



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

August 14, 2015

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

SUBJECT: CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NOS. 1 AND 2; R.E. GINNA NUCLEAR POWER PLANT; AND NINE MILE POINT NUCLEAR STATION, UNIT NO. 2 – COPY OF LICENSE AMENDMENT NOS. 313, 291, 118, AND 150 (TAC NOS. MF4405, MF4406, MF4407, AND MF4409)

Dear Mr. Hanson:

On July 30, 2015, the Nuclear Regulatory Commission issued Amendment No. 313 to Renewed Facility Operating License No. DPR-53 for the Calvert Cliffs Nuclear Power Plant, Unit No. 1; Amendment No. 291 to Renewed Facility Operating License No. DPR-69 for the Calvert Cliffs Nuclear Power Plant, Unit No. 2; Amendment No. 118 to Renewed Facility Operating License No. DPR-18 for the R. E. Ginna Nuclear Power Plant; and Amendment No. 150 to Renewed Facility Operating License No. NPF-69 for the Nine Mile Point Nuclear Station, Unit No. 2 (Agencywide Documents Access and Management System No. ML15161A380). The amendments consist of changes to the Technical Specifications (TSs) in response to the application dated July 10, 2014, as supplemented by letter dated April 30, 2015.

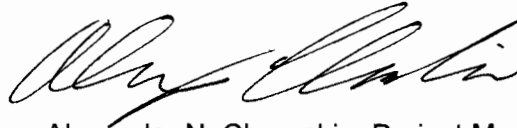
The amendments revise the TSs by implementing Technical Specification Task Force Traveler 523, Revision 2, "Generic Letter 2008-01, Managing Gas Accumulation." The amendments were inadvertently sent to the incorrect recipient. Enclosed please find a copy of the approved amendment.

B. Hanson

- 2 -

Please contact me at 301-415-2549 if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Alex Chereskin". The signature is fluid and cursive, with a large initial "A" and a long, sweeping underline.

Alexander N. Chereskin, Project Manager  
Plant Licensing Branch I-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-317, 50-318, 50-244,  
and 50-410

Enclosure:  
As stated

cc w/encls: Distribution via Listserv

ENCLOSURE

CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NOS. 1 AND 2;  
R. E. GINNA NUCLEAR POWER PLANT; AND  
NINE MILE POINT NUCLEAR STATION, UNIT NO. 2 –  
ISSUANCE OF AMENDMENTS REGARDING IMPLEMENTATION OF TECHNICAL  
SPECIFICATION TASK FORCE TRAVELER 523,  
“GENERIC LETTER 2008-01, MANAGING GAS ACCUMULATION”  
(TAC NOS. MF4405, MF4406, MF4407, AND MF4409)

Enclosure



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

July 30, 2015

Mr. David T. Gudger  
Manager – Licensing and Regulatory Affairs  
Exelon Generation Company, LLC  
Calvert Cliffs Nuclear Power Plant  
R.E. Ginna Nuclear Power Plant  
Nine Mile Point Nuclear Station  
200 Exelon Way  
Kennett Square, PA 19348

SUBJECT: CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NOS. 1 AND 2; R. E. GINNA NUCLEAR POWER PLANT; AND NINE MILE POINT NUCLEAR STATION, UNIT NO. 2 - ISSUANCE OF AMENDMENTS REGARDING IMPLEMENTATION OF TECHNICAL SPECIFICATION TASK FORCE TRAVELER 523, "GENERIC LETTER 2008-01, MANAGING GAS ACCUMULATION" (TAC NOS. MF4405, MF4406, MF4407, AND MF4409)

Dear Mr. Gudger:

The Commission has issued the enclosed Amendment No. 313 to Renewed Facility Operating License No. DPR-53 for the Calvert Cliffs Nuclear Power Plant, Unit No. 1; Amendment No. 291 to Renewed Facility Operating License No. DPR-69 for the Calvert Cliffs Nuclear Power Plant, Unit No. 2 (CCNPP); Amendment No. 118 to Renewed Facility Operating License No. DPR-18 for the R. E. Ginna Nuclear Power Plant (Ginna); and Amendment No. 150 to Renewed Facility Operating License No. NPF-69 for the Nine Mile Point Nuclear Station, Unit No. 2 (NMP2). The amendments consist of changes to the Technical Specifications (TSs) in response to the application dated July 10, 2014, as supplemented by letter dated April 30, 2015.

The amendments revise the TSs by implementing Technical Specification Task Force Traveler 523, Revision 2, "Generic Letter 2008-01, Managing Gas Accumulation." The proposed changes for CCNPP add new Surveillance Requirements (SRs) related to gas accumulation for the shutdown cooling (SDC) system, the emergency core cooling system (ECCS), and the containment spray (CS) system. The proposed changes for Ginna add new SRs related to gas accumulation for the residual heat removal (RHR) system, the ECCS, and the CS system. The proposed changes for NMP2 revise SRs related to gas accumulation for the ECCS, and reactor core isolation cooling (RCIC) system, and add new SRs related to gas accumulation for the RHR system. TS Bases changes associated with these SRs for each application would also be made.

D. Gudger

- 2 -

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

Sincerely,

Handwritten signature of Alexander N. Chereskin in black ink, followed by the text "for,".

Alexander N. Chereskin, Project Manager  
Plant Licensing Branch I-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-317, 50-318, 50-244,  
and 50-410

Enclosures:

1. Amendment No. 313 to DPR-53
2. Amendment No. 291 to DPR-69
3. Amendment No. 118 to DPR-18
4. Amendment No. 150 to NPF-69
5. Safety Evaluation

cc w/enclosures:

Mr. George H. Gellrich, Vice President  
Calvert Cliffs Nuclear Power Plant  
Exelon Generation Company, LLC  
1650 Calvert Cliffs Parkway  
Lusby, MD 20657-4702

Mr. Joseph E. Pacher, Vice President  
R. E. Ginna Nuclear Power Plant  
Exelon Generation Company, LLC  
1503 Lake Road  
Ontario, NY 14519

Mr. Peter Orphanos, Vice President  
Exelon Generation Company, LLC  
Nine Mile Point Nuclear Station, LLC  
P. O. Box 63  
Lycoming, NY 13093

Additional Distribution via Listserv



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

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT 1

CALVERT CLIFFS NUCLEAR POWER PLANT, LLC

EXELON GENERATION COMPANY, LLC

DOCKET NO. 50-317

Amendment No. 313  
Renewed License No. DPR-53

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Exelon Generation Company, LLC (Exelon, the licensee), dated July 10, 2015, as supplemented by letter dated April 30, 2015, 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-53 is hereby amended to read as follows:

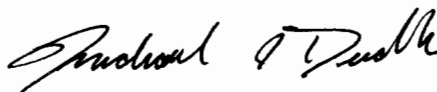
Enclosure 1

2. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 313, are hereby incorporated into this license. The licensee 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 within 120 days.

FOR THE NUCLEAR REGULATORY COMMISSION



Michael I. Dudek, Acting Chief  
Plant Licensing Branch I-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the License and  
Technical Specifications

Date of Issuance: July 30, 2015



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

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT 2

CALVERT CLIFFS NUCLEAR POWER PLANT, LLC

EXELON GENERATION COMPANY, LLC

DOCKET NO. 50-318

Amendment No. 291  
Renewed License No. DPR-69

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Exelon Generation Company, LLC (Exelon, the licensee), dated July 10, 2015, as supplemented by letter dated April 30, 2015, 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-69 is hereby amended to read as follows:

Enclosure 2



2. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 291, are hereby incorporated into this license. The licensee 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 within 120 days.

FOR THE NUCLEAR REGULATORY COMMISSION



Michael I. Dudek, Acting Chief  
Plant Licensing Branch I-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the License and  
Technical Specifications

Date of Issuance: July 30, 2015

ATTACHMENT TO LICENSE AMENDMENTS

AMENDMENT NO. 313 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-53

AMENDMENT NO. 291 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-69

DOCKET NOS. 50-317 AND 50-318

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

Remove Page

3

Insert Page

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

3.4.6-3  
3.4.7-3  
3.4.8-2  
3.5.2-2  
3.5.2-3  
3.6.6-3  
3.6.6-4  
3.9.4-3  
3.9.4-4  
3.9.5-4

Insert Pages

3.4.6-3  
3.4.7-3  
3.4.8-2  
3.5.2-2  
3.5.2-3  
3.6.6-3  
3.6.6-4  
3.9.4-3  
3.9.4-4  
3.9.5-4

- (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, and special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and
- (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 license is deemed to contain and is subject to the conditions set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act, and the rules, regulations, and orders of the Commission, now and hereafter applicable; and is subject to the additional conditions specified and incorporated below:

(1) Maximum Power Level

Exelon Generation is authorized to operate the facility at reactor steady-state core power levels not in excess of 2737 megawatts-thermal in accordance with the conditions specified herein.

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 291 are hereby incorporated into this license. The licensee shall operate the facility in accordance with the Technical Specifications.

- (a) For Surveillance Requirements (SRs) that are new, in Amendment 201 to Facility Operating License No. DPR-69, the first performance is due at the end of the first surveillance interval that begins at implementation of Amendment 201. For SRs that existed prior to Amendment 201, including SRs with modified acceptance criteria and SRs whose frequency of performance is being extended, the first performance is due at the end of the first surveillance interval that begins on the date the Surveillance was last performed prior to implementation of Amendment 201.

