principles of drain time as specified in TSTF-542. The NRC staff has also determined that this alternate definition of drain time is satisfactory for Nine Mile Point, Unit 1, since the NRC staff has reasonable assurance the licensee will include all RPV penetrations below -10 inches indicator scale in the determination of drain time as potential pathways. As part of this evaluation, the staff reviewed information used during the development of TSTF-542, Revision 2, which provided examples of bounding drain time calculations for three situations: (1) water level at or below the reactor flange, (2) water level above RPV flange with fuel pool gates installed, and (3) water level above reactor flange with fuel pool gates removed. The drain time is calculated by taking the water inventory above the break and dividing by the limiting drain rate until the level -10 inches indicator scale is reached. The limiting drain rate is a variable parameter depending on the break size and the reduction of elevation head above break location during the draindown event. The discharge point will depend on the lowest potential drain point for each RPV penetration flow path on a plant-specific basis. This calculation provides a conservative approach to determining the drain time of the RPV.

The NRC staff concluded that the licensee will use methods resulting in conservative calculations to determine RPV drain time, thereby protecting Safety Limit 2.1.1.d, which meets the requirements of 10 CFR 50.36(c)(1)(i)(A). Based on these considerations, the NRC staff has determined the licensee's proposed addition of the drain time definition to the Nine Mile Point, Unit 1, TSs to be acceptable.

3.2 TS LCO 3.1.4, "Core Spray System"

The proposed modification of the applicability statement of LCO 3.1.4 will limit the applicability of LCO 3.1.4 to the power operating condition and shutdown condition – hot. Specifications f, g, and h are proposed to be deleted from this section.

Since the LCO 3.1.4 Specifications f, g, and h (except for the provision of cessation of core alterations) pertained to shutdown condition – cold, they are effectively replaced by proposed LCO 3.1.9 Specifications a, b, and c. Thus, the newly proposed LCO 3.1.9 will contain the requirements for the CS system for the shutdown – cold and the refueling operating conditions. The addition of LCO 3.1.9 is evaluated in Section 3.3 of this SE.

CTS LCO 3.1.4 Specification h also requires cessation of core alterations. This was identified in Section 2.2.7.3 of this SE and is dispositioned below in Section 3.7.3 as Variation 3.

The NRC staff finds that the changes to TS 3.1.4 are consistent with the intent of TSTF-542, Revision 2, in that all necessary requirements concerning the management of the drain time and sources of water addition to the RPV during the shutdown –cold and refueling conditions will be

relocated to proposed TS 3.1.9 so as to be managed in one place in the TSs. Therefore, the proposed changes to LCO 3.1.4 are acceptable.

3.3 TS LCO 3.1.9, "Reactor Pressure Vessel (RPV) Water Inventory Control"

Nine Mile Point, Unit 1, LCOs in the CTS format follow from either the fission product barriers that they protect a general plant condition or the plant overall. The categorical TSs are as follows: TS 3.1.0, "Fuel Cladding Integrity"; TS 3.2.0, "Reactor Coolant System"; TS 3.3.0, "Primary Containment"; TS 3.4.0, "Reactor Building"; TS 3.5.0, "Shutdown and Refueling"; and TS 3.6.0, "General Reactor Plant." The safety limit for the shutdown condition with irradiated fuel in the reactor vessel at Nine Mile Point, Unit 1, is at TS 2.1.1d, which requires the water level to be no less than -10 inches indicator scale.

To be consistent with the CTS format for Nine Mile Point, Unit 1, the licensee proposed that the TS that consolidates the requirements for RPV WIC in one location to satisfy the intent of TSTF-542, Revision 2, be located in Section 3.1.0 of the CTS and identified as TS 3.1.9. Section 3.1.0 of the CTS is to protect fuel cladding integrity.
Proposed LCO 3.1.9, "Reactor Pressure Vessel (RPV) Water Inventory Control," would state, in part:

> Applicability:
>
> Applies to the operating status of the core spray systems and Reactor Water Inventory Control when the reactor coolant temperature is less than or equal to 212°F.
>
> Objective:
>
> To assure the RPV water inventory is maintained -10 inches indicator scale.
>
> Specification:
>
> a. Whenever irradiated fuel is in the reactor vessel and the reactor coolant temperature is less than or equal to 212°F, drain time of RPV water inventory to -10 inches indicator scale shall be ≥36 hours and one core spray subsystem shall be operable except as specified in Specifications b though f below.

The applicability statement clearly indicates that the LCO applies to the CS system's operating status, and reactor coolant temperature is less than 212 °F. The objective provides the nexus between the new LCO to the safety limit (TS 2.1.1, Specification d, "...-10 inches indicator scale ...") and meets the intent of TSTF-542, Revision 2. The use of a safety limit other than TAF is a variation from TSTF-542, Revision 2, and is described in Section 2.2.7.1 of this SE and evaluated in Section 3.7.1 of this SE.

At Nine Mile Point, Unit 1, the CS system is the safety-related emergency core cooling system (ECCS) water source that is included in the proposed TS 3.1.9. For the Nine Mile Point, Unit 1, design, the CS system ensures adequate core cooling. The CS system consists of two separate and independent CS loops. Each loop contains two sets of pumps. Each pump set consists of one CS pump and one topping pump. A CS subsystem consists of one motor-driven CS pump, one motor-driven topping pump, piping, and valves to transfer water from the

suppression pool to the RPV. All eight pumps start on an automatic initiation signal, but operators can also manually start and stop pumps from the main control room.

The NRC staff determined from review of the Nine Mile Point, Unit 1, UFSAR, Tables XV-9a and XV-9b, that the CS pumps are high-capacity pumps with flow rates of thousands of gpm. Most RPV penetration flow paths would have a drain rate on the order of tens or hundreds of gpm when at-power conditions. During the cold shutdown and refueling conditions, the water in the RPV is at or near atmospheric pressure, with water at or frequently beyond the RPV flange in height. Therefore, the manual initiation/start of a CS pump would provide the necessary water source to counter these expected drain rates and add to or maintain the water level in the RPV. Based on these considerations, the NRC staff finds that the water source provides assurance that the lowest functional capability required for safe operation will be maintained, and the safety limit will be protected during the shutdown-cold and refueling operating conditions.

The proposed Specification a further clarifies applicability of TS 3.1.9. It states that reactor coolant temperature is less than or equal to 212 °F, which corresponds to the shutdown condition - cold or refueling condition per CTS. This proposed applicability of TS 3.1.9 is appropriate, given that the TS 3.1.4 requirements on CS in the other reactor operation conditions will be unaffected.

Proposed Specification a contains two more parts. The first part states that drain time of RPV WIC to -10 inches indicator scale shall be ≥ 36 hours, and the second part states that one CS subsystem shall be operable except as specified in Specifications b though f. This effectively implements the LCO requirements of LCO 3.5.2 of TSTF-542. The proposed TS 3.1.9 Specifications b though f specify remedial actions based on either the required low pressure CS subsystem operability or drain time, which matches the actions of the actions table of LCO 3.5.2 of TSTF-542 (Conditions A through E).

The existing TS LCO 3.1.4 Specification a states that two low pressure CS systems shall be operable, whereas the proposed LCO 3.1.9 Specification a states that only one low pressure CS subsystem shall be operable. The change from two low pressure CS subsystems to one low pressure CS subsystem is because this level of redundancy is not required.

The proposed Specification b states that if the required CS subsystem is inoperable, it is to be restored to operable status within 4 hours. This is similar to TSTF-542's LCO 3.5.2 Condition A.

The proposed Specification c states that if Specifications a and b are not met, a method of water injection capable of operating without offsite electrical power shall be established immediately. This is similar to TSTF-542's LCO 3.5.2 Condition B. On page 12 of 12 of Reference 3, the licensee explained that the water injection sources can be powered via the station emergency diesel generators without load shedding actions and then listing the sources with reactor water quality sources first.

With one CS subsystem and non-safety-related injection sources, defense-in-depth will be maintained. The defense-in-depth measure is consistent with other events considered during shutdown with no additional single failure assumed. The drain time controls, in addition to the required low pressure CS subsystem, provide reasonable assurance that an unexpected draining event can be prevented or mitigated before the RPV water level would be lowered to -10 inches indicator scale (Safety Limit 2.1.1d).

The proposed Specification c provides adequate assurance of an available water source, should Specification b not be met within the 4-hour completion time. This is similar to TSTF-542's LCO 3.5.2 Condition B.

The proposed Specification d states that for a drain time < 36 hours and ≥ 8 hours, within 4 hours, perform the following actions:

(1) Verify secondary containment boundary is capable of being established in less than the drain time, and

(2) Verify each secondary containment penetration flow path is capable of being isolated less than the drain time, and

(3) Verify required one RBEVS is capable of being placed in operation in less than the drain time.

The proposed Specification d provides adequate protection, should the drain time be < 36 hours and ≥ 8 hours because of the ability to establish secondary containment, isolate additional flow paths, and have the reactor building emergency ventilation system (RBEVS) capable of being placed in operation. This is similar to TSTF-542's LCO 3.5.2 Condition C.

The proposed Specification e states that for a drain time < 8 hours to immediately perform the following actions:

(1) Initiate action to establish an additional method of water injection with water sources capable of maintaining RPV water level above -10 inches indicator scale for ≥ 36 hours without offsite electrical power, and

(2) Initiate action to establish secondary containment boundary, and

(3) Initiate action to isolate each secondary containment penetration flow path or verify it can be manually isolated from the control room, and

(4) Initiate action to verify one RBEVS is capable of being placed in operation.

The proposed Specification e provides adequate protection, should the drain time be < 8 hours because of the requirement for the ability to establish an additional method of water injection without offsite electrical power, establish secondary containment, isolate additional flow paths, and have one RBEVS capable of being placed in operation. Proposed Specification e is similar to TSTF-542's LCO 3.5.2 Condition D. The supplements added the words "... without offsite electrical power," to the end of action (1) and, therefore, made proposed Specification e consistent with TSTF-542's LCO 3.5.2 Condition D.

The proposed Specification f states that when the required action and associated completion time of Specifications d or e are not met, or the drain time is < 1 hour, then immediately initiate action to restore drain time to ≥ 36 hours. The proposed Specification f is new, as it is not present in the CTS. The proposed Specification f is acceptable, as it provides the necessary step to restore the drain time to ≥ 36 hours, should the other conditions not be met, or if the drain time is < 1 hour. This is similar to TSTF-542's LCO 3.5.2 Condition E.

The NRC staff evaluated the proposed TS 3.1.9 and finds it acceptable based on the actions taken to mitigate the water level reaching -10 inches indicator scale with the defense-in-depth water sources available and maintaining drain time ≥ 36 hours. The NRC staff finds the location of TS LCO 3.1.9 under the CTS Section 3.1.0 as a TS that protects the primary fission product barrier of the fuel cladding as acceptable because it follows the Nine Mile Point, Unit 1, CTS custom of placing the LCOs under the fission product barrier that it protects. Additionally, the staff determined that LCO 3.1.9 correctly specifies the lowest functional capability or performance levels of equipment required for safe operation of the facility. There is reasonable assurance that the required actions to be taken when the LCO is not met can be conducted without endangering the health and safety of the public. Therefore, proposed TS 3.1.9 meets the requirement of 10 CFR 50.36(c)(2)(i) as an LCO.

3.4 TS SR 4.1.9, "Reactor Pressure Vessel (RPV) Water Inventory Control"

The proposed TS 4.1.9 SRs (Section 2.2.4 above) includes verification of drain time, verification of water levels/volumes that support low pressure CS subsystems, verification of correct valve positions for the required low pressure CS subsystem, verification of valves credited for automatic isolation actuated to the isolation position, and verification that the required low pressure CS subsystem can be manually operated. A comparison table showing how each of the proposed SRs fulfills the same purpose of an SR for LCO 3.5.2 of TSTF-542 is included on page 8 of 17 of Attachment 1 to the LAR. Each of the five SRs is described below.

Specification a: The drain time would be determined or calculated and required to be verified to be ≥ 36 hours in accordance with the SFCP. The NRC staff has determined placing this frequency in the licensee's SFCP is appropriate and consistent with similar surveillances. This surveillance would verify the LCO for drain time is met. Numerous indications of changes in RPV level are available to the operator. The period of 36 hours is considered reasonable to identify and initiate action to mitigate draining of reactor coolant (usually 3 or more operator shifts). Changes in RPV level would necessitate recalculation of the drain time. As plant conditions change, the drain time must be confirmed to be ≥ 36 hours or the LCO must be declared not met and the appropriate LCO 3.1.9 specifications followed. Therefore, this SR is acceptable.

Specification b: The suppression pool water level must cover the required downcomers by ≥ 3½ feet of submergence or condensate storage tank level of not < 300,000 gallons would be required to be verified to ensure pump net positive suction head and vortex prevention is available for the CS subsystem required to be operable by the LCO. Indications are available either locally or in the control room regarding suppression pool water level and condensate storage tank level. This surveillance would be required to be performed in accordance with the SFCP. The NRC staff compared this inspection to that of existing Specification i of LCO 3.1.4 for the refueling condition and established that it performs the same function. Per the table on page 8 of 17 of the LAR, this SR compares to SR 3.5.2.3 of TSTF-542, Revision 2, which also establishes adequate water level in the water source for CS. Since this SR will establish that adequate water level exists in the suction water source and meets the current licensing basis, it is acceptable.