(3) Less Than Four Pump Operation

The licensee shall not operate the reactor at power levels in excess of five (5) percent of rated thermal power with less than four (4) reactor coolant pumps in operation. This condition shall remain in effect until the licensee has submitted safety analyses for less than four pump operation, and approval for such operation has been granted by the Commission by amendment of this license.

(4) Environmental Monitoring Program

If harmful effects or evidence of irreversible damage are detected by the biological monitoring program, hydrological monitoring program, and the

- (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, and special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and
- (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 license is deemed to contain and is subject to the conditions set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act, and the rules, regulations, and orders of the Commission, now or hereafter applicable; and is subject to the additional conditions specified and incorporated below:

(1) Maximum Power Level

Exelon Generation is authorized to operate the facility at steady-state reactor core power levels not in excess of 2737 megawatts-thermal in accordance with the conditions specified herein.

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 313, are hereby incorporated into this license. Exelon Generation shall operate the facility in accordance with the Technical Specifications.

- (a) For Surveillance Requirements (SRs) that are new, in Amendment 227 to Facility Operating License No. DPR-53, the first performance is due at the end of the first surveillance interval that begins at implementation of Amendment 227. For SRs that existed prior to Amendment 227, including SRs with modified acceptance criteria and SRs whose frequency of performance is being extended, the first performance is due at the end of the first surveillance interval that begins on the date the Surveillance was last performed prior to implementation of Amendment 227.

(3) Additional Conditions

The Additional Conditions contained in Appendix C as revised through Amendment No. 305 are hereby incorporated into this license. Exelon Generation shall operate the facility in accordance with the Additional Conditions.

(4) Secondary Water Chemistry Monitoring Program

Exelon Generation shall implement a secondary water chemistry monitoring program to inhibit steam generator tube degradation. This program shall include:

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.6.1	Verify one RCS or SDC loop is in operation.	12 hours
SR 3.4.6.2	Verify secondary side water level in required steam generator(s) is > -50 inches.	12 hours
SR 3.4.6.3	Verify correct breaker alignment and indicated power available to the required loop components that are not in operation.	7 days
SR 3.4.6.4	<p>----- NOTE -----            Not required to be performed until 12 hours after entering MODE 4.            -----</p> <p>Verify required SDC train locations susceptible to gas accumulation are sufficiently filled with water.</p>	31 days

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.7.1	Verify one SDC loop is in operation.	12 hours
SR 3.4.7.2	Verify required SG secondary side water level is > -50 inches.	12 hours
SR 3.4.7.3	Verify correct breaker alignment and indicated power available to the required SDC loop components that are not in operation.	7 days
SR 3.4.7.4	Verify required SDC train locations susceptible to gas accumulation are sufficiently filled with water.	31 days

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Required SDC loops inoperable.  <u>OR</u>  No SDC loop in operation.	B.1 Suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet the SDM of LCO 3.1.1.	Immediately
	<u>AND</u>  B.2 Initiate action to restore one SDC loop to OPERABLE status and operation.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.4.8.1 Verify one SDC loop is in operation.	12 hours
SR 3.4.8.2 Verify correct breaker alignment and indicated power available to the required SDC loop components that are not in operation.	7 days
SR 3.4.8.3 Verify SDC train locations susceptible to gas accumulation are sufficiently filled with water.	31 days

**SURVEILLANCE REQUIREMENTS**

SURVEILLANCE		FREQUENCY												
SR 3.5.2.1	<p>Verify the following valves are in the listed position with power to the valve operator removed.</p> <table border="1"> <thead> <tr> <th><u>Valve Number</u></th> <th><u>Position</u></th> <th><u>Function</u></th> </tr> </thead> <tbody> <tr> <td>MOV-659</td> <td>Open</td> <td>Mini-flow Isolation</td> </tr> <tr> <td>MOV-660</td> <td>Open</td> <td>Mini-flow Isolation</td> </tr> <tr> <td>CV-306</td> <td>Open</td> <td>Low Pressure Safety Injection Flow Control</td> </tr> </tbody> </table>	<u>Valve Number</u>	<u>Position</u>	<u>Function</u>	MOV-659	Open	Mini-flow Isolation	MOV-660	Open	Mini-flow Isolation	CV-306	Open	Low Pressure Safety Injection Flow Control	12 hours
<u>Valve Number</u>	<u>Position</u>	<u>Function</u>												
MOV-659	Open	Mini-flow Isolation												
MOV-660	Open	Mini-flow Isolation												
CV-306	Open	Low Pressure Safety Injection Flow Control												
SR 3.5.2.2	<p>-----NOTE ----- Not required to be met for system vent flow paths opened under administrative control. -----</p> <p>Verify each ECCS 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.</p>	31 days												
SR 3.5.2.3	Verify each high pressure safety injection - and low pressure safety injection pump's developed head at the test flow point is greater than or equal to the required developed head.	In accordance with the Inservice Testing Program												
SR 3.5.2.4	Deleted													



SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.5.2.5	Verify each ECCS automatic valve that is not locked, sealed, or otherwise secured in position, in the flow path actuates to the correct position on an actual or simulated actuation signal.	24 months
SR 3.5.2.6	Verify each ECCS pump starts automatically on an actual or simulated actuation signal.	24 months
SR 3.5.2.7	Verify each low pressure safety injection pump stops on an actual or simulated actuation signal.	24 months
SR 3.5.2.8	Verify, by visual inspection, each ECCS train containment sump suction inlet is not restricted by debris and the suction inlet strainers show no evidence of structural distress or abnormal corrosion.	24 months
SR 3.5.2.9	Verify the Shutdown Cooling System open-permissive interlock prevents the Shutdown Cooling System suction isolation valves from being opened with a simulated or actual Reactor Coolant System pressure signal of $\geq 309$ psia.	24 months
SR 3.5.2.10	Verify ECCS locations susceptible to gas accumulation are sufficiently filled with water.	31 days

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.6.6.1 ----- NOTE -----                      Not required to be met for system vent flow paths opened under administrative control.                      -----</p> <p>Verify each containment spray 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.</p>	31 days
<p>SR 3.6.6.2 Operate each containment cooling train fan unit for <math>\geq 15</math> minutes.</p>	31 days
<p>SR 3.6.6.3 Verify each containment cooling train cooling water flow rate is <math>\geq 2000</math> gpm to each fan cooler.</p>	31 days
<p>SR 3.6.6.4 Verify each containment spray pump's developed head at the flow test point is greater than or equal to the required developed head.</p>	In accordance with the Inservice Testing Program
<p>SR 3.6.6.5 Verify each automatic containment spray valve in the flow path that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.</p>	24 months
<p>SR 3.6.6.6 Verify each containment spray pump starts automatically on an actual or simulated actuation signal.</p>	24 months

Containment Spray and Cooling Systems  
3.6.6

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.6.7	Verify each containment cooling train starts automatically on an actual or simulated actuation signal.	24 months
SR 3.6.6.8	Verify each spray nozzle is unobstructed.	Following maintenance that could result in nozzle blockage
SR 3.6.6.9	Verify containment spray locations susceptible to gas accumulation are sufficiently filled with water.	31 days

SDC and Coolant Circulation-High Water Level  
3.9.4

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (Continued)	A.5 Close one door in each air lock.	4 hours
	<u>AND</u>	
	A.6.1 Close each penetration providing direct access from the containment atmosphere to the outside atmosphere with a manual or automatic isolation valve, blind flange, or equivalent.	4 hours
	<u>OR</u>	
	A.6.2 Verify each penetration is capable of being closed by an OPERABLE Containment Purge Valve Isolation System.	4 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.9.4.1 Verify one SDC loop is in operation and circulating reactor coolant at a flow rate of $\geq 1500$ gpm.	12 hours

SDC and Coolant Circulation-High Water Level  
3.9.4

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.9.4.2    Verify required SDC loop locations susceptible to gas accumulation are sufficiently filled with water.	31 days

SDC and Coolant Circulation-Low Water Level  
3.9.5

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. (Continued)	B.5.2 Verify each penetration is capable of being closed by an OPERABLE Containment Purge Valve Isolation System.	4 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.9.5.1 Verify required SDC loops are OPERABLE and one SDC loop is in operation.	12 hours
SR 3.9.5.2 Verify SDC loop in operation is circulating reactor coolant at a flow rate of $\geq 1500$ gpm.	12 hours
SR 3.9.5.3 Verify correct breaker alignment and indicated power available to the required SDC loop components that are not in operation.	7 days
SR 3.9.5.4 Verify SDC loop locations susceptible to gas accumulation are sufficiently filled with water.	31 days



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

R. E. GINNA NUCLEAR POWER PLANT, LLC

EXELON GENERATION COMPANY, LLC

DOCKET NO. 50-244

R. E. GINNA NUCLEAR POWER PLANT

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 118  
Renewed License No. DPR-18

1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:
  - A. The application for amendment by Exelon Generation Company, LLC (Exelon, the licensee), dated July 10, 2015, as supplemented by letter dated April 30, 2015, 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-18 is hereby amended to read as follows:

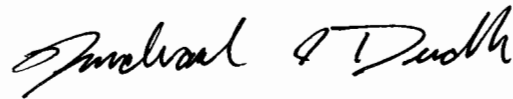
Enclosure 3

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 118 are hereby incorporated in the renewed license. The licensee 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 within 120 days.

FOR THE NUCLEAR REGULATORY COMMISSION



Michael I. Dudek, Acting Chief  
Plant Licensing Branch I-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the License and Technical  
Specifications

Date of Issuance: July 30, 2015



ATTACHMENT TO LICENSE AMENDMENTS

AMENDMENT NO. 118 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-18

DOCKET NO. 50-244

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

Remove Page

3

Insert Page

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

3.4.6-1  
3.4.6-2  
3.4.7-1  
3.4.7-2  
3.4.8-1  
3.4.8-2  
3.5.2-1  
3.5.2-2  
3.5.2-3  
3.5.3-1  
3.5.3-2  
3.6.6-1  
3.6.6-2  
3.6.6-3  
3.9.4-1  
3.9.4-2  
3.9.5-1  
3.9.5-2

Insert Pages

3.4.6-1  
3.4.6-2  
3.4.7-1  
3.4.7-2  
3.4.8-1  
3.4.8-2  
3.5.2-1  
3.5.2-2  
3.5.2-3  
3.5.3-1  
3.5.3-2  
3.6.6-1  
3.6.6-2  
3.6.6-3  
3.9.4-1  
3.9.4-2  
3.9.5-1  
3.9.5-2

- (b) Exelon Generation pursuant to the Act and 10 CFR Part 70, to possess and use four (4) mixed oxide fuel assemblies in accordance with the RG&E's application dated December 14, 1979 (transmitted by letter dated December 20, 1979), as supplemented February 20, 1980, and March 5, 1980;
  - (3) 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 calibration or associated with radioactive apparatus or components; and
  - (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 license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Part 20. Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; and is subject to all applicable provisions of the Act and rules, regulations and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified below:
- (1) Maximum Power Level  
Exelon Generation is authorized to operate the facility at steady-state power levels up to a maximum of 1775 megawatts (thermal).
  - (2) Technical Specifications  
The Technical Specifications contained in Appendix A, as revised through Amendment No. 118 are hereby incorporated in the renewed license. Exelon Generation shall operate the facility in accordance with the Technical Specifications.
  - (3) Fire Protection
    - (a) Exelon Generation shall implement and maintain in effect all fire protection features described in the licensee's submittals referenced in and as approved or modified by the NRC's Fire Protection Safety Evaluation (SE) dated February 14, 1979, and SE supplements dated December 17, 1980, February 6, 1981, June 22, 1981, February 27, 1985, and March 21, 1985 or configurations subsequently approved by the NRC, subject to provision (b) below.

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.6 RCS Loops - MODE 4

LCO 3.4.6 Two loops consisting of any combination of RCS loops and residual heat removal (RHR) loops shall be OPERABLE, and one loop shall be in operation.

-----  
- NOTE -  
-----

1. All reactor coolant pumps (RCPs) and RHR pumps may be de-energized for  $\leq 1$  hour per 8 hour period provided:
    - a. No operations are permitted that would cause introduction of coolant into the RCS with boron concentration less than required to meet the SDM of LCO 3.1.1; and
    - b. Core outlet temperature is maintained at least 10°F below saturation temperature.
  2. No RCP shall be started with any RCS cold leg temperature less than or equal to the LTOP enable temperature specified in the PTLR unless:
    - a. The secondary side water temperature of each steam generator (SG) is  $\leq 50^\circ\text{F}$  above each of the RCS cold leg temperatures; or
    - b. The pressurizer water volume is  $< 324$  cubic feet (38% level).
- 

APPLICABILITY: MODE 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One RCS loop inoperable.  <u>AND</u>  Two RHR loops inoperable.	A.1 Initiate action to restore a second loop to OPERABLE status.	Immediately

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>B. One RHR loop inoperable.</p> <p><u>AND</u></p> <p>Two RCS loops inoperable.</p>	<p>----- - NOTE - Required Action B.1 is not applicable if all RCS and RHR loops are inoperable and Condition C is entered. -----</p> <p>B.1 Be in MODE 5.</p>	24 hours
<p>C. All RCS and RHR loops inoperable.</p> <p><u>OR</u></p> <p>No RCS or RHR loop in operation.</p>	<p>C.1 Suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet the SDM of LCO 3.1.1.</p> <p><u>AND</u></p> <p>C.2 Initiate action to restore one loop to OPERABLE status and operation.</p>	<p>Immediately</p> <p>Immediately</p>

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.4.6.1      Verify one RHR or RCS loop is in operation.	12 hours
SR 3.4.6.2      Verify SG secondary side water level is $\geq$ 16% for each required RCS loop.	12 hours
SR 3.4.6.3      Verify correct breaker alignment and indicated power are available to the required pump that is not in operation.	7 days
<p>SR 3.4.6.4      -----NOTE-----</p> <p>Not required to be performed until 12 hours after entering MODE 4.</p> <p>-----</p> <p>Verify required RHR loop locations susceptible to gas accumulation are sufficiently filled with water.</p>	31 days

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.7 RCS Loops - MODE 5, Loops Filled

LCO 3.4.7 One residual heat removal (RHR) loop shall be OPERABLE and in operation, and either:

- a. One additional RHR loop shall be OPERABLE; or
- b. The secondary side water level of at least one steam generator (SG) shall be  $\geq 16\%$ .

-----  
- NOTE -

- 1. The RHR pump of the loop in operation may be de-energized for  $\leq 1$  hour per 8 hour period provided:
    - a. No operations are permitted that would cause introduction of coolant into the RCS with boron concentration less than required to meet the SDM of LCO 3.1.1; and
    - b. Core outlet temperature is maintained at least  $10^{\circ}\text{F}$  below saturation temperature.
  - 2. One required RHR loop may be inoperable for  $\leq 2$  hours for surveillance testing provided that the other RHR loop is OPERABLE and in operation.
  - 3. No reactor coolant pump shall be started with one or more RCS cold leg temperatures less than or equal to the LTOP enable temperature specified in the PTLR unless:
    - a. The secondary side water temperature of each SG is  $\leq 50^{\circ}\text{F}$  above each of the RCS cold leg temperatures; or
    - b. The pressurizer water volume is  $< 324$  cubic feet (38% level).
  - 4. All RHR loops may be removed from operation during planned heatup to MODE 4 when at least one RCS loop is in operation.
- 

APPLICABILITY: MODE 5 with RCS loops filled.

ACTIONS

CONDITION		REQUIRED ACTION	COMPLETION TIME
A.	One RHR loop inoperable.	A.1 Initiate action to restore a second RHR loop to OPERABLE status.	Immediately
	<u>AND</u> Both SGs secondary side water levels not within limits.	<u>OR</u> A.2 Initiate action to restore required SG secondary side water levels to within limits.	Immediately
B.	Both RHR loops inoperable.	B.1 Suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet the SDM of LCO 3.1.1.	Immediately
	<u>OR</u> No RHR loop in operation.	<u>AND</u> B.2 Initiate action to restore one RHR loop to OPERABLE status and operation.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.7.1	Verify one RHR loop is in operation.	12 hours
SR 3.4.7.2	Verify SG secondary side water level is $\geq 16\%$ in the required SG.	12 hours
SR 3.4.7.3	Verify correct breaker alignment and indicated power are available to the required RHR pump that is not in operation.	7 days
SR 3.4.7.4	Verify required RHR loop locations susceptible to gas accumulation are sufficiently filled with water.	31 days

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.8 RCS Loops - MODE 5, Loops Not Filled

LCO 3.4.8 Two residual heat removal (RHR) loops shall be OPERABLE and one RHR loop shall be in operation.

-----  
- NOTE -

1. All RHR pumps may be de-energized for  $\leq 15$  minutes when switching from one loop to another provided:
    - a. No operations are permitted that would cause introduction of coolant into the RCS with boron concentration less than required to meet the SDM of LCO 3.1.1; and
    - b. Core outlet temperature is maintained at least 10°F below saturation temperature; and
    - c. No draining operations to further reduce the RCS water volume are permitted.
  2. One RHR loop may be inoperable for  $\leq 2$  hours for surveillance testing provided that the other RHR loop is OPERABLE and in operation.
- 

APPLICABILITY: MODE 5 with RCS loops not filled.

ACTIONS

CONDITION		REQUIRED ACTION	COMPLETION TIME
A.	One RHR loop inoperable.	A.1 Initiate action to restore RHR loop to OPERABLE status.	Immediately

CONDITION		REQUIRED ACTION	COMPLETION TIME
B.	Both RHR loops inoperable.	B.1 Suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet the SDM of LCO 3.1.1.	Immediately
	<u>OR</u>  No RHR loop in operation.	<u>AND</u>  B.2 Initiate action to restore one RHR loop to OPERABLE status and operation.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.8.1	Verify one RHR loop is in operation.	12 hours
SR 3.4.8.2	Verify correct breaker alignment and indicated power are available to the RHR pump that is not in operation.	7 days
SR 3.4.8.3	Verify RHR loop locations susceptible to gas accumulation are sufficiently filled with water.	31 days



3.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

3.5.2 ECCS - MODES 1, 2, and 3

LCO 3.5.2 Two ECCS trains shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

- NOTE -

1. In MODE 3, both safety injection (SI) pump flow paths may be isolated by closing the isolation valves for up to 2 hours to perform pressure isolation valve testing per SR 3.4.14.1. Power may be restored to motor operated isolation valves 878B and 878D for up to 12 hours for the purpose of testing per SR 3.4.14.1 provided that power is restored to only one valve at a time.
2. Operation in MODE 3 with ECCS pumps declared inoperable pursuant to LCO 3.4.12, "Low Temperature Overpressure Protection (LTOP) System," is allowed for up to 4 hours or until the temperature of both RCS cold legs exceeds 375°F, whichever comes first.