Specification c: The specification to verify the correct alignment for manual, power operated, and automatic valve that is not locked, sealed, or otherwise secured in position is in the required position for a required CS subsystem flow path and would be retained from the existing TS 4.1.4, Specification f. This surveillance would be required to be performed in accordance with the SFCP. Since this meets the Nine Mile Point, Unit 1, current licensing basis and is being

relocated to new TS 4.1.9, it also meets the intent of TSTF-542, Revision 2. Therefore, it is acceptable.

Specification d: This proposed surveillance verifies that each valve credited for automatically isolating a penetration flow path actuates to the isolation position on an actual or simulated RPV water level isolation signal. It is the functional equivalent of CTS Specification c of SR 4.1.4 and so meets the current licensing basis of Nine Mile Point, Unit 1. Additionally, this surveillance meets the intent of TSTF-542, Revision 2, and, therefore, is acceptable.

Specification e: This surveillance would have the operators verify that the required CS subsystem can be manually operated, excluding vessel spray, at a frequency in accordance with the SFCP. The initially proposed wording of this SR included the words "... initiates on a manual initiation signal ..." The supplement changed the words to "... can be manually operated ..." to more properly reflect the way the CS system is started from the control room. This SR is a test or inspection in new TS 4.1.9 that ensures that the necessary components of the primary makeup water source to the RPV is in a ready-to-operate condition. It also meets the intent of TSTF-542, Revision 2, and therefore, is acceptable.

The NRC staff evaluated each of these proposed SRs associated with the new LCO 3.1.9 and concluded they are appropriate for ensuring the operability of the equipment and instrumentation specified in LCO 3.1.9. The staff concluded that each of the proposed SRs are acceptable since they meet the requirements of 10 CFR 50.36(c)(3) for surveillances by ensuring that the necessary quality of systems and components is maintained.

3.5 TSs 3.6.2 and 4.6.2, "Protective Instrumentation"

The purpose of the RPV WIC instrumentation for TSTF-542 implementation at Nine Mile Point, Unit 1, is to support the requirements of new TS LCO 3.1.9 and the definition of drain time. Nine Mile Point, Unit 1, instrumentation TSs are located in "General Reactor Plant," Section 3.6.0 of the Nine Mile Point, Unit 1, TSs. The LCOs are located in Subsection 3.6.2, and the SRs are located in Subsection 4.6.2, with both subsections titled, "Protective Instrumentation."

Both the LCOs and SRs are implemented by reference to a series of tables that contain specific parameters and the reactor mode switch positions for which the instrumentation must be operable. Each table contains instrumentation for specific plant purposes (e.g., "Instrumentation that Initiates a Primary Coolant System Containment Isolation," or "Instrumentation that Initiates Core Spray").

The licensee proposed to concentrate the instrumentation for RPV WIC into new TS Tables 3.6.2m, "RPV Water Inventory Control Instrumentation Limiting Condition for Operation," and 4.6.2m, "RPV Water Inventory Control Instrumentation Surveillance Requirement."

To accomplish this end, existing instrumentation that supports initiation of the CS system and the equipment necessary to ensure water discharge into the RPV for the shutdown – cold and refueling operating conditions (currently contained in Tables 3.6.2b, "Instrumentation that Initiates Primary Coolant System or Containment Isolation," and 3.6.2d, "Instrumentation that Initiates Core Spray") would be either relocated into new Tables 3.6.2m and 4.6.2m, or deleted, as applicable, to meet the intent of TSTF-542, Revision 2. The new tables would be implemented by their inclusion into Specification a of both LCO 3.6.2 and SR 4.6.2.

3.5.1 Staff Evaluation of Proposed LCO 3.6.2 and SR 4.6.2 Changes

Specification a of both LCO 3.6.2 and SR 4.6.2 is modified to add Tables 3.6.2m and 4.6.2m, respectively. Tables 3.6.2m and 4.6.2m concentrate the instrumentation requirements necessary for RPV WIC in the shutdown – cold and refueling operating conditions to support proposed LCO 3.1.9 and the intent of TSTF-542, Revision 2.

Also, Specification a.(13) would be added to LCO 3.6.2 as follows:

> Reactor Pressure Vessel Water Inventory Control – Specification 3.1.9 shall be applied for the applicable drain time.

Proposed Specification a.(13) will alert operators to apply the requirements of LCO 3.1.9 if the requirements of proposed Table 3.6.2m are not met. This ties new LCO 3.1.9 to the instrumentation that supports it and follows the format of the current Nile Mile Point, Unit 1, TSs. This is consistent with TSTF-542, Revision 2, and, therefore, acceptable since the proposed LCO 3.1.9 would contain the requirements of RPV WIC.

3.5.2 NRC Staff Evaluation of Proposed Changes to Table 3.6.2b

In Reference 1, the licensee proposed a new TS Table 3.6.2m to provide alternative instrumentation requirements to support manual initiation of the CS subsystem required in new TS 3.1.9 and automatic isolation of penetration flow paths that may be credited in the determination of drain time.

Consistent with TSTF-542, some parameters needed to support operation of CS and maintain water in and above the RPV during cold shutdown and refueling operating conditions (currently in TS Table 3.6.2b, "Instrumentation that Initiates Primary Coolant System or Containment Isolation"), would be consolidated into new TS Table 3.6.2m, as stated in Sections 2.2.5.3 and 2.2.5.4 of Reference 1. Specifically, the following parameter applicability during shutdown and refuel operating conditions would be relocated:

- Primary coolant isolation, (1) Low-Low Reactor Vessel Water Level, (a) Cleanup
- Primary coolant isolation, (1) Low-Low Reactor Vessel Water Level, (b) Shutdown Cooling
- Primary coolant isolation, (2) Manual

As stated by the licensee in paragraph 2.2.5.4 of Reference 1, the "cleanup" requirement of the "main steam and cleanup" parameter and the manual parameter correspond to the refueling water cleanup function described in TSTF-542. Likewise, in paragraph 2.2.5.3 of Reference 1, the shutdown cooling and manual parameters correspond to the residual heat removal system isolation described in TSTF-542. The NRC staff finds that relocation of these parameters is consistent with the intent of TSTF-542. Additionally, manual manipulation of components (i.e., starts and stops of pumps, repositioning of valves) is consistent with TSTF-542.

Reference to note (i) is removed for the primary coolant isolation (1) Low-Low Reactor Vessel Water Level (a) Main Steam and Cleanup parameter. Note (i) states that the parameter may be bypassed in the cold shutdown condition. Since the cleanup system parameter that applies to the cold shutdown condition is removed and relocated to Table 3.6.2m, reference to this note is no longer required. The NRC staff finds that this is consistent with TSTF-542 and is acceptable.