ACTIONS

CONDITION		REQUIRED ACTION	COMPLETION TIME
A.	One train inoperable.  <u>AND</u>  At least 100% of the ECCS flow equivalent to a single OPERABLE ECCS train available.	A.1 Restore train to OPERABLE status.	72 hours
B.	Required Action and associated Completion Time not met.	B.1 Be in MODE 3.  <u>AND</u>  B.2 Be in MODE 4.	6 hours  12 hours
C.	Two trains inoperable.	C.1 Enter LCO 3.0.3	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY																																																
SR 3.5.2.1	Verify the following valves are in the listed position.	12 hours																																																
	<table border="1"> <thead> <tr> <th><u>Number</u></th> <th><u>Position</u></th> <th><u>Function</u></th> </tr> </thead> <tbody> <tr> <td>825A</td> <td>Open</td> <td>RWST Suction to SI Pumps</td> </tr> <tr> <td>825B</td> <td>Open</td> <td>RWST Suction to SI Pumps</td> </tr> <tr> <td>826A</td> <td>Closed</td> <td>BAST Suction to SI Pumps</td> </tr> <tr> <td>826B</td> <td>Closed</td> <td>BAST Suction to SI Pumps</td> </tr> <tr> <td>826C</td> <td>Closed</td> <td>BAST Suction to SI Pumps</td> </tr> <tr> <td>826D</td> <td>Closed</td> <td>BAST Suction to SI Pumps</td> </tr> <tr> <td>851A</td> <td>Open</td> <td>Sump B to RHR Pumps</td> </tr> <tr> <td>851B</td> <td>Open</td> <td>Sump B to RHR Pumps</td> </tr> <tr> <td>856</td> <td>Open</td> <td>RWST Suction to RHR Pumps</td> </tr> <tr> <td>878A</td> <td>Closed</td> <td>SI Injection to RCS Hot Leg</td> </tr> <tr> <td>878B</td> <td>Open</td> <td>SI Injection to RCS Cold Leg</td> </tr> <tr> <td>878C</td> <td>Closed</td> <td>SI Injection to RCS Hot Leg</td> </tr> <tr> <td>878D</td> <td>Open</td> <td>SI Injection to RCS Cold Leg</td> </tr> <tr> <td>896A</td> <td>Open</td> <td>RWST Suction to SI and Containment Spray</td> </tr> <tr> <td>896B</td> <td>Open</td> <td>RWST Suction to SI and Containment Spray</td> </tr> </tbody> </table>	<u>Number</u>	<u>Position</u>	<u>Function</u>	825A	Open	RWST Suction to SI Pumps	825B	Open	RWST Suction to SI Pumps	826A	Closed	BAST Suction to SI Pumps	826B	Closed	BAST Suction to SI Pumps	826C	Closed	BAST Suction to SI Pumps	826D	Closed	BAST Suction to SI Pumps	851A	Open	Sump B to RHR Pumps	851B	Open	Sump B to RHR Pumps	856	Open	RWST Suction to RHR Pumps	878A	Closed	SI Injection to RCS Hot Leg	878B	Open	SI Injection to RCS Cold Leg	878C	Closed	SI Injection to RCS Hot Leg	878D	Open	SI Injection to RCS Cold Leg	896A	Open	RWST Suction to SI and Containment Spray	896B	Open	RWST Suction to SI and Containment Spray	
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SR 3.5.2.2	<p>-----NOTE-----</p> <p>Not required to be met for system vent flow paths opened under administrative control.</p> <p>-----</p> <p>Verify each ECCS 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.</p>	31 days																																																

SURVEILLANCE		FREQUENCY
SR 3.5.2.3	Verify each breaker or key switch, as applicable, for each valve listed in SR 3.5.2.1, is in the correct position.	31 days
SR 3.5.2.4	Verify each ECCS pump's developed head at the test flow point is greater than or equal to the required developed head.	In accordance with the Inservice Testing Program
SR 3.5.2.5	Verify each ECCS automatic valve in the flow path that is not locked, sealed, or otherwise secured in position actuates to the correct position on an actual or simulated actuation signal.	24 months
SR 3.5.2.6	Verify each ECCS pump starts automatically on an actual or simulated actuation signal.	24 months
SR 3.5.2.7	Verify, by visual inspection, each RHR containment sump suction inlet is not restricted by debris and the containment sump screen shows no evidence of structural distress or abnormal corrosion.	24 months
SR 3.5.2.8	Verify ECCS locations susceptible to gas accumulation are sufficiently filled with water.	31 days

3.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

3.5.3 ECCS - MODE 4

LCO 3.5.3 One ECCS train shall be OPERABLE.

APPLICABILITY: MODE 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Required ECCS residual heat removal (RHR) subsystem inoperable.	A.1 Initiate action to restore required ECCS RHR subsystem to OPERABLE status.	Immediately
B. Required ECCS Safety Injection (SI) subsystem inoperable.	B.1 <p style="text-align: center;">-----                      - NOTE -                      LCO 3.0.4.b is not applicable.                      -----</p> Restore required ECCS SI subsystem to OPERABLE status.	1 hour
C. Required Action and associated Completion Time of Condition B not met.	C.1 Be in MODE 5.	24 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.5.3.1</p> <p style="text-align: center;">- NOTE -</p> <p>An RHR train may be considered OPERABLE during alignment and operation for decay heat removal, if capable of being manually realigned to the ECCS mode of operation.</p> <p>SR 3.5.2.4 and SR 3.5.2.8 are applicable for all equipment required to be OPERABLE.</p>	<p>In accordance with applicable SR</p>

3.6 CONTAINMENT SYSTEMS

3.6.6 Containment Spray (CS), Containment Recirculation Fan Cooler (CRFC), and NaOH Systems

LCO 3.6.6 Two CS trains, four CRFC units, and the NaOH system shall be OPERABLE.

-----  
- NOTE -  
-----

In MODE 4, both CS pumps may be in pull-stop for up to 2 hours for the performance of interlock and valve testing of motor operated valves (MOVs) 857A, 857B, and 857C. Power may also be restored to MOVs 896A and 896B, and the valves placed in the closed position, for up to 2 hours for the purpose of each test.  
-----

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION		REQUIRED ACTION		COMPLETION TIME
A.	One CS train inoperable.	A.1	Restore CS train to OPERABLE status.	72 hours
B.	NaOH system inoperable.	B.1	Restore NaOH System to OPERABLE status.	72 hours
C.	Required Action and associated Completion Time of Condition A or B not met.	C.1	Be in MODE 3.	6 hours
		C.2	Be in MODE 5.	84 hours
D.	One or two CRFC units inoperable.	D.1	Restore CRFC unit(s) to OPERABLE status.	7 days
E.	Required Action and associated Completion Time of Condition D not met.	E.1	Be in MODE 3.	6 hours
		E.2	Be in MODE 5.	36 hours

CONDITION	REQUIRED ACTION	COMPLETION TIME
F. Two CS trains inoperable.  <u>OR</u>  Three or more CRFC units inoperable.	F.1 Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.6.1 Perform SR 3.5.2.1 and SR 3.5.2.3 for valves 896A and 896B.	In accordance with applicable SRs.
SR 3.6.6.2 -----NOTE----- Not required to be met for system vent flow paths opened under administrative control.  Verify each CS 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.	31 days
SR 3.6.6.3 Verify each NaOH System 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.	31 days
SR 3.6.6.4 Operate each CRFC unit for $\geq 15$ minutes.	31 days
SR 3.6.6.5 Verify cooling water flow through each CRFC unit.	31 days
SR 3.6.6.6 Verify each CS pump's developed head at the flow test point is greater than or equal to the required developed head.	In accordance with the Inservice Testing Program
SR 3.6.6.7 Verify NaOH System solution volume is $\geq 3000$ gal.	184 days
SR 3.6.6.8 Verify NaOH System tank NaOH solution concentration is $\geq 30\%$ and $\leq 35\%$ by weight.	184 days
SR 3.6.6.9 Perform required CRFC unit testing in accordance with the VFTP.	In accordance with the VFTP

SURVEILLANCE		FREQUENCY
SR 3.6.6.10	Verify each automatic CS valve in the flow path that is not locked, sealed, or otherwise secured in position actuates to the correct position on an actual or simulated actuation signal.	24 months
SR 3.6.6.11	Verify each CS pump starts automatically on an actual or simulated actuation signal.	24 months
SR 3.6.6.12	Verify each CRFC unit starts automatically on an actual or simulated actuation signal.	24 months
SR 3.6.6.13	Verify each automatic NaOH System valve in the flow path that is not locked, sealed, or otherwise secured in position actuates to the correct position on an actual or simulated actuation signal.	24 months
SR 3.6.6.14	Verify spray additive flow through each eductor path.	5 years
SR 3.6.6.15	Verify each spray nozzle is unobstructed.	Following maintenance which could result in nozzle blockage
SR 3.6.6.16	Verify CS locations susceptible to gas accumulation are sufficiently filled with water.	31 days



3.9 REFUELING OPERATIONS

3.9.4 Residual Heat Removal (RHR) and Coolant Circulation - Water Level  $\geq$  23 Ft

LCO 3.9.4 One RHR loop shall be OPERABLE and in operation.

-----  
- NOTE -  
-----

The required RHR loop may be removed from operation for  $\leq$  1 hour per 8 hour period, provided no operations are permitted that would cause introduction of coolant into the Reactor Coolant System (RCS) with boron concentration less than that required to meet the minimum required boron concentration of LCO 3.9.1 .  
-----

APPLICABILITY: MODE 6 with the water level  $\geq$  23 ft above the top of reactor vessel flange.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. RHR loop requirements not met.	A.1 Suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet the boron concentration of LCO 3.9.1.	Immediately
	<u>AND</u>	
	A.2 Suspend loading irradiated fuel assemblies in the core.	Immediately
	<u>AND</u>	
	A.3 Initiate action to satisfy RHR loop requirements.	Immediately
	<u>AND</u>	

CONDITION	REQUIRED ACTION	COMPLETION TIME
	A.4 Close all containment penetrations providing direct access from containment atmosphere to outside atmosphere.	4 hours

## SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.9.4.1	Verify one RHR loop is in operation and circulating reactor coolant.	12 hours
SR 3.9.4.2	Verify required RHR loop locations susceptible to gas accumulation are sufficiently filled with water.	31 days

3.9 REFUELING OPERATIONS

3.9.5 Residual Heat Removal (RHR) and Coolant Circulation - Water Level < 23 Ft

LCO 3.9.5 Two RHR loops shall be OPERABLE, and one RHR loop shall be in operation.

APPLICABILITY: MODE 6 with the water level < 23 ft above the top of reactor vessel flange.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Less than the required number of RHR loops OPERABLE.	A.1 Initiate action to restore RHR loop(s) to OPERABLE status.	Immediately
	<u>OR</u> A.2 Initiate action to establish $\geq 23$ ft of water above the top of reactor vessel flange.	Immediately
B. No RHR loop in operation.	B.1 Suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet the boron concentration of LCO 3.9.1.	Immediately
	<u>AND</u> B.2 Initiate action to restore one RHR loop to operation.	Immediately
	<u>AND</u> B.3 Close all containment penetrations providing direct access from containment to outside atmosphere.	4 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.9.5.1	Verify one RHR loop is in operation and circulating reactor coolant.	12 hours
SR 3.9.5.2	Verify correct breaker alignment and indicated power available to the required RHR pump that is not in operation.	7 days
SR 3.9.5.3	Verify RHR loop locations susceptible to gas accumulation are sufficiently filled with water.	31 days



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

NINE MILE POINT NUCLEAR STATION, LLC

EXELON GENERATION COMPANY, LLC

DOCKET NO. 50-410

NINE MILE POINT NUCLEAR STATION, UNIT 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 150  
Renewed License No. NPF-69

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Exelon Generation Company, LLC (Exelon, the licensee), dated July 10, 2015, as supplemented by letters dated April 30, 2015, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.2 of Renewed Facility Operating License No. NPF-69 is hereby amended to read as follows:

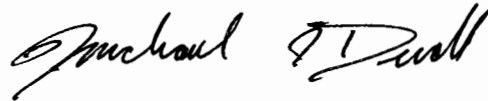
Enclosure 4

(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, as revised through Amendment No. 150, are hereby incorporated into this license. Exelon Generation Company, LLC shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 120 days.

FOR THE NUCLEAR REGULATORY COMMISSION



Michael I. Dudek, Acting Chief  
Plant Licensing Branch I-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the License and Technical  
Specifications

Date of Issuance: July 30, 2015

ATTACHMENT TO LICENSE AMENDMENTS

AMENDMENT NO. 150 TO RENEWED FACILITY OPERATING LICENSE NO. NPF-69

DOCKET NO. 50-410

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

Remove Page

4

Insert Page

4

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

Remove Pages

3.4.9-3  
3.4.10-2  
3.5.1-4  
3.5.2-3  
3.5.3-2  
3.6.2.3-2  
3.6.2.4-2  
3.9.8-3  
3.9.9-3

Insert Pages

3.4.9-3  
3.4.10-2  
3.5.1-4  
3.5.2-3  
3.5.3-2  
3.6.2.3-2  
3.6.2.4-2  
3.9.8-3  
3.9.9-3

(1) Maximum Power Level

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

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, as revised through Amendment No. 150 are hereby incorporated into this license. Exelon Generation shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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

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

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

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

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



SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.4.9.1</p> <p>----- NOTE -----                      Not required to be met until 2 hours after reactor steam dome pressure is less than the RHR cut-in permissive pressure.                      -----</p> <p>Verify one RHR shutdown cooling subsystem or recirculation pump is operating.</p>	<p>12 hours</p>
<p>SR 3.4.9.2</p> <p>----- NOTE -----                      Not required to be performed until 12 hours after reactor steam dome pressure is less than the RHR cut-in permissive pressure.                      -----</p> <p>Verify RHR shutdown cooling subsystem                      Locations susceptible to gas accumulation are sufficiently filled with water.</p>	<p>31 days</p>

RHR Shutdown Cooling System – Cold Shutdown  
3.4.10

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. No RHR shutdown cooling subsystem in operation.  <u>AND</u>  No recirculation pump in operation.	B.1 Verify reactor coolant circulating by an alternate method.	1 hour from discovery of no reactor coolant circulation  <u>AND</u> Once per 12 hours thereafter
	<u>AND</u>  B.2 Monitor reactor coolant temperature and pressure.	Once per hour

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.4.10.1 Verify one RHR shutdown cooling subsystem or recirculation pump is operating.	12 hours
SR 3.4.10.2 Verify RHR shutdown cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water.	31 days

**SURVEILLANCE REQUIREMENTS**

SURVEILLANCE		FREQUENCY
SR 3.5.1.1	Verify, for each ECCS injection/spray subsystem, locations susceptible to gas accumulation are sufficiently filled with water.	31 days
SR 3.5.1.2	<p>----- NOTE -----                      Low pressure coolant injection (LPCI) subsystems may be considered OPERABLE during alignment and operation for decay heat removal with reactor steam dome pressure less than the residual heat removal cut-in permissive pressure in MODE 3, if capable of being manually realigned and not otherwise inoperable.</p> <p>----- NOTE -----                      Not required to be met for system vent paths opened under administrative control.</p> <p>-----</p> Verify each ECCS injection/spray subsystem 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.	31 days
SR 3.5.1.3	Verify: <ol style="list-style-type: none"> <li>a. For each ADS nitrogen receiver discharge header, the pressure is <math>\geq 160</math> psig; and</li> <li>b. For each ADS nitrogen receiver tank, the pressure is <math>\geq 334</math> psig.</li> </ol>	31 days

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.5.2.2	<p>Verify, for the required High Pressure Core Spray (HPCS) System, the:</p> <p>a. Suppression pool water level is <math>\geq 195</math> ft; or</p> <p>b. Condensate storage tank B water level is <math>\geq 26.9</math> ft.</p>	12 hours
SR 3.5.2.3	<p>Verify, for each required ECCS injection/spray subsystem, locations susceptible to gas accumulation are sufficiently filled with water.</p>	31 days
SR 3.5.2.4	<p>-----NOTE----- One low pressure coolant injection (LPCI) subsystem may be considered OPERABLE during alignment and operation for decay heat removal, if capable of being manually realigned and not otherwise inoperable. -----</p> <p>-----NOTE----- Not required to be met for system vent flow paths opened under administrative control. -----</p> <p>Verify each required ECCS injection/spray subsystem 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.</p>	31 days

(continued)

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.5.3.1	Verify the RCIC System locations susceptible to gas accumulations are sufficiently filled with water.	31 days
SR 3.5.3.2	<p>-----NOTE----- Not required to be met for system vent flow paths opened under administrative control. -----</p> <p>Verify each RCIC System 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.</p>	31 days
SR 3.5.3.3	<p>----- NOTE ----- Not required to be performed until 12 hours after reactor steam pressure and flow are adequate to perform the test. -----</p> <p>Verify, with reactor pressure <math>\leq 1035</math> psig and <math>\geq 935</math> psig, the RCIC pump can develop a flow rate <math>\geq 600</math> gpm against a system head corresponding to reactor pressure.</p>	92 days
SR 3.5.3.4	<p>----- NOTE ----- Not required to be performed until 12 hours after reactor steam pressure and flow are adequate to perform the test. -----</p> <p>Verify, with reactor pressure <math>\leq 165</math> psig, the RCIC pump can develop a flow rate <math>\geq 600</math> gpm against a system head corresponding to reactor pressure.</p>	24 months

(continued)

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.2.3.1	Verify each RHR suppression pool cooling subsystem manual and power operated valve in the flow path that is not locked, sealed, or otherwise secured in position, is in the correct position or can be aligned to the correct position.	31 days
SR 3.6.2.3.2	Verify each required RHR pump develops a flow rate $\geq 7450$ gpm through the associated heat exchanger while operating in the suppression pool cooling mode.	In accordance with the Inservice Testing Program
SR 3.6.2.3.3	Verify RHR suppression pool cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water	31 days