Reference to note (j) is removed for the primary coolant isolation (1) Low-Low Reactor Vessel Water Level (b) Shutdown Cooling parameter, and note (j) is also removed from the notes for Tables 3.6.2b and 4.6.2b. Justification for this change is presented by the licensee in Section 2.2.5.3 of Reference 1. Specifically, note (j) applies during the cold shutdown and refueling conditions and describes actions required to be taken during those conditions. Since the shutdown cooling parameter is removed from Table 3.6.2b, and this is the only parameter that references note (j), note (j) is no longer needed. The note (j) content is relocated to proposed Table 3.6.2m as note (e). Since these administrative changes conform to the intent of TSTF-542 by relocating parameters applicable to the cold shutdown and refueling conditions to proposed Table 3.6.2m, the NRC staff has determined that these changes are acceptable.

Reference to new note (k) for Table 3.6.2b is added to the shutdown column under "Reactor Mode Switch Position in Which Function Must Be Operable," for the following parameters:

- Primary coolant isolation (1) Low-Low Reactor Vessel Water Level (a) Main Steam and Cleanup
- Primary coolant isolation (1) Low-low Reactor Vessel Water Level (b) Shutdown Cooling
- Primary coolant isolation (2) Manual

New note (k) states:

> The Primary Coolant Isolation Parameters for Cleanup and Shutdown Cooling in Table 3.6.2b are only applicable in the Shutdown Condition – Hot. See Table 3.6.2m for Parameter applicability in the Shutdown Condition – Cold.

The licensee stated in Attachment 1 of Reference 1 that note (k) was added "... to provide clarification and direct the reader to TS Table 3.6.2m for the corresponding parameter applicability for shutdown condition – cold." The NRC staff has determined that this is a conforming change so that the Nine Mile Point, Unit 1, TSs can accommodate the consolidation of the cold shutdown condition parameters into one location, and is, therefore, acceptable.

3.5.3 Staff Evaluation of Proposed Changes to Table 3.6.2d

The Nine Mile Point, Unit 1, CS initiation parameters are currently specified in TS Table 3.6.2d, "Instrumentation that Initiates Core Spray." In Reference 1, the licensee proposed a new TS Table 3.6.2m to provide alternative instrumentation requirements to support manual initiation of the CS subsystem required in new TS 3.1.9 and automatic isolation of penetration flow paths that may be credited in the determination of drain time.

Consistent with TSTF-542, the parameters needed to support operation of CS and maintain water in and above the RPV in the cold shutdown and refueling operating conditions, currently in Table 3.6.2d, would be consolidated into new TS Table 3.6.2m, as stated in Section 2.2.5.1 of Reference 1.

Table 3.6.2d would be changed to add reference to new note (g) under "Reactor Mode Switch Position in Which Function Must Be Operable" column for the following parameters:

- Start Core Spray Pumps, (1) High Drywell Pressure
- Start Core Spray Pumps, (2) Low-Low Reactor Vessel Water Level

- Open Core Spray Discharge Valves, (3) Reactor Pressure and either (1) or (2) above

The "x," which indicates that the "Open Core Spray Discharge Valves (3) Reactor Pressure and either (1) or (2) ..." is to be operable in all shutdown conditions would be removed.

New note (g) would state:

> The Parameters for Start Core Spray Pumps and Open Core Spray Discharge Valves in Table 3.6.2d are only applicable in the Shutdown Condition - Hot. See Table 3.6.2m for Parameter applicability in the Shutdown Condition – Cold.

Since the three parameters listed above have other operational requirements specified in Table 3.6.2d, these parameters are left in place, but the applicability is modified by note (g). Note (g) informs the reader that the operational requirements specified in Table 3.6.2d would now only apply in shutdown condition – hot. It also directs the reader to new Table 3.6.2m for parameters related to shutdown condition – cold. The NRC staff finds that this change makes Table 3.6.2d consistent with TSTF-542, allowing for all parameters related to CS initiation during cold shutdown and the refueling conditions to be consolidated into new Table 3.6.2m.

The NRC staff has determined that this is a conforming change so that the Nine Mile Point, Unit 1, TSs can accommodate the consolidation of the cold shutdown condition parameters into one location, and is, therefore, acceptable.

3.5.4 Staff Evaluation of Proposed Table 3.6.2m, "RPV Water Inventory Control Instrumentation"

In accordance with TSTF-542, Revision 2, the licensee proposed to consolidate all instrumentation needed to support the requirements of proposed TS LCO 3.1.9, "Reactor Pressure Vessel (RPV) Water Inventory Control," into Table 3.6.2m, "RPV Water Inventory Control Instrumentation Limiting Condition for Operation." Therefore, Table 3.6.2m would support the safety function for TS 3.1.9. These instruments would be required to be operable if the systems that provide water injection and isolation functions were to be considered operable as described in the NRC staff's evaluation of TS 3.1.9 (Sections 3.3 and 3.4 of this SE). Table 3.6.2m is organized such that the parameters necessary for water injection into the core are followed by primary coolant isolation parameters. The NRC staff finds that this is consistent with TSTF-542, Revision 2.

As stated in Reference 3, the proposed revision to Nine Mile Point, Unit 1, TS Tables 3.6.2m and 4.6.2m, are structured in the Nine Mile Point, Unit 1, custom TS format. Therefore, the required remedial actions to be accomplished to meet 10 CFR 50.36(c)(2)(i) are specified in the associated TS table notes. The table notes are similar to the TS 3.3.5.2 actions table in TSTF-542. This is acceptable since these changes are considered as line item improvements per the guidance in the Commission's Final Policy Statement on Technical Specifications (58 FR 39132).

The following is a list of each parameter included in the table:

- Open Core Spray Discharge Valves, (1) Reactor Pressure
- Primary coolant isolation, (1) Low-Low Reactor Vessel Water Level, (a) Cleanup

- Primary coolant isolation, (1) Low-Low Reactor Vessel Water Level, (b) Shutdown Cooling
- Primary coolant isolation, (2) Manual

The LAR stated in Section 2.2.5.1, "To start the CS pumps either Parameter (1) High Drywell Pressure or (2) Low-Low Reactor Water Level, is required." The licensee justified not including the Start Core Spray Pumps (1) High Drywell Pressure parameter from Table 3.6.2d, as follows:

> In alignment with TSTF-542, Revision 2, Proposed Safety Basis ([TSTF-542] Section 3.3.1), the High Drywell Pressure Parameter is not realistic in the Shutdown Condition - Cold and is not transferred to the new Table 3.6.2m/4.6.2m.

In the shutdown – cold and refueling operating conditions, the reactor pressure is very low. It stands to reason that drywell pressure will also not be high. For this reason, the NRC staff agrees that the high drywell pressure parameter is not needed to support the requirements of proposed TS 3.1.9. Therefore, the NRC staff finds that its absence from Table 3.6.2m and deletion from the TSs during the shutdown – cold and refueling operating conditions is acceptable.