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.2.4.1	Verify each RHR suppression pool spray subsystem manual and power operated valve in the flow path that is not locked, sealed, or otherwise secured in position, is in the correct position or can be aligned to the correct position.	31 days
SR 3.6.2.4.2	Verify each required RHR pump develops a flow rate $\geq$ 450 gpm while operating in the suppression pool spray mode.	In accordance with the Inservice Testing Program
SR 3.6.2.4.3	Verify RHR suppression pool spray subsystem locations susceptible to gas accumulation are sufficiently filled with water	31 days

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.9.8.1	Verify one RHR shutdown cooling subsystem is operating.	12 hours
SR 3.9.8.2	Verify required RHR shutdown cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water	31 days



SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.9.9.1	Verify one RHR shutdown cooling subsystem is operating.	12 hours
SR 3.9.9.2	Verify RHR shutdown cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water	31 days



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO

AMENDMENT NO. 313 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-53,

AMENDMENT NO. 291 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-69,

AMENDMENT NO. 118 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-18,

AMENDMENT NO. 150 TO RENEWED FACILITY OPERATING LICENSE NO. NPF-69

EXELON GENERATION COMPANY, LLC

CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NOS. 1 AND 2

R. E. GINNA NUCLEAR POWER PLANT

NINE MILE POINT NUCLEAR STATION, UNIT NO. 2

DOCKET NOS. 50-317, 50-318, 50-244, AND 50-410

1.0 INTRODUCTION

By application dated July 10, 2014 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML14191A255), as supplemented by letter dated April 30, 2015 (ADAMS Accession No. ML15120A284), Exelon Generation Company, LLC (the licensee), requested changes to the Technical Specifications (TSs) for Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2 (CCNPP), R.E. Ginna Nuclear Power Plant (Ginna), and Nine Mile Point Nuclear Station, Unit No. 2 (NMP2). The supplement dated April 30, 2015, provided additional information that clarified the application, did not expand the scope of the application as originally noticed, and did not change the staff's original proposed no significant hazards consideration determination as published in the *Federal Register* (FR) on May 12, 2015 (80 FR 27197). Specifically, the licensee requested to adopt U.S. Nuclear Regulatory Commission (NRC)-approved Technical Specifications Task Force (TSTF) Standard Technical Specifications (STS) Change Traveler TSTF-523, Revision 2 (TSTF-523), "Generic Letter [GL] 2008-01, Managing Gas Accumulation," (ADAMS Accession No. ML13053A075) dated February 21, 2013. The availability of this TS improvement was announced in the FR on January 15, 2014 (79 FR 2700), as part of the consolidated line item improvement process.

The proposed changes for CCNPP would add new Surveillance Requirements (SRs) related to gas accumulation for the shutdown cooling (SDC) system, the emergency core cooling system (ECCS), and the containment spray (CS) system. The proposed changes for Ginna would add new SRs related to gas accumulation for the residual heat removal (RHR) system, the ECCS, and the CS system. The proposed changes for NMP2 would revise SRs related to gas accumulation for the ECCS, and reactor core isolation cooling (RCIC) system, and would add new SRs related to gas accumulation for the RHR system. The proposed changes to the TS bases for each plant were included in the application for informational purposes.

The licensee stated that it has reviewed the information contained in the model safety evaluation dated December 23, 2013 (ADAMS Accession No. ML13255A169), and the license amendment request (LAR) is consistent with NRC-approved TSTF-523.

## 2.0 REGULATORY EVALUATION

### 2.1 Background

Gas accumulation in reactor systems can result in water hammer, pump cavitation, and pumping of non-condensable gas into the reactor vessel. These effects may result in the subject system being unable to perform its specified safety function. The NRC issued GL 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems," in January 2008 to address the issue of gas accumulation in the ECCS, decay heat removal (DHR), and CS systems (ADAMS Accession No. ML072910759). The industry and NRC staff agreed that a change to the STS and plant-specific TS would be necessary to address some issues discussed in GL 2008-01. The TSTF-523 contains changes to the TS SRs and TS Bases to address some of the concerns in GL 2008-01. The licensee proposed amending the CCNPP, Ginna, and NMP2 TSs using a plant-specific adoption of the TSTF-523 changes.

### 2.2 Technical Specification Changes

The proposed changes for CCNPP include revisions to SRs 3.5.2.2 and 3.6.6.1, and the addition of new SRs 3.4.6.4, 3.4.7.4, 3.4.8.3, 3.5.2.10, 3.6.6.9, 3.9.4.2, and 3.9.5.4 to TS 3.4.6, "RCS Loops – MODE 4," TS 3.4.7, "RCS Loops - MODE 5, Loops Filled," TS 3.4.8, "RCS Loops - MODE 5, Loops Not Filled," TS 3.5.2, "ECCS - Operating," TS 3.6.6, "Containment Spray and Cooling Systems," TS 3.9.4, "SDC and Coolant Circulation – High Water Level," and TS 3.9.5, "SDC and Coolant Circulation – Low Water Level," respectively.

The proposed changes for Ginna include revisions to SRs 3.5.2.2, 3.5.3.1, 3.6.6.2, and the addition of new SRs 3.4.6.4, 3.4.7.4, 3.4.8.3, 3.5.2.8, 3.6.6.16, 3.9.4.2, and 3.9.5.3 to TS 3.4.6, "RCS Loops - MODE 4," TS 3.4.7, "RCS Loops - MODE 5, Loops Filled," TS 3.4.8, "RCS Loops MODE 5, Loops Not Filled," TS 3.5.2, "ECCS – MODES 1, 2, and 3," TS 3.5.3, "ECCS – MODE 4," TS 3.6.6, "CS, CRFC, and NaOH Systems," TS 3.9.4, "RHR and Coolant Circulation – Water Level  $\geq$  23 Ft," and TS 3.9.5, "RHR and Coolant Circulation – Water Level  $<$  23 Ft," respectively.

The proposed changes for NMP2 include revisions to SRs 3.5.1.1, 3.5.1.2, 3.5.2.3, 3.5.2.4, 3.5.3.1, and 3.5.3.2, and the addition of new SRs 3.4.9.2, 3.4.10.2, 3.6.2.3.3, 3.6.2.4.3, 3.9.8.2, and 3.9.9.2 to TS 3.4.9, "RHR Shutdown Cooling System – Hot Shutdown," TS 3.4.10, "RHR

Shutdown Cooling System – Cold Shutdown,” TS 3.5.1, “ECCS – Operating,” TS 3.5.2, “ECCS – Shutdown,” TS 3.5.3, “RCIC System,” TS 3.6.2.3, “RHR Suppression Pool Cooling,” TS 3.6.2.4, “RHR Suppression Pool Spray,” TS 3.9.8, “RHR – High Water Level,” and TS 3.9.9, “RHR – Low Water Level,” respectively.

### 2.3 Regulatory Review

The regulations in Appendix A to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, or similar plant-specific principal design criteria, provide design requirements. Appendix B to 10 CFR Part 50, the TSs, and the licensee quality assurance programs provide operating requirements. The regulatory requirements of Appendix A to 10 CFR Part 50 applicable to gas management in the subject systems include General Design Criteria (GDC) 1, 34, 35, 36, 37, 38, 39, and 40. Regulations in GDC 1 require that the subject systems be designed, fabricated, erected, and tested to quality standards. Also, GDC 34 requires an RHR system designed to maintain specified acceptable fuel design limits and to meet design conditions that are not exceeded if a single failure occurs and specified electrical power systems fail. Regulations in GDC 35, 36, and 37 require an ECCS design that meets performance, inspection, and testing requirements. Additionally, the regulations in 10 CFR 50.46 provide specified ECCS performance criteria. Regulations in GDC 38, 39, and 40 require a containment heat removal (CHR) system design that meets performance, inspection, and testing requirements.

The construction permits for CCNPP were issued by the Atomic Energy Commission (AEC) on July 7, 1969, and the operating licenses were issued on July 31, 1974, for Unit No. 1, and August 13, 1976, for Unit No. 2. The AEC published the final rule that added 10 CFR Part 50, Appendix A, “General Design Criteria for Nuclear Power Plants,” in the FR (36 FR 3255) on February 20, 1971, with the rule becoming effective on May 21, 1971. As stated in SECY-92-223, dated September 18, 1992, the Commission decided not to apply the Appendix A GDC to plants with construction permits issued prior to May 21, 1971. The CCNPP updated final safety analysis report (UFSAR), Revision 47, dated September 19, 2014, states that the plant was designed and constructed to meet the intent of the GDC published in July 1967. The plant’s GDC are discussed in the UFSAR, Appendix 1C, “AEC Proposed General Design Criteria for Nuclear Power Plants.”

Ginna was initially licensed to meet the design criteria from the Atomic Industrial Forum issued for comment by the AEC in 1967. As such, a review of the Ginna plant-specific requirements was performed against the requirements in the current Appendix A to 10 CFR Part 50. From this review, the NRC staff determined that the two sets of requirements are sufficiently similar, as related to the proposed change, so as not to warrant a separate discussion of the Ginna plant-specific requirements. Therefore, the remaining discussions pertaining to Appendix A to 10 CFR Part 50 in this safety evaluation are assumed to be applicable to the CCNPP and Ginna design criteria.

Quality assurance criteria provided in Appendix B to 10 CFR Part 50 applicable to gas management in the subject systems include: Criteria III, V, XI, XVI, and XVII. Criteria III and V require measures to ensure that applicable regulatory requirements and the design basis, as defined in 10 CFR 50.2, “Definitions,” and as specified in the license application, are correctly translated into controlled specifications, drawings, procedures, and instructions. Criterion XI requires a test program to ensure that the subject systems will perform satisfactorily while in service, and requires that test results shall be documented and evaluated to ensure that test

requirements have been satisfied. Criterion XVI requires measures to ensure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected. Criterion XVI requires that significant conditions adverse to quality are documented and reported to management. Criterion XVII requires maintenance of records of activities affecting quality.

The NRC's regulatory requirements related to the content of the TSs are contained in 10 CFR 50.36(c). As required by 10 CFR 50.36(c), the TSs must include items in the following categories: (1) safety limits, limiting safety systems settings, and limiting control settings; (2) LCOs [Limiting Conditions for Operation]; (3) SRs; (4) design features; and (5) administrative controls. SRs are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, facility operation will be within safety limits, and LCOs will be met. Typically, TS Section 5 requires that licensees establish, implement, and maintain written procedures covering the applicable procedures recommended in Appendix A to Regulatory Guide (RG) 1.33, "Quality Assurance Program Requirements (Operation)." Appendix A to RG 1.33 identifies instructions for filling and venting the ECCS and DHR systems, as well as for draining and refilling heat exchangers. STSs and most licensee TSs include SRs to verify that at least some of the subject systems' piping is filled with water.

The NRC's guidance for the format and content of licensee TSs, with respect to CCNPP, can be found in NUREG-1432, "Standard Technical Specifications Combustion Engineering Plants." The NRC's guidance for the format and content of licensee TSs, with respect to Ginna, can be found in NUREG-1431, "Standard Technical Specifications Westinghouse Plants." The NRC's guidance for the format and content of licensee TSs, with respect to NMP2, can be found in both NUREG-1433, "Standard Technical Specifications General Electric BWR/4 Plants," and NUREG-1434, "Standard Technical Specifications General Electric BWR/6 Plants."

The NRC staff recognizes that NUREG-0800, "Standard Review Plan [SRP] for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition," is not the regulatory basis of the proposed TSs changes, and that the licensee is not required to confirm that the SRP guidance is applicable to CCNPP, Ginna, or NMP2.

Regulatory guidance for the NRC staff's review of CHR systems, ECCS, and RHR systems is provided in the following revisions and sections of the SRP:

- Revision 3 of the SRP, Section 6.2.2, "Containment Heat Removal Systems," dated March 2007 (ADAMS Accession No. ML070160661) provides the procedures concerning the review of CHR systems under post-accident conditions to help ensure compliance with GDC 38, 39, and 40.
- Revision 3 of the SRP, Section 6.3, "Emergency Core Cooling System," dated March 2007 (ADAMS Accession No. ML070550068) provides the procedures concerning the review of ECCS to help ensure compliance with GDC 35, 36, and 37.
- Revision 5 of the SRP, Section 5.4.7, "Residual Heat Removal (RHR) System," dated May 2010 (ADAMS Accession Number ML100680577) provides the procedures concerning the review of RHR systems used to cool the Reactor Coolant System (RCS) during and following shutdown, to help ensure compliance with GDC 34.

### 3.0 TECHNICAL EVALUATION

#### 3.1 CCNPP TS Changes

The licensee proposed the following TS changes for CCNPP:

- (1) Add SR 3.4.6.4, which states,

Verify required SDC train locations susceptible to gas accumulation are sufficiently filled with water.

With a note that states:

Not required to be performed until 12 hours after entering MODE 4.

And a frequency of 31 days.

- (2) Add SR 3.4.7.4, which states,

Verify required SDC train locations susceptible to gas accumulation are sufficiently filled with water.

With a frequency of 31 days.

- (3) Add SR 3.4.8.3, which states,

Verify SDC train locations susceptible to gas accumulation are sufficiently filled with water.

With a frequency of 31 days.

- (4) Add a note to SR 3.5.2.2, which states,

Not required to be met for system vent flow paths opened under administrative control.

- (5) Add SR 3.5.2.10, which states,

Verify ECCS locations susceptible to gas accumulation are sufficiently filled with water.

With a frequency of 31 days.

- (6) Add a note to SR 3.6.6.1, which states,

Not required to be met for system vent flow paths opened under administrative control.

- (7) Add SR 3.6.6.9, which states,

Verify containment spray locations susceptible to gas accumulation are sufficiently filled with water.

With a frequency of 31 days.

- (8) Add SR 3.9.4.2, which states,

Verify required SDC loop locations susceptible to gas accumulation are sufficiently filled with water.

With a frequency of 31 days.

- (9) Add SR 3.9.5.4, which states,

Verify SDC loop locations susceptible to gas accumulation are sufficiently filled with water.

With a frequency of 31 days.

The NRC staff evaluated the licensee's proposed change for CCNPP against the applicable regulatory guidance in the STS, as modified by TSTF-523. The staff also compared the proposed changes to the existing SRs, as well as the regulatory requirements of 10 CFR 50.36. The staff determined that the proposed change adopted the TS format and content, to the extent practicable, contained in the changes made to NUREG-1432, "Standard Technical Specifications Combustion Engineering Plants," by TSTF-523.

### 3.2 Ginna TS Changes

The licensee proposed the following TS changes for Ginna:

- (1) Add SR 3.4.6.4, which states,

Verify required RHR loop locations susceptible to gas accumulation are sufficiently filled with water.

With a note that states:

Not required to be performed until 12 hours after entering MODE 4.

And a frequency of 31 days.

- (2) Add SR 3.4.7.4, which states,

Verify required RHR loop locations susceptible to gas accumulation are sufficiently filled with water.

With a frequency of 31 days.

- (3) Add SR 3.4.8.3, which states  

Verify RHR loop locations susceptible to gas accumulation are sufficiently filled with water.

With a frequency of 31 days.
- (4) Add a note to SR 3.5.2.2, which states,  

Not required to be met for system vent flow paths opened under administrative control.
- (5) Add SR 3.5.2.8, which states,  

Verify ECCS locations susceptible to gas accumulation are sufficiently filled with water.

With a frequency of 31 days.
- (6) Revise the language for SR 3.5.3.1, from  

SR 3.5.2.4 is applicable for all equipment required to be OPERABLE.

to:

SR 3.5.2.4 and SR 3.5.2.8 are applicable for all equipment required to be OPERABLE.
- (7) Add a note to SR 3.6.6.2, which states,  

Not required to be met for system vent flow paths opened under administrative control.
- (8) Add SR 3.6.6.16, which states,  

Verify CS locations susceptible to gas accumulation are sufficiently filled with water.

With a frequency of 31 days.
- (9) Add SR 3.9.4.2, which states,  

Verify required RHR loop locations susceptible to gas accumulation are sufficiently filled with water.

With a frequency of 31 days.
- (10) Add SR 3.9.5.3, which states,



Verify RHR loop locations susceptible to gas accumulation are sufficiently filled with water.

With a frequency of 31 days.

The NRC staff evaluated the licensee's proposed change for Ginna against the applicable regulatory guidance in the STS, as modified by TSTF-523. The staff also compared the proposed changes to the existing SRs, as well as the regulatory requirements of 10 CFR 50.36. The staff determined that the proposed changes adopted the TS format and content, to the extent practicable, contained in the changes made to NUREG-1431, "Standard Technical Specifications Westinghouse Plants," by TSTF-523.

### 3.3 NMP2 TS Changes

The licensee proposed the following TS changes for NMP2:

- (1) Add SR 3.4.9.2, which states,

Verify RHR shutdown cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water.

With a note that states:

Not required to be performed until 12 hours after reactor steam dome pressure is less than the RHR cut-in permissive pressure.

And a frequency of 31 days.

- (2) Add SR 3.4.10.2, which states,

Verify RHR shutdown cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water.

With a frequency of 31 days.

- (3) Revise the language for SR 3.5.1.1 from

Verify, for each ECCS injection/spray subsystem, the piping is filled with water from the pump discharge valve to the injection valve.

to:

Verify, for each ECCS injection/spray subsystem, locations susceptible to gas accumulation are sufficiently filled with water.

- (4) Add a note to SR 3.5.1.2, which states,

Not required to be met for system vent flow paths opened under administrative control.

- (5) Revise the language for SR 3.5.2.3 from

Verify, for each ECCS injection/spray subsystem, the piping is filled with water from the pump discharge valve to the injection valve.

to:

Verify, for each ECCS injection/spray subsystem, locations susceptible to gas accumulation are sufficiently filled with water.

- (6) Add a note to SR 3.5.2.4, which states,

Not required to be met for system vent flow paths opened under administrative control.

- (7) Revise the language for SR 3.5.3.1 from

Verify the RCIC System piping is filled with water from the pump discharge valve to the injection valve.

to:

Verify the RCIC system locations susceptible to gas accumulation are sufficiently filled with water.

- (8) Add a note to SR 3.5.3.2, which states,

Not required to be met for system vent flow paths opened under administrative control.

- (9) Add SR 3.6.2.3.3, which states,

Verify RHR suppression pool cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water.

With a frequency of 31 days.

- (10) Add SR 3.6.2.4.3, which states,

Verify RHR suppression pool cooling spray subsystem locations susceptible to gas accumulation are sufficiently filled with water.

With a frequency of 31 days.

- (11) Add SR 3.9.8.2, which states,

Verify required RHR shutdown cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water.

With a frequency of 31 days.

- (12) Add SR 3.9.9.2, which states,

Verify RHR shutdown cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water.