The proposed TS Table 3.6.2m, which is similar to TSTF-542, Revision 2, Table 3.3.5.2, does not include a parameter for low-low reactor water level. In Table 3.3.5.2 of TSTF-542, an injection permissive is included as one of the functions for the core spray system. Reference 2 addressed this on page 3 of 9 of Attachment 1:

> The, "Low-Low Reactor Water Level Parameter," is not included under the, "Start Core Spray Pumps," function in the proposed TS marked-up Tables 3.6.2m and 4.6.2m because it does not provide a start permissive signal for the Core Spray system. ... There are no interlocks or permissives preventing Core Spray Pump or Core Spray Topping Pump from being started. This is a variation to TSTF-542 and is acceptable and revises the variation discussion in Section 2.2.5.1 of Reference 1 [the LAR].

Since there are no permissives preventing CS pumps from being manually started, and manual initiation of a makeup water source is in conformance with TSTF-542, Revision 2, the NRC staff finds this change acceptable.

The shutdown/refuel operating applicability for the "Open Core Spray Discharge Valves (1) Reactor Pressure" parameter would be moved from existing Table 3.6.2d to Table 3.6.2m. This parameter must be operable to support the required CS subsystem providing water injection and isolation function as described in Section 3.3 of this SE for new LCO 3.1.9. Since the CS system is a low pressure system, discharge valves are normally kept shut until pressure in the RPV is low enough to allow the system to discharge water. Until the internal isolation valves are opened, water (minimum of 480 gpm) is recirculated through a mechanical relief valve set at 349 psig to the suppression chamber to provide the pump cooling. Since the water in the RPV is typically less than 212 °F during the shutdown – cold operating condition, and near atmospheric during the refueling operating condition, the setpoint pressure of less than or equal to 365 psig is expected to be met. Additionally, the licensee updated the LAR in Reference 3 to make the "Minimum No. of Tripped or Operable Trip Systems" column "2," instead of "1 per pump"; the minimum number of operable instrument channels per operable trip system was revised from "1 per pump" to "1." The licensee's explanation is as follows:

> The configuration of the circuitry is one-out-of-two, taken twice. There are two trip systems, labeled 11 and 12. Each trip system has two channels, with only one channel required from trip system 11 (either 11-1 or 11-2), and one channel required from trip system 12 (either 12-1 or 12-2).

Since one operable channel of the reactor pressure parameter can support the one injection source required to be operable per proposed LCO 3.1.9 (in accordance with TSTF-542, Revision 2), the NRC staff finds this change acceptable.

Furthermore, notes (d) and (e) are cited in the minimum number of operable instrument channels per operable trip system column and are explained below.
The primary coolant isolation system parameters, low-low reactor vessel water level for (a) cleanup and (b) shutdown cooling would be transferred from existing TS Table 3.6.2b to meet the intent of TSTF-542, Revision 2. These instruments support automatic isolation of the cleanup and shutdown cooling system, so their consolidation into this table supports the requirements in new LCO 3.1.9, which meets the intent of TSTF-542, Revision 2. The relation to LCO 3.1.9 requirements is highlighted by note (c) to Tables 3.6.2m and 4.6.2m, which states, in part: "Applicable when automatic isolation of the associated penetration flow path(s) is credited in calculating drain time."

Note (c) goes on to state that, "With one or more channels inoperable, immediately: 1. Declare associated penetration flow path(s) incapable of automatic isolation, and 2. Calculate drain time." Declaring the flow paths incapable of automatic isolation with a completion time of immediately is acceptable because isolation will not be capable of being performed in the normal manner. Operators should still be able to manually isolate these flow paths by manual closure of the isolation valves. Recalculation of drain time is necessary so that the operators are aware of the amount of time that they have to successfully complete a manual isolation before addition of water to the RPV is necessary. These actions and associated completion time of immediately agree with the overall scheme of RPV water level management and the intent of TSTF-542, Revision 2, and are acceptable remedial actions per 10 CFR 50.36(c)(2).

Note (a) for Tables 3.6.2m and 4.6.2m states that the parameters of this table are only applicable in the shutdown condition – cold and refuel. It also states to see Tables 3.6.2b or 3.6.2d for parameter applicability in the shutdown condition – hot. This serves to differentiate application of the new tables from the previously used tables and is acceptable for that purpose.

Note (b) for Tables 3.6.2m and 4.6.2m states that the instrumentation that allows for the injection of the CS system is not required to be operable if there is no fuel in the reactor vessel. This note is currently note (e) of Table 3.6.2d and is carried forward to the new table notes. Since this has no impact on the implementation of TSTF-542, it is acceptable.

Notes (d) and (e) are cited from proposed Table 3.6.2m in the minimum number of operable instrument channels per operable trip system column. Note (d) explains that the parameter is associated with the subsystem of CS required to be operable by LCO 3.1.9. Since this note is explanatory and relates the reactor pressure parameter for the opening of CS discharge valves back to the newly proposed LCO 3.1.9, "Reactor Pressure Vessel (RPV) Water Inventory Control," it is acceptable and in agreement with TSTF-542, Revision 2.

Note (e) implements proposed remedial actions for cases where the number of operable channels is less than that specified in the table. If one required trip system instrument in one trip system was inoperable, the other trip system would remain operable. Declaring the required

CS subsystem inoperable per specification (LCO) 3.1.9 is appropriate because the purpose of the instrumentation is to support LCO 3.1.9.

The notes discussed above direct the licensee to take appropriate actions as necessary to support LCO 3.1.9. The NRC staff has determined these actions satisfy the requirements of 10 CFR 50.36(c)(2)(i) by providing a remedial action permitted by the TSs until the LCO can be met. Therefore, the staff has concluded there is reasonable assurance the licensee will take appropriate actions during an unexpected drain event to either prevent or mitigate RPV water level being lowered to the -10 inches indicator scale safety limit chosen by Nine Mile Point, Unit 1, and is, therefore, acceptable.

3.5.5 Staff Evaluation of Proposed Table 4.6.2m

The proposed Table 4.6.2m SRs include sensor checks for the primary coolant isolation (1) low-low reactor water level and instrument channel tests for all parameters. The NRC staff finds these tests are sufficient and adequate because they are essential to ensure the functions of Tables 3.6.2m and 4.6.2m are operable (i.e., capable of performing the specified safety function in support of TS 3.1.9, drain time, and the protection from a potential draindown of the RPV in the shutdown – cold and refueling operating conditions). The NRC staff finds the proposed SRs of Table 4.6.2m, as described in Section 3.3.3 of the TSTF-542 justification, satisfy 10 CFR 50.36(c)(3) by providing the specific SRs relating to test, calibration, or inspection, to assure that the necessary quality of systems and components is maintained.

The performance of a sensor check would ensure that a gross failure of instrumentation has not occurred. A sensor check is normally a comparison of the parameter indicated on one channel to a similar parameter on other related channels. A sensor check is significant in assuring that there is a low probability of an undetected, complete channel failure and is a key safety practice to verifying the instrumentation continues to operate properly between each channel functional test. The frequency for sensor checking is in accordance with the SFCP. Therefore, the NRC staff determined that this is acceptable because it is consistent with the existing requirements and supports operating shift situational awareness.

Table 4.6.2m would require an instrument channel test for all parameters in TS Table 3.6.2m. An instrument channel test is the injection of a simulated or actual signal into the channel as close to the sensor as practicable to verify operability of all devices in the channel required for channel operability. It would be performed on each required channel to ensure that the entire channel will perform the intended function. The frequency is in accordance with the SFCP. The NRC staff has determined this is acceptable because it is consistent with the existing requirements for these functions and is based upon operating experience that demonstrates channel failure is rare. In addition, this SR could be included as part of a refueling activity since during refueling, outage periods in the shutdown – cold or refueling operating conditions are often 30 days or less.

TSTF-542 did not include SRs to verify or adjust the instrument setpoint derived from the allowable value using a channel calibration or a surveillance to calibrate the trip unit. A draining event in the shutdown – cold or refueling operating conditions is not an analyzed accident and, therefore, there is no accident analysis on which to base the calculation of a setpoint. The purpose of the functions is to allow ECCS manual initiation or to automatically isolate a penetration flow path, but no specific RPV water level is assumed for those actions. Therefore, the shutdown – hot setpoint was chosen for use in the shutdown – cold or refueling operating conditions, as it will perform the desired function. Calibrating the functions in the shutdown –

cold or refueling operating conditions is not necessary, as Tables 4.6.2b and 4.6.2d continue to require the functions to be calibrated on an established interval. Also, a draining event in the shutdown – cold or refueling operating conditions is not an analyzed accident and, therefore, there are no accident analysis assumptions on response time. The staff has determined this is acceptable because this is adequate to ensure the channel responds with the required pumping systems to inject water when needed and isolation equipment to perform when commanded.

Based on the determinations discussed above, the NRC staff has concluded the proposed SRs of Table 4.6.2m satisfy 10 CFR 50.36(c)(3) by providing the specific SRs relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained and is, therefore, acceptable.

Proposed Table 3.6.2m, "RPV Water Inventory Control Instrumentation," presents details on the functions required to support the equipment and instrumentation of TS 3.1.9. The NRC staff finds the presentation in this table to be acceptable because the table sufficiently discusses the purpose of the parameters, the applicability, the number of required channels, the notes provide the proper remedial actions to be taken if the parameter is inoperable, the applicable SRs, the selection of the setpoints, and justification of differences between the existing and proposed TS functions. This RPV WIC instrumentation set is acceptable because it is adequate to ensure that the channels of instrumentation respond with the required accuracy permitting pumps and associated subsystems to operate to inject water when needed and isolating equipment when commanded to support the prevention of or to mitigate a potential RPV draining event.

Each of the ECCS subsystems in the shutdown – cold or refueling operating conditions, can be started by manual alignment of a small number of components. Automatic initiation of a CS subsystem may be undesirable because it could lead to overflowing the RPV cavity due to injection rates of thousands of gpm. Thus, there is adequate time to take manual actions (e.g., hours vs. minutes). Considering the action statements as the drain time decreases (the proposed TS 3.1.9, Specification f, prohibits plant conditions that could result in drain times less than 1 hour), there is sufficient time for the reactor operators to take manual action to stop the draining event and to manually start a CS subsystem or additional method of water injection, as needed. Consequently, there is no need for automatic initiation of ECCS to respond to an unexpected draining event. This is acceptable because a draining event is a slow evolution when compared to a design-basis LOCA assumed to occur at a significant power level.

3.6 Staff Evaluation of Proposed Deletion of References to OPDRVs Term

Section 2.2.6 of this SE lists the numerous OPDRVs references proposed for deletion. The proposed changes would replace the existing specifications related to OPDRVs with revised specifications for RPV WIC. For example, the proposed change removes "operations with a potential for draining the reactor vessel"; "OPDRVs"; related concepts such as "Shutdown Cooling System integrity maintained"; and required actions to "suspend OPDRVs." The term OPDRVs is not specifically defined in the TSs and historically has been subject to inconsistent application by licensees. The changes discussed in this SE are intended to resolve any ambiguity by creating a new RPV WIC TS with attendant equipment operability requirements, required actions, and SRs, and deleting references to OPDRVs throughout the TSs.

The existing Nine Mile Point, Unit 1, TSs contain instrumentation requirements related to OPDRVs in eight separate TSs. The proposed TS Tables 3.6.2m and 4.6.2m consolidate the instrumentation requirements into two locations, one for LCO requirements and the other for SRs, to simplify the presentation and provide requirements consistent with new TS 3.1.9. The

remaining TSs with OPDRVs requirements are for reactor coolant system isolation valves, containment and containment isolation valves, control room air treatment, and reactor building air treatment. Each of these system's requirements during OPDRVs were proposed for consolidation into new TS 3.1.9 for RPV WIC based on the appropriate plant conditions and calculated drain time.

The NRC staff has determined that deletion of OPDRVs references, along with the corresponding editorial changes, is appropriate because the proposed TSs governing RPV WIC and the associated instrumentation clarified and simplified an alternative set of controls for ensuring water level is maintained above the TAF and is, therefore, acceptable.

3.7 Staff Evaluation of Proposed Technical Variations

Section 2.2.7 of this SE lists the licensee's proposed technical variations from the TS changes described in TSTF-542 or the applicable parts of the NRC staff's SE. The licensee stated in the LAR (Reference 1) that these variations do not affect the applicability of TSTF-542 or the NRC staff's SE to the proposed license amendment. The NRC staff evaluated each variation below.

3.7.1 Variation 1, Use of a Different Safety Limit

The licensee has an existing safety limit of -10 inches indicator scale specified in Nine Mile Point, Unit 1, TS 2.1.1.d. This differs from the TAF safety limit identified in the approved TSTF-542.

As reason for the deviation, the licensee states on page 4 of 17 of Attachment 1 to Reference 1 that:

> The reactor vessel water level of -10 inches indicator scale used by Nine Mile Point, Unit 1 [Nine Mile Point, Unit 1] as its SL [safety limit] is a reflection of the limitations of the vessel level instrumentation available to the Operations staff and is not indicative of a difference from or change to the analysis presented in TSTF-542, Revision 2.