With a frequency of 31 days.

The NRC staff evaluated the licensee's proposed change for NMP2, against the applicable regulatory guidance in the STS, as modified by TSTF-523. The staff also compared the proposed changes to the existing SRs, as well as the regulatory requirements of 10 CFR 50.36. The staff determined that the proposed change adopted the TS format and content, to the extent practicable, contained in the changes made to NUREG-1433, "Standard Technical Specifications General Electric Plants BWR/4," by TSTF-523.

#### 3.4 Technical Evaluation Conclusions

The new language in the proposed SRs for CCNPP, Ginna, and NMP2 were developed using licensee responses to GL 2008-01, and the NRC discussion contained in Task Interface Agreement (TIA) 2008-03, "Emergency Core Cooling System (ECCS) Voiding Relative To Compliance With Surveillance Requirements (SR) 3.5.1.1, 3.5.2.3, and 3.5.3.1" (ADAMS Accession No. ML082560209). Several of the GL 2008-01 responses stated that licensees identified system locations that were susceptible to gas accumulation. In the TIA, the NRC stated that the intent of the TS SRs (which states "full of water") may be met if the licensee can establish that there is a reasonable expectation that the system in question will perform its specified safety function through an Operability Determination. Therefore, the phrase, "sufficiently filled with water" was recommended for the proposed TS changes. In the TS, "sufficiently filled with water" is understood to mean "sufficiently filled with water to support Operability." The regulation at 10 CFR 50.36(c)(3) states that one of the purposes of the SR is to verify that the LCO is met. Therefore, the NRC staff finds that the new SR language, "Verify the [system name] locations susceptible to gas accumulation are sufficiently filled with water," is acceptable since this language will allow the licensee to make a conclusion as to whether or not a system is Operable.

For NMP2, language is provided in the notes for SR 3.4.9.2 stating that the SR does not have to be performed until 12 hours after entering Mode 3 with reactor steam dome pressure less than the RHR cut-in permissive pressure. For CCNPP and Ginna, language is provided in the notes for SR 3.4.6.4 stating that the SR does not have to be performed until 12 hours after entering Mode 4. The NRC staff finds that the language provided for CCNPP, Ginna, and NMP2 is acceptable because the notes provide a limited time to perform the Surveillance after entering the Applicability of the LCO. As described in TSTF-523, Revision 2, during a rapid shutdown, there may be insufficient time to verify all susceptible locations in the system before entering the Applicability. A 12-hour limit to perform the surveillance requirement takes into account the time needed to perform these surveillance requirements in a controlled manner following a rapid shutdown. Also, under the STS usage rules (STS Section 1.4), the requirement to manage gas

accumulation is not affected. Licensees must have confidence that the SR can be met or the LCO must be declared not met.

For CCNPP, Ginna, and NMP2 the frequency for the proposed SRs is 31 days. As stated in TSTF-523, Revision 2, the 31-day frequency is based on the gradual nature of gas accumulation and the procedural controls governing system operation.

The language for the notes that allow the SRs to not be met for system vent flow paths opened under administrative control is necessary to allow the licensee to credit administratively controlled manual action to close the system vent flow path in order to maintain system Operability during system venting and performance of the proposed gas accumulation SR. Therefore, the NRC staff finds these notes are acceptable.

The NRC staff determined that the proposed changes to the SRs for CCNPP, Ginna, and NMP2 meet the regulatory requirements of 10 CFR 50.36 because they provide assurance that the necessary quality of systems and components will be maintained and that the LCO will be met. Therefore, the NRC staff finds the proposed changes for CCNPP, Ginna, and NMP2 acceptable.

#### 4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Maryland and New York State officials were notified of the proposed issuance of the amendments. The State officials had no comments.

#### 5.0 ENVIRONMENTAL CONSIDERATION

The amendments change requirements with respect to installation or use of facility components 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 May 12, 2015 (80 FR 27197). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

#### 6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) there is reasonable assurance that such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of these amendments will not be inimical to the common defense and security or to the health and safety of the public.

## 7.0 REFERENCES

1. Letter to NRC Document Control Desk, Calvert Cliffs Nuclear Power Plant, Units 1 & 2, Nine Mile Point Nuclear Station, Unit 2, and R. E. Ginna Nuclear Power Plant transmitting Application to Revise Technical Specifications to Adopt TSTF-523, "Generic Letter 2008-01, Managing Gas Accumulation," using the Consolidated Line Item Improvement Process. for to add SRs related to gas accumulation for the shutdown cooling system, the emergency core cooling system, and the containment spray system, 07/10/14 (ML14191A255).
2. Letter to NRC Document Control Desk, R. E. Ginna Nuclear Power Plant, transmitting Response to Request for Additional Information Regarding Proposed License Amendment to Revise Technical Specifications to Adopt TSTF-523, 04/30/15, (ML15120A284).
3. Letter to NRC Document Control Desk, Technical Specification Task Force, transmitting TSTF-523, Revision 2, "Generic Letter 2008-01, Managing Gas Accumulation," February 21, 2013, (ML13053A075).
4. Model Safety Evaluation for Plant-Specific Adoption of Technical Specifications Task Force Traveler TSTF-523, Revision 2, "Generic Letter 2008-01, Managing Gas Accumulation," "Using the Consolidated Line Item Improvement Process, 12/23/13, (ML13255A169).
5. U.S. Nuclear Regulatory Commission, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems (Generic Letter 2008-01)," January 2008, (ML072910759).
6. Domestic Licensing of Production and Utilization Facilities – General Design Criteria for Nuclear Power Plants, *Title 10 of the Code of Federal Regulations* (10 CFR) Part 50, Appendix A.
7. Domestic Licensing of Production and Utilization Facilities – Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants, *Title 10 of the Code of Federal Regulations* (10 CFR) Part 50, Appendix B.
8. Provisional Construction Permit and for Calvert Cliffs Nuclear Power Plant, Construction Permit Nos. CPPR-63 and CPPR-64, 07/07/69, (ML010400206)
9. Facility Operating License for Calvert Cliffs Nuclear Power Plant, Unit 1, 07/31/74 (ML010400396)
10. Facility Operating License for Calvert Cliffs Nuclear Power Plant, Unit 2, 08/13/76 (ML003774209 and ML003774250)
11. Paper by Chilk, Samuel J., Secretary, Staff Requirements Memo, "SECY-92-223 – Resolution of Deviations Identified During The Systematic Evaluation Program," 09/18/92, (ML003763736).

12. Updated Final Safety Analysis Report (UFSAR), for Calvert Cliffs Nuclear Power Plant, Units 1 and 2, 09/19/14 (ML14267A069).
13. *The Atomic Energy Act of 1967, as Amended*, Section 161A [42 United States Code (U.S.C.) §2201.a].
14. U.S. Nuclear Regulatory Commission, "Quality Assurance Program Requirements (Operation)," Regulatory Guide 1.33, ADAMS Accession No. ML13109A458.
15. Standard Technical Specifications – Combustion Engineering Plants, Revision 4.0, Volume 1 and 2, Specifications, NUREG-1432, (ML12102A165 and ML12102A169)
16. Standard Technical Specifications – Westinghouse Plants, Revision 4.0, Volume 1 and 2, Specifications, NUREG-1431, (ML12100A222 and ML12100A228).
17. Standard Technical Specifications – General Electric [Boiling Water Reactors] BWR/4 Plants, Revision 4.0, Volume 1 and 2, Specifications, NUREG-1433, (ML12104A192 and ML12104A193).
18. Standard Technical Specifications – General Electric [Boiling Water Reactors] BWR/6 Revision 4.0, Volume 1 and 2, Specifications NUREG-1434, (ML12104A195 and ML12104A196).
19. *Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: [Light-Water Reactors] LWR Edition*, NUREG-0800.
20. *Containment Heat Removal Systems*, Section 6.2.2, Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: [Light-Water Reactors] LWR Edition, NUREG-0800, Rev. 3, March 2007 (ML070160661).
21. *Emergency Core Cooling System*, Section 6.3, Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: [Light-Water Reactors] LWR Edition, NUREG-0800, Rev. 3, March 2007 (ML070550068).
22. *Residual Heat Removal (RHR) System*, Section 5.4.7, Standard Review Plant for the Review of Safety Analysis Reports for Nuclear Power Plants: [Light-Water Reactors] LWR Edition, NUREG-0800, Rev. 5., May 2010 (ML100680577).
23. *Emergency Core Cooling Systems (ECCS) Voiding Relative to Compliance with Surveillance Requirements (SR) 3.5.1.1, 3.5.2.3 and 3.5.3.1 (TIA 2008-03)*, October 21, 2008 (ML082560209).

Principal Contributor: William C. Satterfield

Date: July 30, 2015

D. Gudger

- 2 -

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

Sincerely,  
**/RA RGuzman for/**  
Alexander N. Chereskin, Project Manager  
Plant Licensing Branch I-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-317, 50-318, 50-244,  
and 50-410

Enclosures:

1. Amendment No. 313 to DPR-53
2. Amendment No. 291 to DPR-69
3. Amendment No. 118 to DPR-18
4. Amendment No. 150 to NPF-69
5. Safety Evaluation

cc w/enclosures:

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Please contact me at 301-415-2549 if you have any questions.

Sincerely,

*/RA/*

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Docket Nos. 50-317, 50-318, 50-244,  
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