The licensee additionally states on page 4 of 17 of Attachment 1 to Reference 1 that the TAF at Nine Mile Point, Unit 1, is 84 inches below vessel zero. Using information presented on pages 10, 11, and 16 of the licensee's TSs, the NRC staff determined that vessel zero corresponds to 0 inches indicator scale. Therefore, the licensee's chosen safety limit of -10 inches indicator scale will ensure that the RPV water inventory will remain 74 inches above the TAF instead of at the TAF limit identified in TSTF-542. The safety limit, therefore, does not directly impact reactor safety. The NRC staff additionally reviewed the location of the level taps to confirm what the licensee identified in its justification.

In addition, this safety limit is consistent with at-power application of the safety limit. The licensee states that -10 inches indicator scale also corresponds to the setpoint for low-low reactor water level, which, with a simultaneous high drywell pressure condition, is the actuation signal for the automatic depressurization system. The automatic depressurization system depressurizes the reactor during an at-power accident so that the low pressure CS system can function to add water to the reactor.

Lastly, the licensee states that existing TS 2.1.1.d safety limit is longstanding at Nine Mile Point, Unit 1, because it is "... a reflection on the limitations of the vessel level instrumentation available to the operations staff ..."

Because application of the Nine Mile Point, Unit 1, TS 2.1.1.d safety limit will maintain water level in the reactor vessel 74 inches above TAF, and because this safety limit is existing and longstanding at Nine Mile Point, Unit 1, the NRC staff finds that the modified safety limit is consistent with the intent of TSTF-542 and, therefore, approves this deviation.

3.7.2 Variation 2, Core Spray with No LPCI System in the Nine Mile Point, Unit 1, Design

The model SE for TSTF-542, Revision 2, was written for a BWR/4 plant with an LPCI system and a CS system. Nine Mile Point, Unit 1, is of an earlier design and has a robust CS system. There are two separate and independent CS loops with each loop having two (2) full capacity sets of CS pumps and CS topping pumps. This system is designed to accommodate the range of LOCAs from the smallest up to the largest line breaks as discussed in Sections VII and XV of the UFSAR. The licensee provided the following description of the CS system and its ability to be relied upon as a satisfactory water makeup source in the LAR:

> The Core Spray system consists of two separate and independent Core Spray loops as described in Nine Mile Point, Unit 1 Updated Final Safety Analysis Report (UFSAR) Section VII, Engineered Safeguards. For Nine Mile Point, Unit 1, the Core Spray system performance is evaluated for the entire spectrum of break sizes for a postulated LOCA. Both systems (at least one subsystem in each system) are required to operate to limit peak clad temperatures below 2200°F (10 CFR 50.46(a)(1)(i) model) for the worst case line break (recirculation discharge line break). The Nine Mile Point, Unit 1 UFSAR, Chapter XV, Section 2.4.4, discusses a Core Spray system break, during a Design Basis Accident LOCA, reducing the Core Spray system to one sparger fed by one Core Spray pump and one topping pump. The resultant analysis demonstrated that the 10 CFR 50.46 limits are met. It is reasonable to assume, based on engineering judgment, that while the reactor coolant temperature is less than or equal to 212°F, one Core Spray subsystem can maintain adequate reactor vessel water level. Operation of one pump set and blocking valve is sufficient to establish required delivery rate and flow path. This evaluation represents an adequate technical basis for this variation to TSTF-542, Revision 2.

The NRC staff's research of the applicable description in Sections VII and XV of the Nine Mile Point, Unit 1, UFSAR, confirms the licensee's assessment. Therefore, the NRC staff find the use of the Nine Mile Point, Unit 1, CS system is sufficient justification for application of TSTF-542, Revision 2, to Nine Mile Point, Unit 1.

3.7.3 Variation 3, Deletion of TS 3.1.4h Requirement to Suspend Core Alterations

The variation is identified in Section 2.2.7.3 of this SE. The licensee provided justification for this on page 8 of 17 of Attachment 1 to Reference 1, as follows:

> In alignment with TSTF-542, Revision 2, Proposed Safety Basis (Section 3.1.2), the existing Nine Mile Point, Unit 1 TS 3.1.4.h requirement to suspend core alterations as an action for Core Spray subsystem inoperability is no longer warranted since there are no postulated events associated with core alterations

that are prevented or mitigated by the proposed RPV WIC requirements. In addition, loss of RPV inventory events are not initiated by core alteration operations. Refueling Limiting Conditions for Operation (LCOs) provide requirements to ensure safe operation during core alterations. Therefore, Nine Mile Point, Unit 1 proposes to delete TS 3.1.4.h.

The NRC staff finds the justification for the removal of the core alteration cessation provision to TS 3.1.4 Specification h acceptable in its entirety, but most specifically because, as the licensee states "... loss of RPV inventory events are not initiated by core alteration operations ..." Appropriate remedial actions exist for the control of reactor vessel water level in the proposed SR 4.1.9 because of the following:

- addition of a drain time definition into the Nine Mile Point, Unit 1, TSs,
- addition of LCO 3.1.9 and the associated surveillances and instrumentation operational focus,
- modifications of TSs 3.6.2 and 4.6.2, and
- addition of new Tables 3.6.2m and 4.6.2m.

There are no specific reasons why core alterations should necessarily be suspended due to core spray subsystem inoperability. The proper actions to be taken by the licensee for a core spray pump inoperability are included per Specifications b through f of LCO 3.1.9. Therefore, the NRC staff concludes that removal of the TS 3.1.4h requirement to suspend core alterations is acceptable.

3.8 Technical Conclusion

Safety Limit 2.1.1.d requires that reactor vessel water level shall be greater than -10 inches indicator scale. Maintaining water level above -10 inches indicator scale ensures that the fuel cladding fission product barrier is protected during shutdown conditions. The TS changes evaluated within this SE establish new LCO requirements that address the preventive and mitigative equipment and associated instrumentation that provide an alternative means to support Safety Limit 2.1.1.d during the shutdown – cold and refueling operating conditions.

The reactor coolant system is at a low operating temperature (≤ 212 °F) and is depressurized during the shutdown - cold and refueling operating conditions. An event involving a loss of inventory while in the shutdown condition is judged to not exceed the capacity of one low pressure ECCS core spray subsystem. The only accident that is postulated to occur during shutdown conditions is the fuel handling accident (UFSAR, Chapter XV, Section 3.0). The fuel handling accident does not involve a loss of RPV inventory. The equipment and instrumentation associated with the RPV WIC TSs do not provide detection or mitigation related to this design-basis accident.

The proposed TS LCO 3.1.9 contains requirements for operability of one low pressure ECCS core spray subsystem, along with requirements to maintain a sufficiently long drain time so plant operators would have time to diagnose and mitigate an unplanned draining event. The NRC staff has determined that TS LCOs 3.1.9 and 3.6.2, Table 3.6.2m, provide for the lowest functional capability or performance levels of equipment required for safe operation of the facility and, therefore, meet the LCO requirements of 10 CFR 50.36(c)(2)(i).

Additionally, the revised TS LCOs 3.1.9 and 3.6.2, Table 3.6.2m, provide remedial actions to be taken in the event the LCO is not satisfied and, therefore, meet the requirements of 10 CFR 50.36(c)(2)(i).

The NRC staff finds that the proposed action statements provide reasonable assurance that an unexpected draining event can be prevented or mitigated before the RPV water level would be lowered to -10 inches indicator scale.

The NRC staff evaluated the proposed drain time definition, TS 3.1.9, which contains the requirements for RPV WIC, and Table 3.6.2m, which contains the requirements for instrumentation necessary to support TS 3.1.9. Based on the considerations discussed above, the NRC staff concludes that the proposed revisions are acceptable because they consolidate and clarify the RPV WIC requirements, which meet 10 CFR 50.36(c)(2)(ii), Criterion 4, to establish LCOs for structures, systems, or components significant to public health and safety, as evidenced by operating experience.

The licensee proposed to delete phrases used for controls during OPDRVs from the TS applicability, conditions, required actions, and footnotes. The NRC staff has reviewed the proposed changes and determined that deletion of OPDRVs references, along with the corresponding editorial changes is appropriate, because the proposed TSs governing RPV WIC and the associated instrumentation, TS 3.1.9 and TS Table 3.6.2m, respectively, are a greatly clarified and simplified alternative set of controls for ensuring water level is maintained above -10 inches indicator scale.

The NRC staff reviewed the SRs described in the proposed SR 4.1.9 and Table 4.6.2m. The NRC staff finds that the proposed SR 4.1.9 and Table 4.6.2m are acceptable for the following reasons:

- they support TS 3.1.9 drain time requirements,
- they assure that water inventory is available for low pressure ECCS core spray subsystem RPV injection and pump performance,
- they are adequately filled (mitigates effects of gas accumulation or voiding),
- the subsystems have verified valve positions to support RPV injection,
- the verified pumps provide adequate flow to support drain time and RPV injection and verification of automatic isolation, and
- the low pressure ECCS core spray subsystems can be manually operated to inject.

The NRC staff finds that the proposed SRs of Table 4.6.2m are sufficient and adequate because they are essential to ensure that the parameters are capable of performing their specified safety functions in support of TS 3.1.9 drain time, and the protection from a potential draindown of the RPV in the shutdown – cold and refueling operating conditions. Therefore, the NRC staff concludes that the proposed SRs satisfy 10 CFR 50.36(c)(2)(ii) and 10 CFR 50.36(c)(3).

The NRC staff evaluated the proposed Nine Mile Point, Unit 1, changes against the unit's applicable design requirements per the UFSAR, as detailed in Sections VII and XV (Reference 9) of this SE. The NRC staff finds that the proposed changes for the shutdown – cold and refueling operating conditions, as they relate to the proposed TS changes for the new drain time definition, and the removal of OPDRVs references, remain consistent with the GDCs in that the Nine Mile Point, Unit 1, design requirements for instrumentation, reactor coolant

leakage detection, the reactor coolant pressure boundary, and reactor coolant makeup are unaffected.

Additionally, the proposed TS changes were reviewed for technical clarity and consistency with the existing Nine Mile Point, Unit 1, requirements for customary terminology and formatting. The NRC staff found that the proposed changes were consistent with TSTF-542, Revision 2, and Chapter 16 of the Standard Review Plan.

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 7, 2019. 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 (83 FR 6224). 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 NRC 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.

7.0 REFERENCES

1. Letter from Exelon Generation Company, LLC, Nine Mile Point Nuclear Station, Unit 1, License Amendment Request – Revise Technical Specifications to Apply TSTF-542, "Reactor Pressure Vessel Water Inventory Control," Revision 2 (NMP1L3142), dated December 15, 2017 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17349A027).

2. Letter from Exelon Generation Company, LLC, Response to Request for Additional Information by the Office of Nuclear Reactor Regulation to Support Review of Nine Mile Point Nuclear Station, Unit 1, License Amendment Request to Apply TSTF-542, Revision 2, "Reactor Pressure Vessel Water Inventory Control" (NMP1L3238), dated October 1, 2018 (ADAMS Accession No. ML18274A140).

3. Letter from Exelon Generation Company, LLC, Supplement to the Response to Request for Additional Information by the Office of Nuclear Reactor Regulation to Support Review of Nine Mile Point Nuclear Station, Unit 1, License Amendment Request to Apply TSTF-542, Revision 2, "Reactor Pressure Vessel Water Inventory Control" (NMP1L3248), dated November 2, 2018 (ADAMS Accession No. ML18306A774).

4. Enclosure to Technical Specifications Task Force Traveler TSTF-542, Revision 2, "Reactor Pressure Vessel Water Inventory Control," dated March 14, 2016 (ADAMS Accession No. ML16074A448).

5. Final Safety Evaluation for Technical Specifications Task Force Traveler TSTF-542, Revision 2, "Reactor Pressure Vessel Water Inventory Control" (TAC No. MF3487), dated December 20, 2016 (ADAMS Accession No. ML16343B008).

6. U.S. Nuclear Regulatory Commission (USNRC), "Standard Technical Specifications, General Electric BWR/4 Plants," NUREG-1433, Volume 1, Revision 4.0, "Specifications," dated April 2012 (ADAMS Accession No. ML12104A192).

7. USNRC, "Standard Technical Specifications, General Electric BWR/4 Plants," NUREG-1433, Volume 2, Revision 4.0, "Bases," dated April 2012 (ADAMS Accession No. ML12104A193).

8. NUREG-0800, Revision 3, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants," Section 16, "Technical Specifications," dated March 2010 (ADAMS Accession No. ML100351425).

9. Nine Mile Point Nuclear Station, Unit 1, Final Safety Analysis Report (Updated), Chapters VII and XV.

10. USNRC E-mail to Exelon Generation Company, LLC, "Nine Mile Point, Unit 1 – Request for Additional Information Regarding Reactor Pressure Vessel Water Inventory Control License Amendment Request (L-2017-LLA-0426)," dated August 15, 2018 (ADAMS Accession No. ML18228A693).

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Date: January 22, 2019

SUBJECT: NINE MILE POINT NUCLEAR STATION, UNIT 1 – ISSUANCE OF AMENDMENT NO. 236 REVISING TECHNICAL SPECIFICATIONS TO ADOPT TSTF-542, REVISION 2, "REACTOR PRESSURE VESSEL WATER INVENTORY CONTROL" (EPID L-2017-LLA-0426) DATED JANUARY 22, 2019

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ADAMS Accession No.: ML19008A454 *by memorandum **by email

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